THE DESIGN AND DEVELOPMENT OF A MANAGEMENT INFORMATION SYSTEM FOR THE MONTEREY NAVY FLYING CLUB (U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA  D R GEORGE 27 MAR 86
NAVAL POSTGRADUATE SCHOOL
Monterey, California

THE DESIGN AND DEVELOPMENT OF A MANAGEMENT INFORMATION SYSTEM FOR THE MONTEREY NAVY FLYING CLUB

by

Derek R. George

March 1986

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THE DESIGN AND DEVELOPMENT OF A MANAGEMENT INFORMATION SYSTEM FOR THE MONTEREY NAVY FLYING CLUB

GEORGE, Derek R.

Masten’s Thesis

FROM ____ TO ____ 27 March 1996

PROTOTYPE, MIS

This thesis provides a Management Information System for the Monterey Navy Flying Club. It supplies the tools necessary to enable the club manager to maintain all club records and generate required administrative and financial reports.
The Design and Development of a Management Information System for the Monterey Navy Flying Club

by

Derek R. George
Commander, United States Navy
B.S., Southern Illinois University, 1967

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

NAVAL POSTGRADUATE SCHOOL
March 1986

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ABSTRACT

This thesis provides a Management Information System for the Monterey Navy Flying Club. It supplies the tools necessary to enable the club manager to maintain all club records and generate required administrative and financial reports.
THESIS DISCLAIMER

The reader is cautioned that computer programs developed in this research may not have been exercised for all cases of interest. While every effort has been made, within the time available, to ensure that the programs are free of computational and logic errors, they cannot be considered validated. Any application of these programs without additional verification is at the risk of the user.
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I. INTRODUCTION

A. ORGANIZATION

The Monterey Naval Flying Club is a non-profit organization sponsored by the Naval Post Graduate School, Monterey, Ca. It exists to provide low cost, safe, light aircraft operations for its members. The Superintendent, Naval Postgraduate School, is directly responsible for ensuring strict adherence to FAA regulations and flight procedures. An elected Board of Directors, through the Club Manager, is responsible to the Commanding Officer for the implementation of his directives.

The Club Manager conducts routine club business within the guidelines of applicable DOD, USN, FAA, and NTSB directives and regulations. A major responsibility is maintaining accurate financial records of club activities. This data is used to prepare the annual financial report for submission to NMPC at the completion of each fiscal year. An annual audit is conducted each year for inclusion in the annual report. Specific areas of the audit include:

- Organization, management and administration
- Aircraft, equipment and supplies
- Operations, training and standardization
- Safety and aircraft maintenance
- Financial management

B. THESIS BACKGROUND

The Monterey Navy Flying Club has one of the largest memberships of the Navy sponsored flying clubs. As a result of this large membership and the amount of manual paperwork required to properly maintain club records, the Manager's ability to provide necessary services and reports is severely hampered. The implementation of
an efficient Management Information System will provide the resources necessary to track the statistics and financial data mandated by current directives and regulations.

C. GOALS AND OBJECTIVES

The primary goal of this system is to provide a functioning Management Information System for the MNFC Manager's use. It should provide substantial time savings and significantly reduce the manual duplication presently required. The structure of this system is designed to accommodate full financial and administrative support. Of the final output listed below, The first five items have been included in this thesis. Ultimate output will include:

- Member Roster
- Dispatcher Report
- Instructor Statement
- Member Statement
- Lessor Statement
- Income Statement
- Balance Sheet
- Input Items For The Budget Proposal
- Manager's Report (monthly)
- A/C Inventory and Status Report (monthly)
- Aged Accounts Receivables
- Input Items For Appendix A of Annual Report
- Statement of Net Worth
- Membership Breakdown

All necessary data stores (tables) and logic to produce the final system have been incorporated in the thesis. The Monterey Navy Flying Club does not presently maintain individual product inventories. However, an appropriate table containing product name, company, part number, unit price, number on hand, reorder point, date of last update, etc, with the necessary command file could be added in the future.
D. METHODOLOGY

Function descriptions (Appendix A) and data descriptions (Appendix B) will be combined to develop the data flow diagrams of Chapter IV.

The resulting logical system specification is converted into a physical system implementation which may be carried out in a phased manner.

Management of the Monterey Navy Flying Club can be functionally divided into two areas:

- MANAGE THE CLUB’S RECORDS
- GENERATE THE REQUIRED REPORTS

Hierarchical function charts for the two major functions are shown in Chapter II. Additionally, each of the functions utilized by the system are described in detail. This description includes a structure chart of the function and its next level of detail (abstraction), a unique numerical identifier, and a detailed description of the function. The lowest level function includes a listing of the data used, and their source and destination.

The data descriptions in Appendix A consist of a data dictionary containing the entity name, a detailed description of the entity and a list of the elements that make up that entity. Each element is further defined by type, field size, and a brief description if necessary.

The following data entities are included:

- AIRCRAFT HOURS TABLE
- AIRCRAFT MAINTENANCE TABLE
- AIRCRAFT RECORD TABLE
- ACCOUNTS PAYABLE TABLE
- ACCOUNTS RECEIVABLE TABLE
- BALANCE SHEET TABLE
- BILLTEMP TABLE
- CAPITAL ASSET TABLE
- CASH ACCOUNTS TABLE
- CHARGE HISTORY TABLE
FLIGHT RECORD TABLE
HOUR HISTORY TABLE
INSTRUCTOR HISTORY TABLE
INSTRUCTOR RECORD TABLE
LESSOR ACCOUNTS TABLE
MAINTENANCE HISTORY TABLE
MEMBER CHARGE TABLE
MEMBER FLIGHT TABLE
MEMBER PAYMENT TABLE
MEMBER RECORD TABLE
PAYMENT HISTORY TABLE
TEMPORARY HOURS TABLE

E. SYSTEM REQUIREMENTS
A prototype Management Information System for the Monterey Navy Flying Club was developed using the R:base 5000 Database Management System. The R:base 5000 program is a product of Microrim, Inc., Bellview, Washington and requires the following to operate properly:

- IBM PC, PC-XT, PC-AT, or 100% compatible microcomputer
- DOS, version 2.0 or higher
- 237 K of main memory after system configuration (a minimum of 320 K is recommended)
- Either a color or monochrome monitor
- Either a hard disk drive and one double-sided, double-density 5.25 inch floppy disk drive, or 2 double-sided, double-density 5.25 inch floppy disk drives.

This system is designed to utilize a hard disk. Processing speed can be increased considerably if 640 K of main memory is available.

F. SYSTEM OVERVIEW
The basic user interface for this system is via a series of menus set up to allow the user to select the type of system interaction desired. The initial menu will allow the user to select membership or financial transactions,
print certain reports and records, or generate end of month transactions. Each selection will produce another menu. The menu choices are shown below in Figures 1.1 - 1.10. Chapter V provides detailed instructions for and explanations of the choices available for the various functions.

Figure 1.1 Menu Structure Chart.

Additional input/query interaction with the system is available via the R:base 5000 language.

The system will automatically credit or debit the applicable accounts, and update appropriate fields (transparent to the user).
MNFC MAIN MENU
(1) MEMBERSHIP TRANSACTIONS
(2) FINANCIAL TRANSACTIONS
(3) PRINT REPORTS / STATEMENTS
(4) GENERATE END OF MONTH TRANSACTIONS
(5) BACK UP AND PACK THE DATABASE
(6) RETURN TO SYSTEM DOS

Figure 1.2 MNFC Main Menu.

MEMBERSHIP TRANSACTIONS
(1) ENTER A NEW MEMBER RECORD
(2) EDIT / DELETE EXISTING MEMBER RECORD
(3) RETURN TO MAIN MENU

Figure 1.3 Membership Transactions.

FINANCIAL TRANSACTIONS
(1) ENTER A NEW TRANSACTION
(2) EDIT / DELETE AN EXISTING TRANSACTION
(3) RETURN TO MAIN MENU

Figure 1.4 Financial Transactions.

ENTER A NEW TRANSACTION
(1) ACCOUNTS RECEIVABLE
(2) ACCOUNTS PAYABLE
(3) ENTER A MEMBER'S CHARGES
(4) ENTER A MEMBER'S PAYMENTS
(5) ENTER A MAINTENANCE TRANSACTION
(6) RETURN TO FINANCIAL TRANSACTIONS MENU

Figure 1.5 Enter a New Transaction.
EDIT / DELETE AN EXISTING TRANSACTION
(1) ACCOUNTS RECEIVABLE
(2) ACCOUNTS PAYABLE
(3) MEMBER CHARGE TRANSACTIONS
(4) MEMBER PAYMENT TRANSACTION
(5) RETURN TO FINANCIAL TRANSACTIONS MENU

Figure 1.6 Edit / Delete An Existing Transaction.

PRINT REPORTS / STATEMENTS
(1) PRINT ADMINISTRATIVE REPORTS
(2) PRINT FINANCIAL STATEMENTS
(3) PRINT ANNUAL REPORTS
(4) RETURN TO MAIN MENU

Figure 1.7 Print Reports / Statements.

PRINT ADMINISTRATIVE REPORTS
(1) PRINT MEMBER ROSTER
(2) PRINT DISPATCHER REPORT
(3) PRINT MANAGER'S REPORT
(4) RETURN TO PRINT REPORTS/STATEMENTS MENU

Figure 1.8 Print Administrative Reports.

PRINT FINANCIAL STATEMENTS
(1) PRINT MEMBER STATEMENTS
(2) PRINT INSTRUCTOR STATEMENTS
(3) PRINT LESSOR STATEMENTS AND AIRCRAFT INVENTORY/STATUS
(4) PRINT AGED ACCOUNTS RECEIVABLE
(5) PRINT BALANCE SHEET INPUTS
(6) PRINT INCOME STATEMENT INPUTS
(7) RETURN TO PRINT REPORTS/STATEMENTS MENU

Figure 1.9 Print Financial Statements.
PRINT ANNUAL REPORTS

(1) PRINT MEMBERSHIP BREAKDOWN
(2) PRINT STATEMENT OF NET WORTH DATA
(3) PRINT DATA FOR APPENDIX A OF ANNUAL REPORT
(4) RETURN TO PRINT REPORTS/STATEMENTS MENU

Figure 1.10 Print Annual Reports.
II. DATA FLOW DIAGRAMS

The data flow depicted in Figure 2.1 through Figure 2.5 is the result of combining the function descriptions from Appendix A and the data descriptions from Appendix B.

As shown, the flow through the system is initiated and controlled by a series of menu choices. These were discussed in Chapter I and depicted in Figures 1.1 through 1.10.

To ensure full availability of DBMS advantages, the user also has the option of addressing the system in a direct query/command mode for ad hoc query requirements.

![Diagram](image)

Figure 2.1 Manage Navy Flying Club DFD.
Figure 2.2  Manage Navy Flying Club - 1st Level DFD.
Figure 2.3  Manage Club Records DFD.
Figure 2.4 Generate Required Reports DFD.
Figure 2.5
Process End of Month Transactions.

1.2.3.1 Determine Cost of Flight Supplies Sold

1.2.6 Generate Income Statement

1.2.3.2 Calculate Depreciation

1.2.3.3 Compute Prepaid Insurance Charges

Manager
End of Inventory
Sum of Receipts

Capital Assets Table

Aircraft Record Table

Balance Sheet Table

Insurance Charge

Lessor Account Table
III. USER'S GUIDE

A. INTRODUCTION

The Monterey Navy Flying Club Management Information System is an integrated MIS designed to provide the club manager with an efficient and effective tool with which to manage both the administrative and financial records of the club. The following special topics are presented to facilitate introduction to this system:

- STARTING THE SYSTEM
- MENU GUIDE
- DATE FORMAT
- LOADING THE DATABASE INITIALLY
- SYSTEM BACKUP
- EXITING R:base 5000

B. STARTING THE SYSTEM

Once the system is on line, the proper subdirectory selected, and the C> is displayed, type RB5000 and press [ENTER]. Move the cursor to RBASE and press [ENTER]. When the RBASE menu appears, select #1 for the R> prompt. At this time, type RUN CLUB_MIS IN CLUB_MIS.APF and press [ENTER]. This selects the Monterey Navy Flying Club Management information system and displays the MNFC MAIN MENU (Figure 1.2).

C. MENU GUIDE

1. MNFC Main Menu (Figure 1.2)

Selecting option 1, MEMBERSHIP TRANSACTIONS, from the main menu displays the MEMBERSHIP TRANSACTIONS menu (Figure 1.3). Option 2 presents the FINANCIAL TRANSACTIONS menu (Figure 1.4). Option 3 displays the PRINT REPORTS/STATEMENTS menu (Figure 1.8). Option 4 computes four end
of month transactions for the BALANCE SHEET and the INCOME
STATEMENT. Option 5 backs up and repacks the database to
recover unusable disk space. Option 6 returns the user to
system DOS.

2. Membership Transactions (Figure 1.2)
   This menu provides the user with 3 options;
   ENTER A NEW MEMBER RECORD, EDIT/DELETE AN EXISTING
MEMBER RECORD, and RETURN TO MAIN MENU. Both of the
first two options display an interactive form and either
requests new member information or a member number for the
record to be edited / deleted. The third option returns the
user to the MNFC MAIN MENU.

3. Financial Transactions (Figure 1.4)
   If option 1 is selected, the user is
provided with the ENTER A NEW TRANSACTION menu (Figure
1.5). Option 2 provides the EDIT/DELETE AN EXISTING
TRANSACTION menu (Figure 1.6). Option 3 will return the
user to the MNFC MAIN MENU.

4. Enter A New Transaction (Figure 1.5)
   This menu allows the user to select what kind of
transaction to enter via 4 options with a fifth option to
return to the FINANCIAL TRANSACTIONS MENU. Option 1,
ACCOUNTS RECEIVABLE, enters data into the ACCOUNTS
RECEIVABLE TABLE. Option 2, ACCOUNTS PAYABLE, enters data
into the ACCOUNTS PAYABLE TABLE. Option 3, MEMBER
CHARGE TRANSACTIONS, processes members' charge sheets as
input by the club manager. Option 4, MEMBER PAYMENT
TRANSACTIONS, processes member payments as input by the club
manager.

5. Edit/Delete An Existing Transaction (Figure 1.6).
   Option 1, ACCOUNTS RECEIVABLE, edits/deletes data
into the ACCOUNTS RECEIVABLE TABLE. Option 2, ACCOUNTS
PAYABLE, edits/deletes data into the ACCOUNTS PAYABLE
TABLE. Option 3, MEMBER CHARGE TRANSACTIONS, edits/deletes
members' charge sheets. Option 4, MEMBER PAYMENT TRANSACTIONS, edits/deletes member payments. All options display an interactive form. To enter new transaction information or member information, the number for the record/account plus the invoice number for the particular transaction desired is requested. Option 5 returns the user to the FINANCIAL TRANSACTIONS menu.

6. **Print Reports / Statements (Figure 1.7)**
   
   Option 1 displays the PRINT ADMINISTRATIVE REPORTS menu (Figure 1.8). Option 2 displays the PRINT FINANCIAL STATEMENTS menu (Figure 1.9). Option 3 displays the PRINT ANNUAL REPORTS INPUT menu (Figure 1.10). Option 4 returns the user to the MNEC MAIN MENU.

7. **Print Administrative Reports (Figure 1.8)**
   
   This menu allows the user to print 4 reports. Option 1 produces the Member Roster. Option 2 produces the Dispatcher Report, and option 3 prints the monthly Manager's Report. Option 4 returns the user to the PRINT REPORTS/STATEMENTS menu.

8. **Print Financial Statements (Figure 1.9)**
   
   This menu contains 7 options. The first 6 produce Member Statements, Instructor Statements, Lessor Statements/Aircraft Inventory and Status Report, Aged Accounts Receivable Report, Balance Sheet Inputs, and Income Statement Inputs. The last option returns the user to the PRINT REPORTS/STATEMENTS menu.

9. **Print Annual Report Inputs (Figure 1.10)**
   
   Option 1 produces the required annual Membership Breakdown. Option 2 prints data to be used in developing the Statement of Net Worth. Option 3 produces data for inclusion in the Annual Report. Option 4 returns the user to the PRINT REPORTS/STATEMENTS menu.

   As a relational database language, RBASE 5000 is efficient and powerful. The menus address the routine
and repetitive tasks involved in managing the MNFC. Additional items of information are readily available through the extensive system of tables provided and the normal RBASE 5000 commands. For example, to print an alphabetized list of members qualified to operate the C-150 aircraft, the user would enter the following two commands:

```
OUTPUT PRINTER
SELECT L:NAME F:NAME MEM_NUM FROM MEM_REC SORTED BY + L:NAME WHERE CUR_MODS CONTAINS C_150
```

D. DATE FORMAT INFORMATION

The date function can be set to several basic formats: i.e., day-month-year, day-year-month, month-day-year, month-year-day, year-month-day, or year-day-month. The day must be expressed as two digits. The month can be expressed as either two digits or a three letter abbreviation. The year can be expressed as either two or four digits. The RBASE default format is MM/DD/YY. Once a format is set, RBASE only accepts dates entered in that format. If a month or day is only one digit, it is not necessary to enter a zero before the digit.

E. LOADING THE DATABASE INITIALLY

The system is designed to input data via the menus in most instances. However, before using the menu system, certain of the tables in the database must be loaded directly, i.e., initial information about each aircraft and lessor data (name, address, etc.). To enter aircraft information, the user enters the following command at the "R>" prompt: OPEN FLYCLUB followed by: ENTER A/C_FORM The user is then shown a form that requests the necessary information about the aircraft.

To enter lessor data, the user enters the following command at the "R>" prompt: ENTER LES_FORM Once
again he is prompted to enter the necessary information about the individual lessors and their aircraft identification.

All remaining data is entered via menus within the normal MNFC MIS. To start the system running, enter the following command at the "R>" prompt: RUN CLUB_MIS IN CLUB_MIS.APX

F. SYSTEM BACKUP

System backup and "packing" the database is accomplished via option 5 on the Main Menu, BACK UP AND PACK THE DATABASE. As data is entered and removed from various tables, unusable disk space accumulates. To alleviate this situation, the user "repacks" the database. Menu prompts direct the user through the necessary steps to obtain a floppy disk backup copy of the database and complete a "repack." It is recommended that this be completed at least once weekly.

G. EXITING RBASE 5000

To exit Rbase, the user selects the final option of the current menu to return to the Main Menu. From there he may exit to DOS.
IV. SYSTEM REPORTS AND STATEMENTS

The following monthly reports and statements are included in the system and are selected by the menu choices indicated:

REPORT / STATEMENT MENU SELECTION / FIGURE #

AIRCRAFT INVENTORY/STATUS SELECTION 3 / FIGURE 1.9

MEMBER ROSTER SELECTION 1 / FIGURE 1.8

DISPATCHER REPORT SELECTION 2 / FIGURE 1.8

INSTRUCTOR STATEMENT SELECTION 2 / FIGURE 1.9

LESSOR STATEMENTS SELECTION 3 / FIGURE 1.9

MEMBER STATEMENTS SELECTION 1 / FIGURE 1.9

Figure 4.1 - Figure 4.6 are examples of the above output.
### Aircraft Inventory and Status Report for Period Ending: 03/05/86

<table>
<thead>
<tr>
<th>A/C Num</th>
<th>Type</th>
<th>End Time</th>
<th>Start</th>
<th>Gross</th>
<th>Main HR</th>
<th>Billed</th>
<th>Rent</th>
<th>Rent Tot</th>
<th>Lease</th>
<th>Lease Tot</th>
<th>Maint CST</th>
<th>Insur Cost</th>
<th>Other</th>
<th>Net To Owner</th>
<th>Fuel CST</th>
<th>Net To Club</th>
</tr>
</thead>
<tbody>
<tr>
<td>N15631</td>
<td>P-180</td>
<td>140.00</td>
<td>100.00</td>
<td>40.00</td>
<td>5.00</td>
<td>35.00</td>
<td>30.00</td>
<td>1,050.00</td>
<td>15.00</td>
<td>$525.00</td>
<td>$420.00</td>
<td>$60.00</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N7322A</td>
<td>C-150</td>
<td>100.00</td>
<td>70.00</td>
<td>30.00</td>
<td>0.00</td>
<td>30.00</td>
<td>23.00</td>
<td>650.00</td>
<td>11.00</td>
<td>$330.00</td>
<td>$55.00</td>
<td>$60.00</td>
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<td></td>
</tr>
<tr>
<td>N8847Y</td>
<td>AZTEC</td>
<td>120.00</td>
<td>100.00</td>
<td>20.00</td>
<td>0.00</td>
<td>20.00</td>
<td>65.00</td>
<td>1,300.00</td>
<td></td>
<td>$40.00</td>
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</tr>
</tbody>
</table>
## MONTEREY NAVY FLYING CLUB ROSTER

**ROSTER DATE:** 04/16/86  
**TOTAL MEMBERS:** 4  
**PAGE:** 1

<table>
<thead>
<tr>
<th>NAME</th>
<th>MEMBER NO.</th>
<th>INST NO.</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIFT, MICHAEL R.</td>
<td>3</td>
<td></td>
<td>(408)646-0732</td>
</tr>
<tr>
<td>4538 BROWNELL</td>
<td></td>
<td>MONTEREY, CA 93946</td>
<td></td>
</tr>
<tr>
<td>GEORGE, DEREK R.</td>
<td>1</td>
<td>1</td>
<td>(408)649-0992</td>
</tr>
<tr>
<td>1284 OAKGLEN WAY</td>
<td></td>
<td>MONTEREY, CA 93943</td>
<td></td>
</tr>
<tr>
<td>RODECK, BRIAN D.</td>
<td>4</td>
<td>4</td>
<td>(408)375-7442</td>
</tr>
<tr>
<td>830 SUNSET DR. #J</td>
<td></td>
<td>MONTEREY, CA 93940</td>
<td></td>
</tr>
<tr>
<td>RODECK, RENEE R.</td>
<td>2</td>
<td>2</td>
<td>(408)375-7442</td>
</tr>
<tr>
<td>830 SUNSET DR. #J</td>
<td></td>
<td>PACIFIC GROVE, CA 93950</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.2 Monterey Navy Flying Club Roster.
<table>
<thead>
<tr>
<th>NAME</th>
<th>NE# NO.</th>
<th>INST NO.</th>
<th>FLT HRS-BIENNIAL-MED</th>
<th>DATE/CLASS</th>
<th>FAA CERT/CLASS</th>
<th>COLLATERAL DUTY</th>
<th>LAST DUAL—LAST FLIGHT/ AIRCRAFT—DAY</th>
<th>LNDGS-NITE</th>
<th>LAST-NITE LND—PREC APP—NON PREC—INST TIME</th>
<th>AIRCRAFT MODELS CURRENT IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIFT, MICHAEL R.</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>09/20/85/I</td>
<td>STUD/SINGLE</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0.0 - C-152</td>
</tr>
<tr>
<td>GEORGE, DEPREK R.</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>08/12/85</td>
<td>-</td>
<td>COML/SINGLE, MULTI, INST, LAND</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0.0 - T34, P-3, 5R-71</td>
</tr>
<tr>
<td>RODECK, BRIAN D.</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>05/13/84</td>
<td>-</td>
<td>PRIV/HLD, SINGLE, LAND</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0.0 - UH-1, C-172</td>
</tr>
<tr>
<td>RODECK, RENEE R.</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>02/04/86</td>
<td>-</td>
<td>CFI/SINGLE, LAND, INST</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0.0 - C-180, BEECH-95, C-177A6</td>
</tr>
</tbody>
</table>

Figure 4.3: Monterey Navy Flying Club Dispatchers Report

DATE: 04/16/86

MONTEREY NAVY FLYING CLUB
DISPATCHERS REPORT

PAGE: 1

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Monterey Navy Flying Club Dispatch Report.
### Instructor Statement

**MONTEREY NAVY FLYING CLUB**  
806 AIRPORT ROAD  
MONTEREY, CA 93940  
(408) 372-7033

**STATEMENT OF INSTRUCTION PROVIDED**

**INSTRUCTOR NO.: 1**  
**STATEMENT FOR PERIOD ENDING: 02/28/86**

<table>
<thead>
<tr>
<th>DATE</th>
<th>STUDENT</th>
<th>AIRCRAFT</th>
<th>HOURS FLOWN</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/03/86</td>
<td>CLIFT</td>
<td>N8047Y</td>
<td>1.000</td>
<td>20.00</td>
</tr>
<tr>
<td>02/04/86</td>
<td>RODECK</td>
<td>N7322A</td>
<td>2.000</td>
<td>25.00</td>
</tr>
</tbody>
</table>

**TOTAL DUE INSTRUCTOR: $45.00**
MONTEREY NAVY FLYING CLUB
806 AIRPORT ROAD
MONTEREY, CA 93940
(408) 372-7033

STATEMENT OF LEASED AIRCRAFT OPERATION

AIRCRAFT NO: N7322A

HOBBS METER READINGS:

FOR THE PERIOD ENDING: 03/05/86
BEGINNING:

ENDING: 100.00

JONES, JAYNE J.
21 SOUTH ELM
SEASIDE CA 93953

ELAPSED: 30.00

LESS MAINT TIME: 0.00

NET HOURS FLOWN: 30.00

LESS OWNER TIME: 1.00

TOTAL LEASED TIME: 29.00

ELAPSED:

COMPUTED LEASE AMOUNT: 29.00 HRS $11.00 /HR. = $319.00

MAINTENANCE PERFORMED

DATE LABOR CHARGES PARTS CHARGES
03/02/86 10.00 5.00
03/01/86 40.00 0.00

TOTAL MAINT: 55.00

SUB TOTAL: 526.00

OTHER CHARGES AND CREDITS

TOTAL OTHER:

TOTAL DUE OWNER:

MNFC CHECK # ______ ENCLOSED IN THE AMOUNT OF $_______ DUE TO OWNER.

THANK YOU,

MNFC MANAGER

Figure 4.5 Lessor Statement.
Figure 4.6

Member Statement:

<table>
<thead>
<tr>
<th>DATE</th>
<th>INVOICE</th>
<th>DESCRIPTION</th>
<th>CHARGES</th>
<th>PAYMENTS</th>
<th>BALANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/01/86</td>
<td>1</td>
<td>BALANCE FORWARD</td>
<td></td>
<td></td>
<td>$30.00</td>
</tr>
<tr>
<td>02/01/86</td>
<td>1</td>
<td>AIRCRAFT RENTAL</td>
<td>$30.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02/01/86</td>
<td>1</td>
<td>INSTRUCTION CHARGE</td>
<td>$10.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02/01/86</td>
<td>1</td>
<td>EXCESS FUEL CHARGE</td>
<td>$20.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02/28/86</td>
<td></td>
<td>DUES</td>
<td>$15.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02/23/86</td>
<td></td>
<td>PAYMENT</td>
<td></td>
<td>$80.00</td>
<td>$25.00</td>
</tr>
</tbody>
</table>

CURRENT $25.00
30 DAYS $0.00
60 DAYS $0.00
90 DAYS $0.00
AMOUNT DUE $25.00
V. SOURCE CODE

Appendix C contains the program code generated by both this thesis writer and the application generator within the Rbase 5000 language in the process of developing the system menus, tables, etc. The portions of the code generated through the Application Express do not contain comments. As any changes input to the current application cause a complete rewrite of this code, it is not considered cost effective to attempt to include comments. However, one is able to discern how the other programs, reports, forms, etc. are incorporated and how to go about changing / updating them by reviewing the system through the Express program.
VI. TEST DATA

The following eight data stores (tables) were loaded with data to test the system and to generate example reports and statements:

- Aircraft Hours
- Aircraft Maintenance
- Aircraft Record
- Accounts Receivable
- Lessor Accounts
- Member Charge
- Member Payment
- Member Record

A listing of the data that was input is contained in the database files.
VII. CONCLUSIONS / RECOMMENDATIONS

A. SUMMARY
This thesis has developed a prototype Management Information System for the Monterey Navy Flying Club. Rbase:5000, by Microrim of Bellevue, Washington, was used as the database language for this product.

The system is interactive and menu-driven and consists of 22 data stores (tables), 161 separate columns and currently 8 command programs.

B. OUTPUT REVIEW
Present output consists of the following administrative and financial reports/statements.

1. Member Statement
This statement is a compilation of all charges and payments that have transpired during the current billing period. In conjunction with posting appropriate monetary charges, additional data is recorded to produce additional output.

2. Instructor Statement
Includes all flights for each instructor during the billing period and lists the date, aircraft, flight time, student, charge, etc.

3. Member Roster
Includes a listing of all club members for a quick crosscheck of member number, address, etc.

4. Dispatcher Report
List each member and his/her currency in numerous areas.

5. Lessor Statement
Produces a listing of what the club owes/is owed in connection with leased aircraft.
6. **Aircraft Inventory and Status Report**
   Includes costs and flight time comparisons of all club aircraft, both owned and leased.

C. **RECOMMENDATION**

   The structure of this system was based from the beginning on the expectations of a final product that included full financial and administrative support for the MNFC manager. Although the final product was beyond the scope of this thesis, every effort has been made to create a program that will readily accept follow on work to provide for expansion and implementation of additional financial functions.

   It is recommended that a phased implementation be utilized and that follow on thesis work be assigned to completed the remaining financial portions i.e. Balance Sheet and Income Statement. Additional areas to be developed that have been provided for in the initial structure include the appendices for the Annual Report.
APPENDIX A
MONTEREY NAVY FLYING CLUB FUNCTIONAL DESCRIPTIONS

Figure A.1 - Figure A.5 depicting the functional breakdowns of the Monterey Navy Flying Club, as well as individual function descriptions are contained in this appendix.

1. FIRST LEVEL FUNCTIONAL BREAKDOWN

*******************************************************************************
ENTITY NAME : Manage Monterey Navy Flying Club
NUMERICAL IDENTIFIER : 1.0
DESCRIPTION : This module manages all club records, assimilates external inputs and generates reports required to manage financial accounts, maintenance functions, membership data, aircraft data, internal reports to the Board of Directors and the Superintendent, as well as reports required by external activities.

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Figure A.1  MNFC Structure Chart.
1.0 MANAGE NAVY FLYING CLUB

1.1 MAINTAIN CLUB RECORDS

1.2 GENERATE REQ'D REPORTS

Figure A.2  First Level Functional Breakdown.

FUNCTION NAME : Manage Club Records
NUMERICAL IDENTIFIER : 1.1
DESCRIPTION : This module processes charge sheets, maintains member and aircraft records, accounts receivable, and aircraft transaction data, and maintains flight supplies data. Output is provided to various destinations within the system.

FUNCTION NAME : Generate Required Reports
NUMERICAL IDENTIFIER : 1.2
DESCRIPTION : This module retrieves data from the supporting data stores and tables within the system to produce reports requested by the manager. Desired reports are selected via menu options.
2. MANAGE CLUB RECORDS FUNCTIONAL BREAKDOWN

**FUNCTION NAME**: ENTER/DELETE NEW MEMBER/INSTRUCTOR

**NUMERICAL IDENTIFIER**: 1.1.1

**DESCRIPTION**: This module retrieves data about new members or instructors (entered by the club manager) and enters them in the MEMBER RECORD TABLE. If there is no source specified below, information is entered/updated from the MEMBER FORM, addressed via the Edit/delete Member Record option (figure 1.3). The last date flown and the last aircraft model flown, as well as all landings, approaches, and instrument information, are updated by the PROCESS CHARGE SHEET module. The destination for all data listed below is the MEMBER RECORD TABLE unless listed differently under SOURCE/DESTINATION.

**DATA**

SOURCE (s) / DESTINATION (d)
- member number
- instructor number
- last name
- first name
- middle initial
- SSN
- street
- city
- state
- zipcode
- phone
- category (MO, NO, ME, etc)
- initiation fee (Y/N)
- key deposit (Y/N)
- current models (152, 172, T34, etc.)
- collateral duty
- biennial flight check date (MM/DD/YY)
- medical cert. date (MM/DD/YY)
- medical classification
- FAA cert (Stud, CFI, COML, etc.)
- FAA classification
  (single, multi, inst, etc.)
- record of previous mishap (Y/N)
FUNCTION NAME : Maintain Accounts Receivable

NUMERICAL IDENTIFIER : 1.1.2

DESCRIPTION : This module receives external input as well as input from other modules within the system to keep ACCOUNTS RECEIVABLE TABLE current. Destination is the ACCOUNTS RECEIVABLE TABLE; sources are listed below:

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE (s) / DESTINATION (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>who/what</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td>transaction date</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td>amount</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td>account number</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td>member number</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>current balance</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>balance past due 30 days</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>balance past due 60 days</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>balance past due 90 days</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>bal brought fwd - 30</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>bal brought fwd - 60</td>
<td>(s) Generate Member Stmt module</td>
</tr>
<tr>
<td>bal brought fwd - 90</td>
<td>(s) Generate Member Stmt module</td>
</tr>
</tbody>
</table>
FUNCTION NAME : Enter Reimbursable Transactions

NUMERICAL IDENTIFIER : 1.1.3

DESCRIPTION : This module receives data (input by the club manager) for leased aircraft and updates both the AIRCRAFT MAINTENANCE TABLE and the AIRCRAFT RECORD TABLE.

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE (s) / DESTINATION (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>prepaid insurance</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT RECORD TABLE</td>
</tr>
<tr>
<td>aircraft number</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>invoice number</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>labor hours</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>labor charge</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>parts charge</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>date of maintenance</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td>maintenance source</td>
<td>(s) club manager input</td>
</tr>
<tr>
<td></td>
<td>(d) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
</tbody>
</table>
FUNCTION NAME : Process Charge Sheet

NUMERICAL IDENTIFIER : 1.1.4

DESCRIPTION : This module receives external input i.e. data from individual charge sheets, and routes the data to the appropriate module/data store for processing and/or storage. The source for the data listed below is the Charge Sheet and the destination is temporary storage for use later to generate the instructor statements, and member statements.

DATA

- member number
- member name
- aircraft number
- invoice number
- date charged
- hours flown
- aircraft charge
- instructor number
- instructor name
- instruction charge

SOURCE (s) / DESTINATION (d)

- (s) MEMBER RECORD TABLE
- (d) MEMBER CHARGE TABLE
- (d) MEMBER RECORD TABLE
- (d) MEMBER CHARGE FORM
- (d) MEMBER FLIGHT TABLE
- (d) FLIGHT RECORD TABLE
- (d) FLIGHT RECORD TABLE
- (d) GENERATE LESSOR STATEMENT module
- (s) AIRCRAFT RECORD TABLE
- flight supplies charge
- misc. charge type
- misc. charge amount
- misc. credit type
- misc. credit amount
- cumulative flight hours
- flight date
- aircraft flown
- dual flight
- night flight
- number of night landings
- number of day landings
- number of night hours
- number of precision approaches
- number of non-precision approaches
- number of instrument hours
FUNCTION NAME : Enter Member Payments

DESCRIPTION : This module receives external input i.e. data from member payments, and routes the data to the appropriate module for processing and/or storage. The source for the data listed below is the individual members' payments and the destination is storage for use later by the GENERATE MEMBER STATEMENT module. Data with different sources or different / additional destinations will be listed below under SOURCE / DESTINATION.

DATA

- member number
- member name
- check number
- date received
- amount received

SOURCE (s) / DESTINATION (d)

(s) MEMBER RECORD TABLE
(d) MEMBER CHARGE FORM
(d) MEMBER RECORD TABLE
3. GENERATE REQUIRED REPORTS FUNCTIONAL BREAKDOWN

Figure A.4  Generate Required Reports Functional Breakdown.

FUNCTION NAME : Generate Instructor Statement

NUMERICAL IDENTIFIER : 1.2.1

DESCRIPTION : This module generates individual instructor statements.

DATA SOURCE (s) / DESTINATION (d)
- instructor member # (s) MEMBER CHARGE DATA
- instructor name (s) MEMBER RECORD DATA
  (d) GENERATE INSTRUCTOR STATEMENT
- instructor address (s) MEMBER RECORD DATA
  (d) GENERATE INSTRUCTOR STATEMENT
- date (s) MEMBER CHARGE DATA
  (d) GENERATE INSTRUCTOR STATEMENT
- member # (student)  (s) MEMBER CHARGE DATA
- member name (student)  (s) MEMBER RECORD DATA
   (d) GENERATE INSTRUCTOR STATEMENT
- instruction charge  (s) MEMBER CHARGE DATA
   (d) GENERATE INSTRUCTOR STATEMENT

FUNCTION NAME : Generate Member Roster
NUMERICAL IDENTIFIER : 1.2.2
DESCRIPTION : This module retrieves data from MEMBER RECORD DATA and generates a member roster.

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE (s) / DESTINATION (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- member name</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member number</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member street</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member city</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member state</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member zipcode</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
<tr>
<td>- member phone</td>
<td>(s) MEMBER RECORD DATA (d) MEMBER ROSTER</td>
</tr>
</tbody>
</table>
FUNCTION NAME : Process End of Month Transactions
NUMERICAL IDENTIFIER : 1.2.3

DESCRIPTION : This module processes transactions relating to accumulating data from user input. These computations are used by the system to produce the income statement and the balance sheet.
**FUNCTION NAME** : Generate Dispatcher Report  
**NUMERICAL IDENTIFIER** : 1.2.4  
**DESCRIPTION** : This module retrieves data from the MEMBER RECORD TABLE and produces the DISPATCHER'S REPORT. The source for data used in this module is the MEMBER FLIGHT table and the MEMBER RECORD table. The destination is the DISPATCHER'S REPORT.

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE (s) / DESTINATION (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMBER NAME</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>MEMBER NUMBER</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>INSTRUCTOR NUMBER</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>FAA certificate</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>FAA classification</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>cum flight hours</td>
<td>(s) FLIGHT RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>biennial flight check date</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>medical cert. date</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
<tr>
<td>medical cert. classification</td>
<td>(s) MEMBER RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) DISPATCHER'S REPORT</td>
</tr>
</tbody>
</table>
- current aircraft models
  (s) MEMBER RECORD TABLE
  (d) DISPATCHER'S REPORT

- date last dual
  (s) FLIGHT RECORD TABLE
  (d) DISPATCHER'S REPORT

- date last flight
  (s) FLIGHT RECORD TABLE
  (d) DISPATCHER'S REPORT

- last aircraft flown
  (s) FLIGHT RECORD TABLE
  (d) DISPATCHER'S REPORT

- number of day landings
  (last 90 days)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT

- number of night landings
  (last 90 days)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT

- number of night hours
  (last 90 days)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT

- date last night time
  (s) FLIGHT RECORD TABLE
  (d) DISPATCHER'S REPORT

- number precision approaches
  (last 6 months)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT

- number non-precision app.
  (last 6 months)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT

- number instrument hours
  (last 6 months)
  (s) MEMBER FLIGHT TABLE
  (d) DISPATCHER'S REPORT
FUNCTION NAME : Generate Lessor Statement

NUMERICAL IDENTIFIER : 1.2.5

DESCRIPTION : This module receives data from various data stores within the system to produce individual lessor statements.

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE (s) / DESTINATION (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- aircraft number</td>
<td>(s) LESSOR ACCOUNTS TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- lessor name</td>
<td>(s) LESSOR ACCOUNTS TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- lessor address</td>
<td>(s) LESSOR ACCOUNTS TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- hourly lease cost</td>
<td>(s) LESSOR ACCOUNTS TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- insurance charge</td>
<td>(s) AIRCRAFT RECORD TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- maintenance parts</td>
<td>(s) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- maintenance labor</td>
<td>(s) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- date (of maint. action)</td>
<td>(s) AIRCRAFT MAINTENANCE TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
<tr>
<td>- hours flown</td>
<td>(s) AIRCRAFT HOURS TABLE</td>
</tr>
<tr>
<td></td>
<td>(d) LESSOR STATEMENT</td>
</tr>
</tbody>
</table>
FUNCTION NAME : Generate Income Statement
NUMERICAL IDENTIFIER : 1.2.6
DESCRIPTION : This module will scan transaction tables and sum revenue and expense accounts to produce the monthly INCOME STATEMENT. Although not incorporated at this time, the structure and data tables are included in the system for future implementation.

FUNCTION NAME : Generate Balance Sheet
NUMERICAL IDENTIFIER : 1.2.7
DESCRIPTION : This module will take Balance Brought Forward from the BALANCE SHEET VARIABLES, scan the transaction tables for transactions affecting these variables and produce new BALANCE SHEET VARIABLES for use in the current BALANCE SHEET. All necessary structure and data tables are included in the present system to facilitate future implementation.

FUNCTION NAME : Generate Membership Report
NUMERICAL IDENTIFIER : 1.2.8
DESCRIPTION : This module will sort and tally the category column in the MEMBER RECORD table to produce the
membership report required in the Annual Report. Structure and
database tables are in place to facilitate future implementation.

FUNCTION NAME : Generate Member Statement
NUMERICAL IDENTIFIER : 1.2.9
DESCRIPTION : This module retrieves data from various
modules within the system and generates individual member
statements. The destination is the individual member statement
unless specified otherwise.

DATA

SOURCE (s) / DESTINATION (d)
- member name (s) MEMBER RECORD TABLE
- member address (s) MEMBER RECORD TABLE
- statement date (s) current system date
- transaction date (s) BILLTEMP TABLE
- invoice number (s) BILLTEMP TABLE
- transaction description (s) BILLTEMP TABLE
- transaction charge (s) BILLTEMP TABLE
- transaction payment (S) BILLTEMP TABLE
- balance brought forward (S) ACCOUNTS RECEIVABLE TABLE
- balance 30 days (S) ACCOUNTS RECEIVABLE TABLE
- balance 60 days (S) ACCOUNTS RECEIVABLE TABLE
- balance 90 days (S) ACCOUNTS RECEIVABLE TABLE
4. PROCESS END OF MONTH TRANSACTIONS FUNCTIONAL BREAKDOWN.

**Figure A.5  Process End Of Month Transactions Functional Breakdown.**

**FUNCTION NAME** : Determine Cost of Flight Supplies Sold

**NUMERICAL IDENTIFIER** : 1.2.3.1

**DESCRIPTION** : This module will compute the cost of flight supplies sold by using the beginning balance, and subtracting cost of purchases. This will result in the ending balance which will be sent to storage for generating the INCOME STATEMENT.

**DATA**

- beginning inventory  
  - SOURCE (s) / DESTINATION (d)
  - (s) Club Manager

- cost of inventory purchased  
  - (s) Club Manager

- ending inventory  
  - (s) Club Manager

- cost of flight supplies sold  
  - (d) BALANCE SHEET TABLE
FUNCTION NAME : Calculate Depreciation
NUMERICAL IDENTIFIER : 1.2.3.2
DESCRIPTION : This module will calculate the depreciation on capital assets and update the CAPITAL ASSETS TABLE.

DATA SOURCE (s) / DESTINATION (d)
- book value (s) CAPITAL ASSETS TABLE
- term (s) CAPITAL ASSETS TABLE
- accumulated capital depreciation (s) CAPITAL ASSETS TABLE
- book value (s) AIRCRAFT RECORD TABLE
- term (s) AIRCRAFT RECORD TABLE
- accumulated aircraft depreciation (s) AIRCRAFT RECORD TABLE
- net value (d) BALANCE SHEET TABLE

FUNCTION NAME : Compute Prepaid Insurance Charge
NUMERICAL IDENTIFIER : 1.2.3.3
DESCRIPTION : This module will compute and assign insurance charges to the appropriate aircraft accounts.

DATA SOURCE (s) / DESTINATION (d)
- insurance charge (s) MANAGER INPUT
(d) AIRCRAFT RECORD TABLE
(d) LESSOR ACCOUNT TABLE

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APPENDIX B
MNFC DATA DICTIONARY

This data dictionary consists of the following items:

• Data Relationship Chart (Figure B.1)
• Listing of tables contained in the database Flyclub
• Listing of column definitions and locations
• A brief description of each data store (table)

Of the 22 data stores (tables) included in the database, 5 are not currently being utilized. They have been included in the database to facilitate future expansion and implementation of additional financial functions not within the scope of this thesis. These five tables are: Accounts Payable, Accounts Receivable, Balance Sheet, Capital Assets, and Cash Accounts.
Figure B.1  Data Relationship Chart.
## Tables in the Database FLYCLUB

<table>
<thead>
<tr>
<th>Name</th>
<th>Columns</th>
<th>Rows</th>
<th>Name</th>
<th>Columns</th>
<th>Rows</th>
</tr>
</thead>
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<td>462</td>
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<td>0</td>
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<td>MEM_PAY</td>
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<td>3</td>
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<td>0</td>
<td>PAYHIST</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
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<td>2</td>
<td>CASH_ACT</td>
<td>10</td>
<td>0</td>
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<td>3</td>
<td>CAPASET</td>
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<td>0</td>
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<tr>
<td>A/C_REC</td>
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<td>3</td>
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<td>45</td>
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<td>3</td>
<td>INST_REC</td>
<td>6</td>
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</tr>
<tr>
<td>INSTHIST</td>
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<td>3</td>
<td>FLT_REC</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>MEM_FLT</td>
<td>9</td>
<td>2</td>
<td>A/CMAINT</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

### Report Table

<table>
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<tr>
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<th>Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEM_REC</td>
<td>MEM_REC</td>
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<tr>
<td>A/C_STAT</td>
<td>A/C_HRS</td>
</tr>
<tr>
<td>DISPATCH</td>
<td>MEM_REC</td>
</tr>
<tr>
<td>INST_STMT</td>
<td>INST_REC</td>
</tr>
<tr>
<td>LES_STMT</td>
<td>LES_ACCT</td>
</tr>
<tr>
<td>MAINT</td>
<td>A/CMAINT</td>
</tr>
<tr>
<td>MEM_BILL</td>
<td>BILLTEMP</td>
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<tr>
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<td>MEM_REC</td>
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</tbody>
</table>

### Form Table

<table>
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</thead>
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<td>A/C_REC</td>
</tr>
<tr>
<td>CHGFORM</td>
<td></td>
</tr>
<tr>
<td>HOB_FORM</td>
<td></td>
</tr>
<tr>
<td>LES_FORM</td>
<td>LES_ACCT</td>
</tr>
</tbody>
</table>
MAINTFRM  A/CMAINT
MEM_FORM  MEM_REC
PAYFORM

Table: A/C_HRS
Read Password: NO
Modify Password: NO

Column definitions
# Name   Type     Length          Key
1 A/C_NUM TEXT   6 characters   yes
2 CUM_HRS REAL   1 value(s)     
3 HOB_END REAL   1 value(s)     
4 HOBSTART REAL  1 value(s)     
5 HOB_USED REAL  1 value(s)     
6 HOBMAINT REAL  1 value(s)     
7 HOB_NET REAL   1 value(s)     
8 HOBOWNER REAL  1 value(s)     
9 HOBLEASE REAL  1 value(s)     
10 LEASEAMT DOLLAR 1 value(s)    
11 TOTMAINT DOLLAR 1 value(s)    

Current number of rows:  3

Table: A/CMAINT
Read Password: NO
Modify Password: NO

Column definitions
# Name     Type     Length          Key
1 A/C_NUM TEXT   6 characters   yes
2 INVO_NUM TEXT   4 characters    
3 LABOR_HR REAL   1 value(s)     
4 LABR_CHG DOLLAR 1 value(s)     
5 PART_CHG DOLLAR 1 value(s)     
6 A/C_DATE DATE  1 value(s)      

60
Table: A/C_REC
Read Password: NO
Modify Password: NO

Column definitions

# Name Type Length Key
1 A/C_NUM TEXT 6 characters yes
2 TYPE TEXT 6 characters
3 YEAR TEXT 4 characters
4 LEAS_RAT DOLLAR 1 value(s)
5 RENT_RAT DOLLAR 1 value(s)
6 PREP_INS DOLLAR 1 value(s)
7 BOOK_VAL DOLLAR 1 value(s)
8 ACC_DEP DOLLAR 1 value(s)
9 DEP_TERM INTEGER 1 value(s)
10 DATE_GOT DATE 1 value(s)

Current number of rows: 3

Table: ACCT_PAY
Read Password: NO
Modify Password: NO

Column definitions

# Name Type Length Key
1 WHO/WHAT TEXT 20 characters
2 AMOUNT DOLLAR 1 value(s)
3 AP_DATE DATE 1 value(s)
4 ACCT_NUM TEXT 4 characters yes

Current number of rows: 0
Table: ACCT_REC
Read Password: NO
Modify Password: NO

Column definitions
# Name       Type   Length             Key
 1 WHO/WHAT  TEXT    20 characters
 2 AR_DATE   DATE    1 value(s)
 3 AMOUNT   DOLLAR  1 value(s)
 4 ACCT_NUM  TEXT    4 characters yes
 5 MEM_NUM   TEXT    4 characters yes
 6 CURR_BAL DOLLAR 1 value(s)
 7 BAL:30    DOLLAR  1 value(s)
 8 BAL:60    DOLLAR  1 value(s)
 9 BAL:90    DOLLAR  1 value(s)
10 BALFWD30  DOLLAR 1 value(s)
11 BALFWD60  DOLLAR 1 value(s)
12 BALFWD90  DOLLAR 1 value(s)
13 SUM60+90  DOLLAR 1 value(s)

Current number of rows: 4

Table: BAL_SHET
Read Password: NO
Modify Password: NO

Column definitions
# Name       Type       Length             Key
 1 ACCT_NUM   TEXT      4 characters yes
 2 BALANCE    DOLLAR    1 value(s)

Current number of rows: 0

Table: BILLTEMP
Read Password: NO
Modify Password: NO
Column definitions
# Name      Type     Length       Key
1 MEM_NUM   TEXT     4 characters yes
2 INVIO_NUM TEXT     4 characters
3 TRANDATE  DATE     1 value(s)
4 CHARGES   DOLLAR   1 value(s)
5 PAYMENTS  DOLLAR   1 value(s)
6 DESCRIPT  TEXT     20 characters

Current number of rows: 0

Table: CAPASET
Read Password: NO
Modify Password: NO

Column definitions
# Name      Type     Length       Key
1 IDENT     TEXT     50 characters yes
2 INITCST   DOLLAR   1 value(s)
3 DATEACQ   DATE     1 value(s)
4 DEP_TERM  INTEGER  1 value(s)
5 ACCDEP    DOLLAR   1 value(s)

Current number of rows: 0

Table: CASH_ACT
Read Password: NO
Modify Password: NO

Column definitions
# Name      Type     Length       Key
1 MEM_NUM   TEXT     4 characters yes
2 ACCTNUM   TEXT     4 characters yes
3 A/C_NUM   TEXT     6 characters
4 LESORNU   TEXT     4 characters
5 WHO/WHAT  TEXT     20 characters

63
Current number of rows: 0

Table: CHGHIST
Read Password: NO
Modify Password: NO

Column definitions
# Name Type Length Key
1 MEM_NUM TEXT 4 characters yes
2 INVO_NUM TEXT 4 characters
3 TRANDATE DATE 1 value(s)
4 CHARGES DOLLAR 1 value(s)
5 DESCRIPT TEXT 20 characters
6 HRS_FLON REAL 1 value(s)
7 A/C_NUM TEXT 6 characters

Current number of rows: 0

Table: FLT_REC
Read Password: NO
Modify Password: NO

Column definitions
# Name Type Length Key
1 MEM_NUM TEXT 4 characters yes
2 FLT_HRS REAL 1 value(s)
3 LASTFLT DATE 1 value(s)
4 LAST_A/C TEXT 6 characters
5 LASTDUAL DATE 1 value(s)
6 LASTNITE DATE 1 value(s)
Current number of rows: 1

Table: HOURHIST
Read Password: NO
Modify Password: NO

Column definitions
# Name     Type  Length          Key
1 A/C_NUM  TEXT  6 characters yes
2 CUM_HRS  REAL  1 value(s)
3 HOB_END  REAL  1 value(s)
4 HOBSTART REAL 1 value(s)
5 HOB_USED REAL 1 value(s)
6 HOBMAINT REAL 1 value(s)
7 HOB_NET  REAL 1 value(s)
8 HOBOWNER REAL 1 value(s)
9 HOBLEASE REAL 1 value(s)
10 LEASEAMT DOLLAR 1 value(s)

Current number of rows: 45

Table: INSTHIST
Read Password: NO
Modify Password: NO

Column definitions
# Name    Type  Length          Key
1 INST_NUM TEXT  4 characters yes
2 TRANDATE DATE 1 value(s)
3 MEM_NUM TEXT  4 characters
4 HRS_FLO REAL 1 value(s)
5 A/C_NUM TEXT  6 characters
6 AMOUNT DOLLAR 1 value(s)

Current number of rows: 3
Table: INST_REC
Read Password: NO
Modify Password: NO

Column definitions

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INST_NUM</td>
<td>TEXT</td>
<td>4 characters</td>
<td>yes</td>
</tr>
<tr>
<td>2</td>
<td>TRANDATE</td>
<td>DATE</td>
<td>1 value(s)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>MEM_NUM</td>
<td>TEXT</td>
<td>4 characters</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>HRS_FLOH</td>
<td>REAL</td>
<td>1 value(s)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>A/C_NUM</td>
<td>TEXT</td>
<td>6 characters</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>AMOUNT</td>
<td>DOLLAR</td>
<td>1 value(s)</td>
<td></td>
</tr>
</tbody>
</table>

Current number of rows: 6

Table: LES_ACCT
Read Password: NO
Modify Password: NO

Column definitions

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<tr>
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<th>Name</th>
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<th>Key</th>
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</thead>
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<td>1</td>
<td>L:NAME</td>
<td>TEXT</td>
<td>15 characters</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>F:NAME</td>
<td>TEXT</td>
<td>15 characters</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>MID_INIT</td>
<td>TEXT</td>
<td>2 characters</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>SSN</td>
<td>TEXT</td>
<td>11 characters</td>
<td></td>
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<tr>
<td>5</td>
<td>STREET</td>
<td>TEXT</td>
<td>20 characters</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
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<td>TEXT</td>
<td>13 characters</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>A/C_NUM</td>
<td>TEXT</td>
<td>6 characters</td>
<td>yes</td>
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Current number of rows: 2

Table: MAINHIST
Column definitions

Table: MEM_CHG

Table: MEMFLT

Table: MEM_FLT
### Column definitions

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<td>value(s)</td>
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<tr>
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Current number of rows: 2

### Table: MEM_PAY
Read Password: NO  
Modify Password: NO

Column definitions

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<td>value(s)</td>
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<td>DOLLAR</td>
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Current number of rows: 3

### Table: MEM_REC
Read Password: NO  
Modify Password: NO

Column definitions

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<tr>
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<td>SSN</td>
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<tr>
<td>7</td>
<td>STREET</td>
<td>TEXT</td>
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<tr>
<td>8</td>
<td>CITY</td>
<td>TEXT</td>
<td>15</td>
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<td>STATE</td>
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</table>

Current number of rows: 4

Table: PAYHIST
Read Password: NO
Modify Password: NO

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<th>Length</th>
<th>Key</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>MEM_NUM</td>
<td>TEXT</td>
<td>4 characters</td>
<td>yes</td>
</tr>
<tr>
<td>2</td>
<td>CHK_NUM</td>
<td>TEXT</td>
<td>10 characters</td>
<td></td>
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<tr>
<td>3</td>
<td>TRANDATE</td>
<td>DATE</td>
<td>1 value(s)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>PAYMENTS</td>
<td>DOLLAR</td>
<td>1 value(s)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>DESCRIPT</td>
<td>TEXT</td>
<td>20 characters</td>
<td></td>
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</tbody>
</table>

Current number of rows: 0
Table: TEMP_HRS
Read Password: NO
Modify Password: NO

Column definitions
# Name       Type     Length       Key
1 CUM_HRS    REAL     1 value(s)      
2 HOB_END    REAL     1 value(s)      
3 A/C_NUM    TEXT     6 characters  yes

Current number of rows: 3
### Column definitions and locations:

<table>
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<tr>
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<th>Type</th>
<th>Length</th>
<th>Table</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C_DATE</td>
<td>DATE</td>
<td>1 value(s)</td>
<td>A/CMAINT</td>
<td>MAINHIST</td>
</tr>
<tr>
<td>A/C_NUM</td>
<td>TEXT</td>
<td>6 characters</td>
<td>MAINHIST</td>
<td>yes</td>
</tr>
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- **CHGHIST**: INST_REC
- **INST_REC**: CASH_ACT
- **CASH_ACT**: MEM_FLT
- **MID_INIT**: TEXT, 2 characters
- **MEMREC**: MEM_FLT
- **LESACT**: LES_ACCT
- **MISHAP**: TEXT, 1 characters
- **MEMPAY**: yes

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MEMNUM TEXT

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PHONE        | TEXT   | 13 characters | LES_ACCT |
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DESCRIPTION: Database file containing information relative to aircraft hours flown each month.

ENTITY NAME: AIRCRAFT MAINTENANCE TABLE (A/CMAINT)
DESCRIPTION: Repository for data on maintenance actions completed each month on all aircraft.

ENTITY NAME: AIRCRAFT RECORDS TABLE (A/C_REC)
DESCRIPTION: Contains permanent information on each aircraft used, whether owned or leased, by the Monterey Navy Flying Club.

ENTITY NAME: ACCOUNTS PAYABLE TABLE (ACCT_PAY)
DESCRIPTION: Contains listing of club's accounts payable - not necessarily interactive with the user.

ENTITY NAME: ACCOUNTS RECEIVABLE TABLE (ACCT_REC)
DESCRIPTION: Maintains listing of club's accounts receivables - not necessarily interactive with the user.
ENTITY NAME: BALANCE SHEET TABLE (BAL_SHEET)
DESCRIPTION: Contains a series of variables (account number and balance) to be used in constructing the Balance Sheet.

ENTITY NAME: BILLTEMP TABLE (BILLTEMP)
DESCRIPTION: Data store containing records of all charges and payments made during any given billing period. Data is appended from both MEM_CHG and MEM_PAY tables to produce the members' statements.

ENTITY NAME: CAPITAL ASSETS TABLE (CAPASET)
DESCRIPTION: Contains data pertaining to shop equipment and aircraft. Used to figure and maintain accumulated depreciation.

ENTITY NAME: CASH ACCOUNTS TABLE (CASH_ACT)
DESCRIPTION: Contains records of all cash transactions.
ENTITY NAME: CHARGE HISTORY TABLE (CHGHIST)
DESCRIPTION: An historical data store where records of monthly charges are archived following completion of the monthly member statements.

ENTITY NAME: FLIGHT RECORD TABLE (FLT_REC)
DESCRIPTION: One of two data stores utilized to maintain flight records on all club members. This store contains data pertaining to flight minimums as published in the dispatcher's report.

ENTITY NAME: HOUR HISTORY TABLE (HOURHIST)
DESCRIPTION: An historical data store where aircraft flight information from the A/C_HRS table is archived following monthly statements.

ENTITY NAME: INSTRUCTOR HISTORY TABLE (INSTHIST)
DESCRIPTION: An historical data store where flight instruction charge data is archived following completion of the monthly Instructor Statements.
ENTITY NAME: INSTRUCTOR RECORD TABLE (INST_REC)
DESCRIPTION: Contains flight instruction charge data. Utilized to generate the monthly instructor statements.

ENTITY NAME: LESSOR ACCOUNTS TABLE (LES_ACCT)
DESCRIPTION: Data store containing data relating to individuals that own aircraft and have leased them to the club.

ENTITY NAME: MAINTENANCE HISTORY TABLE (MAINHIST)
DESCRIPTION: An historical data store where maintenance action records on each aircraft are archived following the completion of monthly statements.

ENTITY NAME: MEMBER CHARGE TABLE (MEM_CHG)
DESCRIPTION: Data store containing complete record of all member charges entered during any given billing period.
ENTITY NAME: MEMBER FLIGHT TABLE (MEMFLT)
DESCRIPTION: One of two data stores utilized to maintain flight records on all club members. This store contains data on members' daily flights.

ENTITY NAME: MEMBER PAYMENT TABLE (MEMPAY)
DESCRIPTION: Data store containing complete records of all payments made by members during any given billing period.

ENTITY NAME: MEMBER RECORD TABLE (MEMREC)
DESCRIPTION: Data store containing primarily administrative data about each club member. One record per member.

ENTITY NAME: PAYMENT HISTORY TABLE (PAYHIST)
DESCRIPTION: An historical data store where records of monthly payments are archived following completion of the monthly member statements.
ENTITY NAME: TEMPORARY HOURS TABLE (TEMP_HRS)

DESCRIPTION: Store for the temporary storage of aircraft
flight hour data during monthly statement preparation.
APPENDIX C
SOURCE CODE

$COMMAND
CLUB_MIS
SET MESSAGE OFF
OPEN FLYCLUB
SET ERROR MESSAGE OFF
SET VAR PICK1 INT
LABEL STARTAPP
   NEWPAGE
   CHOOSE PICK1 FROM MAIN IN CLUB_MIS.APX
   IF PICK1 EQ 0 THEN
      GOTO ENDAPP
   ENDF
   IF PICK1 EQ 1 THEN
      SET VAR PICK2 INT
      SET VAR LEVEL2 INT
      SET VAR LEVEL2 TO 0
      WHILE LEVEL2 EQ 0 THEN
         NEWPAGE
         CHOOSE PICK2 FROM SUBMEN10 IN CLUB_MIS.APX
         IF PICK2 EQ 0 THEN
            BREAK
ENDIF
IF PICK2 EQ 1 THEN
  RUN ADD_MEM IN CLUB_MIS.APX
ENDIF
IF PICK2 EQ 2 THEN
  FILLIN WHVAL USING "ENTER NUMBER FOR MEMBER TO BE CHANGED"
EDIT USING MEM_FORM +
  SORTED BY MEM_NUM L:NAME +
  WHERE MEM_NUM EQ .WHVAL
  CLEAR WHVAL
ENDIF
IF PICK2 EQ 3 THEN
  BREAK
ENDIF
ENDWHILE
CLEAR LEVEL2
CLEAR PICK2
GOTO STARTAPP
ENDIF
IF PICK1 EQ 2 THEN
  SET VAR PICK2 INT
  SET VAR LEVEL2 INT
  SET VAR LEVEL2 TO 0
  WHILE LEVEL2 EQ 0 THEN
    NEWPAGE
CHOOSE PICK2 FROM SUBMEN20 IN CLUB_MIS.APX
IF PICK2 EQ 0 THEN
   BREAK
ENDIF
IF PICK2 EQ 1 THEN
   SET VAR PICK3 INT
   SET VAR LEVEL3 INT
   SET VAR LEVEL3 TO 0
   WHILE LEVEL3 EQ 0 THEN
      NEWPAGE
      CHOOSE PICK3 FROM SUBMEN21 IN CLUB_MIS.APX
      IF PICK3 EQ 0 THEN
         BREAK
      ENDIF
      IF PICK3 EQ 1 THEN
         ENDIF
      IF PICK3 EQ 2 THEN
         ENDIF
      IF PICK3 EQ 3 THEN
         RUN PUTCHG IN CLUB_MIS.APX
      ENDIF
      IF PICK3 EQ 4 THEN
         RUN PUTPAY IN CLUB_MIS.APX
      ENDIF
      IF PICK3 EQ 5 THEN

RUN ADDMAINT IN CLUB_MIS.APX

ENDIF
IF PICK3 EQ 6 THEN
BREAK
ENDIF
ENDWHILE
CLEAR LEVEL3
CLEAR PICK3
ENDIF
IF PICK2 EQ 2 THEN
SET VAR PICK3 INT
SET VAR LEVEL3 INT
SET VAR LEVEL3 TO 0
WHILE LEVEL3 EQ 0 THEN
NEWPAGE
CHOOSE PICK3 FROM SUBMEN22 IN CLUB_MIS.APX
IF PICK3 EQ 0 THEN
BREAK
ENDIF
IF PICK3 EQ 1 THEN
ENDIF
IF PICK3 EQ 2 THEN
ENDIF
IF PICK3 EQ 3 THEN
ENDIF
IF PICK3 EQ 4 THEN
ENDIF
IF PICK3 EQ 5 THEN
BREAK
ENDIF
ENDWHILE
CLEAR LEVEL3
CLEAR PICK3
ENDIF
IF PICK2 EQ 3 THEN
BREAK
ENDIF
ENDWHILE
CLEAR LEVEL2
CLEAR PICK2
GOTO STARTAPP
ENDIF
IF PICK1 EQ 3 THEN
SET VAR PICK2 INT
SET VAR LEVEL2 INT
SET VAR LEVEL2 TO 0
WHILE LEVEL2 EQ 0 THEN
NEWPAGE
CHOOSE PICK2 FROM SUBMEN30 IN CLUB_MIS.APX
IF PICK2 EQ 0 THEN
BREAK
ENDIF
IF PICK2 EQ 1 THEN
  SET VAR PICK3 INT
  SET VAR LEVEL3 INT
  SET VAR LEVEL3 TO 0
  WHILE LEVEL3 EQ 0 THEN
    NEWPAGE
    CHOOSE PICK3 FROM SUBMEN31 IN CLUB_MIS.APX
    IF PICK3 EQ 0 THEN
      BREAK
    ENDIF
    IF PICK3 EQ 1 THEN
      RUN ROSTER IN CLUB_MIS.APX
    ENDIF
    IF PICK3 EQ 2 THEN
      RUN DISPATCH IN CLUB_MIS.APX
    ENDIF
    IF PICK3 EQ 3 THEN
      ENDIF
    IF PICK3 EQ 4 THEN
      BREAK
    ENDIF
  ENDWHILE
CLEAR LEVEL3
CLEAR PICK3
ENDIF
IF PICK2 EQ 2 THEN
SET VAR PICK3 INT
SET VAR LEVEL3 INT
SET VAR LEVEL3 TO 0
WHILE LEVEL3 EQ 0 THEN
NEWPAGE
CHOOSE PICK3 FROM SUBMEN32 IN CLUB_MIS.APX
IF PICK3 EQ 0 THEN
BREAK
ENDIF
IF PICK3 EQ 1 THEN
RUN MEMSTMT IN CLUB_MIS.APX
ENDIF
IF PICK3 EQ 2 THEN
RUN INSTSTMT IN CLUB_MIS.APX
ENDIF
IF PICK3 EQ 3 THEN
RUN LES_STMT IN CLUB_MIS.APX
ENDIF
IF PICK3 EQ 4 THEN
ENDIF
IF PICK3 EQ 5 THEN
ENDIF
IF PICK3 EQ 6 THEN
ENDIF
IF PICK3 EQ 7 THEN
BREAK
ENDIF
ENDWHILE
CLEAR LEVEL3
CLEAR PICK3
ENDIF
IF PICK2 EQ 3 THEN
SET VAR PICK3 INT
SET VAR LEVEL3 INT
SET VAR LEVEL3 TO 0
WHILE LEVEL3 EQ 0 THEN
NEWPAGE
CHOOSE PICK3 FROM SUBMEN33 IN CLUB_MIS.AFX
IF PICK3 EQ 0 THEN
BREAK
ENDIF
IF PICK3 EQ 1 THEN
ENDIF
IF PICK3 EQ 2 THEN
ENDIF
IF PICK3 EQ 3 THEN
ENDIF
IF PICK3 EQ 4 THEN
  BREAK
ENDIF
ENDWHILE
CLEAR LEVEL3
CLEAR PICK3
ENDIF
IF PICK2 EQ 4 THEN
  BREAK
ENDIF
ENDWHILE
CLEAR LEVEL2
CLEAR PICK2
GOTO STARTAPP
ENDIF
IF PICK1 EQ 4 THEN
  GOTO ENDAPP
  GOTO STARTAPP
ENDIF
IF PICK1 EQ 5 THEN
  RUN BACKPACK IN CLUB_MIS.APX
  GOTO STARTAPP
ENDIF
IF PICK1 EQ 6 THEN
  GOTO ENDAPP
ENDIF
GOTO STARTAPP
LABEL ENDAPP
CLEAR PICK1
RETURN
$MENU
MAIN
COLUMN MNFC MAIN MENU
MEMBERSHIP TRANSACTIONS
FINANCIAL TRANSACTIONS
PRINT REPORTS / STATEMENTS
GENERATE END OF MONTH TRANSACTIONS
BACK UP AND PACK THE DATABASE
RETURN TO SYSTEM DOS
$MENU
SUBMEN10
COLUMN MEMBERSHIP TRANSACTIONS
ENTER A NEW MEMBER RECORD
EDIT / DELETE EXISTING MEMBER RECORD
RETURN TO MAIN MENU
$MENU
SUBMEN20
COLUMN FINANCIAL TRANSACTIONS
ENTER A NEW TRANSACTION
EDIT / DELETE AN EXISTING TRANSACTION
$MENU
SUBMEN31
COLUMN PRINT ADMINISTRATIVE REPORTS
PRINT MEMBER ROSTER
PRINT DISPATCHER REPORT
PRINT MANAGER'S REPORT
RETURN TO PRINT REPORTS/STATEMENTS MENU
$MENU
SUBMEN32
COLUMN PRINT FINANCIAL STATEMENTS
PRINT MEMBER STATEMENTS
PRINT INSTRUCTOR STATEMENTS
PRINT LESSOR STATEMENTS AND AIRCRAFT INVENTORY/STATUS
PRINT AGED ACCOUNTS RECEIVABLE
PRINT BALANCE SHEET INPUTS
PRINT INCOME STATEMENT INPUTS
RETURN TO PRINT REPORTS/STATEMENTS MENU
$MENU
SUBMEN33
COLUMN PRINT ANNUAL REPORTS
PRINT MEMBERSHIP BREAKDOWN
PRINT STATEMENT OF NET WORTH DATA
PRINT DATA FOR APPENDIX A OF ANNUAL REPORT
RETURN TO PRINT REPORTS/STATEMENTS MENU
$COMMAND
BACKPACK
*(*********************************************************************)

PROGRAM: BACKPACK.CMD
AUTHOR: D.R. GEORGE
DATE WRITTEN: MARCH, 1986
DESCRIPTION: CREATES A BACKUP OF THE DATABASE AND REPACKS IT

*********************************************************************)

SET MESSAGES OFF
SET ERROR MESSAGES OFF
NEWPAGE
WRITE "INSERT A FORMATTED DISK IN DRIVE A" AT 5,10
WRITE "PRESS ANY KEY TO CONTINUE" AT 7,14
PAUSE
SET ERR VAR ERV
COPY FLYCLUB?.RBS A:
IF ERV = 0 THEN
   PACK FLYCLUB
   IF ERV = 0 THEN
      COPY FLYCLUB?.RBS A:
      ENDIF
ELSE
   NEWPAGE
   WRITE "TRY ANOTHER DISK, UNABLE TO BACKUP DATABASE" AT 15,10
   WRITE "PRESS ANY KEY TO CONTINUE" AT 17,14
PAUSE
BREAK
ENDIF
NEWPAGE
WRITE "THE PACK IS COMPLETE, AT 5,15"
WRITE "THE DISK IN DRIVE 'A' CONTAINS A BACKUP OF THE DATABASE" AT 7,4
WRITE "PRESS ANY KEY TO CONTINUE" AT 9,12
PAUSE
RETURN
$COMMAND
ADD_MEM
ENTER MEM_FORM
RETURN

$COMMAND
PUTCHG

*-------------------------------------------------------------------*

PROGRAM: PUTCHG.CMD
AUTHOR: D. R. GEORGE
DATE WRITTEN: DECEMBER, 1985
DESCRIPTION: ENTERS MEMBER'S CHARGES (INPUT BY MANAGER
FROM INDIVIDUAL CHARGE SHEETS)
TABLES USED: MEM_REC, MEM_CHG, MEM_FLT, INST_REC
FORM USED: CHGFORM

********************************************************************************

*(- Establish message parameters)
SET MESSAGES OFF
SET ERROR MESSAGES OFF
OPEN FLYCLUB
*(Establish loop for entering member number)
SET VARIABLE VMEMNUM TEXT
SET VARIABLE VMEMNUM TO 0
WHILE VMEMNUM EXISTS THEN
    NEWPAGE
    CLEAR VINVONUM
    CLEAR VTRANDAT
    CLEAR VACCHARG
    CLEAR VHRSFLOK
    CLEAR VACNUM
    CLEAR VINSTNAM
    CLEAR VINCHARG
    CLEAR VFSCHARG
    CLEAR VFSCHARG
    CLEAR VMSCREDIT
    CLEAR VCRTYPE
CLEAR VCHCTYPE
CLEAR VFLT_HRS
CLEAR VDAYLDG
CLEAR VNITELDG
CLEAR VNITEHRS
CLEAR VPREAPP
CLEAR VNONPRE
CLEAR VINSTIME

*(Get member number)
WRITE "Add New Charges (ESC to quit)" AT 2,1
FILLIN VMEMNUM USING "Enter member number - " AT 4,1
*(If no member number entered, exit)
IF VMEMNUM FAILS THEN
    SET MESSAGES ON
    SET ERROR MESSAGES ON
    BREAK
ENDIF *(VMEMNUM fails)
*(Look up member number in MEM_REC table)
SET POINTER #1 STATUS1 FOR MEM_REC WHERE MEM_NUM = .VMEMNUM
*(If member number not found, warn user)
IF STATUS1 <> 0 THEN
    WRITE "No such member number!" AT 18,1
    WRITE "Press any key to continue." AT 19,1
    PAUSE
    BREAK
*(Otherwise set up variables for screen)
ELSE
  SET VARIABLE NAME1 TO L:NAME IN #1
  SET VARIABLE NAME2 TO .NAME1 + ","
  SET VARIABLE NAME3 TO F:NAME IN #1
  SET VARIABLE NAME4 TO .NAME2 & .NAME3
  SET VARIABLE NAMES5 TO MID_INIT IN #1
  SET VARIABLE VFULLNAM TO .NAME4 & .NAME5
  SET VARIABLE VEXFUEL TO "EXCESS FUEL CHARGE"
  SET VARIABLE VINITFEE TO "INITIATION FEE"
  SET VARIABLE VKEYDEP TO "KEY DEPOSIT"
  SET VARIABLE VINITDUE TO "INITIAL DUES"
  SET VARIABLE VFUELCR TO "FUEL CREDIT"
  SET VARIABLE VKEYRET TO "KEY RETURN"
  SET VARIABLE VDUESCR TO "DUES CREDIT"
  SET VARIABLE VACRENT TO "AIRCRAFT RENTAL"
  SET VARIABLE VINCHG TO "INSTRUCTION CHARGE"
  SET VARIABLE VFSCHG TO "FLIGHT SUPPLIES"
  SET VARIABLE VFLT_HRS TO FLT_HRS IN FLT_REC WHERE MEM_NUM = .VMEMNUM
ENDIF *( Status1 <> 0)
NEWPAGE
DRAW CHGFORM WITH VARIABLE VMEMNUM VFULLNAM VFLT_HRS
WRITE "PRESS PGDN KEY TO ENTER DATA - PRESS ESC KEY TO QUIT" AT 24,8
ENTER VARIABLE VACNUM VINVONUM VTRANDAT VHRSFLOM VINSTNUM VINCHARG +
VFSCHARG VCHGTYPE VMCSCHARG VCTYPE VMSCREDIT VDAYLDG +
VNITELDG VNITEHRS VPREAPP VNONPRE VINSTIME RETURN PGDN ESC
*(If escape, break loop)
IF #RETURN = ESC THEN
  BREAK
ENDIF *(Escape)
*(Look up aircraft number)
SET POINTER #2 STATUS2 FOR A/C_REC WHERE A/C_NUM = .VACNUM
*(If aircraft number found, compute rental charge)
IF STATUS2 = 0 THEN
  SET VARIABLE VRENT TO RENT_RAT IN #2
  SET VARIABLE VACCHARG TO .VHRSFLON X .VRENT
ENDIF *(Status2 = 0)
*(-Look up instructor name)
SET POINTER #3 STATUS3 FOR MEM_REC WHERE INST_NUM = .VINSTNUM
IF STATUS3 = 0 THEN
  SET VARIABLE VINSTNAM TO L:NAME IN #3
ENDIF *(-look up instructor)
NEWPAGE
DRAW CHGFORM WITH ALL
WRITE "PRESS ANY KEY TO CONTINUE - ESC TO QUIT " AT 24,15
PAUSE
IF VACCHARG <> 0 THEN *(AIRCRAFT RENTAL)
  LOAD MEM_CHG
    .VMEMNUM .VINVONUM .VTRANDAT .VACCHARG .VACRENT +
    .VHRSFLON .VACNUM
END *(Load )

*(-- Update cum flight hours, last date flown, and last aircraft flown)
LOAD MEM_FLT
   .VMEMNUM .VHRSFLON .VTRANDAT .VDAYLDG .VNITEHRS .VNITELDG +
   .VINSTIME .VPREAPP .VNONPRE
END *(-- Load )

IF VHRSFLON EXISTS THEN
   IF VFLT_HRS EXISTS THEN
      ASSIGN FLT_HRS TO FLT_HRS + .VHRSFLON IN FLT_REC WHERE MEM_NUM +
      = .VMEMNUM
   ELSE
      LOAD FLT_REC USING MEM_NUM FLT_HRS LAST_FLT LAST_A/C
      .VMEMNUM .VHRSFLON .VTRANDAT .VACNUM
   END *( load )
ENDIF

 ChangE LAST_FLT TO .VTRANDAT IN FLT_REC WHERE MEM_NUM = .VMEMNUM
 ChangE LAST_A/C TO .VACNUM IN FLT_REC WHERE MEM_NUM = .VMEMNUM
ENDIF *(-- VHRSFLON exists )

*(-- load night time)
IF VNITEHRS > 0 THEN
   CHANGE LASTNITE TO .VTRANDAT IN FLT_REC WHERE MEM_NUM = .VMEMNUM
ENDIF *(-- load night time )

ENDIF *(Aircraft rental)
IF VINCHARG <> 0 THEN  *(Instruction charge)
  *(-- Load INST_REC table for generating instructor statements)
  LOAD INST_REC
      .VINSTNUM .VTRANDAT .VMEMNUM .VHRSFLON .VACNUM .VINCHARG
  END *(-- Load )
  LOAD MEM_CHG
      .VMEMNUM .VINVONUM .VTRANDAT .VINCHARG .VINCHG +
      .VHRSFLON .VACNUM
  END *(Load)
  *(-- update last instruction date )
  CHANGE LASTDUAL TO .VTRANDAT IN FLT_REC WHERE MEM_NUM = .VMEMNUM
ENDIF *(End instruction charge)

SET VARIABLE VACNUM TO " "
SET VARIABLE VHRSFLON TO " "
IF VFSCHARG <> 0 THEN  *(Flight supplies charge)
  LOAD MEM_CHG
      .VMEMNUM .VINVONUM .VTRANDAT .VFSCHARG .VFSCHG +
      .VHRSFLON .VACNUM
  END *(Load)
ENDIF *(End instruction charge)
IF VCHGTYPE = 1 THEN  *(Excess fuel charge)
  LOAD MEM_CHG
      .VMEMNUM .VINVONUM .VTRANDAT .VMSCHARG .VEXFUEL +
      .VHRSFLON .VACNUM
  END *(Load )
END IF *(Excess fuel)
LOAD MEM_CHG
VMEMNUM  VINOUM  VTRANDAT  VMSCHARG  VINITIEE +

END IF *(Initiation fee)
END

IF VCHGTYPE = 2 THEN *(Initiation fee)
LOAD MEM_CHG
VMEMNUM  VINOUM  VTRANDAT  VMSCHARG  VKEYDEP +

END IF *(Initiation fee)
END

IF VCHGTYPE = 3 THEN *(Key deposit)
LOAD MEM_CHG
VMEMNUM  VINOUM  VTRANDAT  VMSCHARG  VINITDUE +

END IF *(Key deposit)
END

IF VCHGTYPE = 4 THEN *(Initial dues)
LOAD MEM_CHG
VMEMNUM  VINOUM  VTRANDAT  VMSCHARG  VINITDUE +

END IF *(Initial dues)
END

SET VARIABLE VMSCHRED = VMSCHRED X -1
END IF *(Initial dues)
END

IF VCRTYPE = 5 THEN *(Fuel credit)
LOAD MEM_CHG
VMEMNUM  VINOUM  VTRANDAT  VMSCHRED  VFEUCLR +

END IF *(Fuel credit)
END

END *(Load )
ENDIF *(Fuel credit)
IF VCRTYPE = 6 THEN *(Key return)
    LOAD MEM_CHG
        .VMEMNUM .VINVNUM .VTRANDAT .VMSCREDIT .VKEYRET +
        .VHRSFLON .VACNUM
    END *(Load )
ENDIF *(Key return)
IF VCRTYPE = 7 THEN *(Dues credit)
    LOAD MEM_CHG
        .VMEMNUM .VINVNUM .VTRANDAT .VMSCREDIT .VDUESCR +
        .VHRSFLON .VACNUM
    END *(Load )
ENDIF *(Dues credit)
ENDWHILE
RETURN
$COMMAND
PUTPAY

*((***********************************************************************)

    PROGRAM: PUTPAY.CMD
    AUTHOR: D.R. GEORGE
    DATE WRITTEN: NOVEMBER, 1985
    DESCRIPTION: ENTERS MEMBER'S PAYMENTS (INPUT BY MANAGER)
    TABLE USED: MEM_REC, MEM_PAY
    FORM USED: PAYFORM

***********************************************************************)

*(-- Establish message parameters)
SET MESSAGES OFF
SET ERROR MESSAGES OFF
*(Establish loop for entering member number)
SET VARIABLE VMEMNUM TO 0
WHILE VMEMNUM EXISTS THEN
NEWPAGE
CLEAR VCHKNUM
CLEAR VTRANDAT
CLEAR VTRANAMT
*(Get member number)
WRITE "Add New Payments     (ESC to Quit)" AT 2,1
FILLIN VMEMNUM USING 'Enter Member Number - " AT 4,1
*(If no member number entered, exit)
IF VMEMNUM FAILS THEN
  SET MESSAGES ON
  SET ERROR MESSAGES ON
  BREAK
ENDIF *(vmemnum fails)
*(Look up member number in MEM_REC table)
SET POINTER #1 STATUS1 FOR MEM_REC WHERE MEM_NUM = .VMEMNUM
*(If member number not found, warn user)
IF STATUS1 <> 0 THEN
  WRITE "No such member number!" AT 18,1
  WRITE "Press any key to continue." AT 19,1
  PAUSE
ELSE
  SET VARIABLE NAME1 TO L:NAME IN #1
  SET VARIABLE NAME2 TO .NAME1 + ","
  SET VARIABLE NAME3 TO F:NAME IN #1
  SET VARIABLE NAME4 TO .NAME2 & .NAME3
SET VARIABLE Names5 to MID_INIT in #1
SET VARIABLE vFullNam to .name4 & .name5
SET VARIABLE vTranDat to .#DATE
ENDIF  *(Status1 <> 0)
NEWPAGE
DRAW PAYFORM with VARIABLE VMEMNUM VFULLNAM VTRANDAT
WRITE "PRESS PAGE DOWN KEY TO ENTER DATA - PRESS ESC KEY TO QUIT" AT 22,8
ENTER VARIABLE VCHKNUM VPAYMENT return PGDN ESC
*(If escape, break loop)
IF #RETURN = ESC THEN
BREAK
ENDIF  *(Escape)
LOAD MEM_Pay
   .VMEMNUM .VCHKNUM .VTRANDAT .VPAYMENT PAYMENT
END  *(End of Load)
ENDWHILE
RETURN
NEWPAGE
WRITE "THE CLUB ROSTER MAY BE PRINTED AS OFTEN AS DESIRED." AT 5,8
WRITE "UPDATES ARE PERFORMED WHenever MEMBERS ARE ENTERED." AT 7,8
WRITE "DO YOU WANT TO PROCEED? (Y/N) - " AT 11,17
SET VARIABLE YESNO TEXT
FILLIN YESNO USING " " AT 11,50
IF YESNO <> Y THEN
  GOTO BAILOUT
ENDIF *(-- yesno <> y)
NEWPAGE
WRITE "ENSURE PRINTER IS READY, THEN PRESS ANY KEY TO CONTINUE." AT 10,5
PAUSE
NEWPAGE
WRITE "WORKING...PLEASE STANDBY." AT 10,20
SET MESSAGES OFF
SET ERROR MESSAGES OFF
*(-- Print club roster )
OUTPUT PRINTER
SET NULL " "
SET VARIABLE TOTNUM INTEGER
COMPUTE TOTNUM AS COUNT MEM_NUM FROM MEM_REC
PRINT ROSTER SORTED BY L:NAME F:NAME
OUTPUT SCREEN
SET NULL -0-

NEWPAGE
SET MESSAGES ON
SET ERROR MESSAGES ON
WRITE "CLUB ROSTER COMPLETE." AT 7,17
WRITE "PRESS ANY KEY TO RETURN TO DOS." AT 10,15
PAUSE
NEWPAGE
RETURN

*(-- Bailout routine for immediate exit)
LABEL Bailout
NEWPAGE
WRITE " Returning to Main Menu Without Update." AT 7,10
*(-- End Of Program )
RETURN
$COMMAND
DISPATCH

********************

PROGRAM: DISPATCH.CMD
AUTHOR: D.R.GEORGE
DATE WRITTEN: FEBRUARY, 1986
DESCRIPTION: PRINTS THE DISPATCHER REPORT - INFORMATION IS
IS UPDATED WHENEVER MEMBER CHARGES ARE ENTERED.
TABLES USED: MEM_REC, MEM_FLT
REPORTS PRODUCED: DISPATCHER REPORT (DISPATCH)

NEWPAGE
WRITE "THE DISPATCHER REPORT MAY BE PRINTED AS OFTEN AS DESIRED. " AT 5,8
WRITE "UPDATES ARE PERFORMED WHENEVER CHARGES ARE ENTERED. " AT 7,11
WRITE "DO YOU WANT TO PROCEED? (Y/N) - " AT 11,17
SET VARIABLE YESNO TEXT
FILLIN YESNO USING " " AT 11,50
IF YESNO <> Y THEN
    GOTO BAILOUT
ENDIF *(-- yesno <> y)
NEWPAGE *(-- yesno <> y)
NEWPAGE
WRITE "ENSURE PRINTER IS READY, THEN PRESS ANY KEY TO CONTINUE." AT 10,5
PAUSE

NEWPAGE
WRITE "WORKING...PLEASE STANDBY." AT 10,20
SET MESSAGES OFF
SET ERROR MESSAGES OFF
*(-- Print dispatcher report )
OUTPUT PRINTER
SET NULL " "
PRINT DISPATCH SORTED BY L: NAME F: NAME
OUTPUT SCREEN
SET NULL -0-

NEWPAGE
SET MESSAGES ON
SET ERROR MESSAGES ON
CLEAR ALL VARIABLES
WRITE "DISPATCHER REPORT COMPLETE." AT 7,17
WRITE "PRESS ANY KEY TO RETURN TO DOS." AT 10,15
PAUSE

NEWPAGE
RETURN

*(-- Bailout routine for immediate exit)
LABEL Bailout
NEWPAGE
WRITE " Returning to Main Menu Without Update." AT 7,10
*(-- End Of Program )
RETURN
$COMMAND
INSTSTMT

********************************************************************************

PROGRAM: INSTSTMT.CMD
AUTHOR: D.R.GEORGE
DATE WRITTEN: FEBRUARY, 1986
DESCRIPTION: COMPUTES AND PRINTS INSTRUCTOR STATEMENTS
TABLES USED: INST_REC, INSTHIST
REPORTS PRODUCED: INSTRUCTOR STATEMENT (INSTSTMT)

NEWPAGE
WRITE "STATEMENTS ARE TO BE PRINTED ONCE A MONTH ONLY." AT 5,12
WRITE "MONTHLY UPDATES ARE AUTOMATICALLY PERFORMED." AT 7,13
WRITE "ENSURE A BACKUP COPY OF THE DATABASE HAS BEEN MADE." AT 9,10
WRITE "DO YOU WANT TO PROCEED? (Y/N) - " AT 11,17
SET VARIABLE YESNO TEXT
FILLIN YESNO USING " " AT 11,50
IF YESNO <> Y THEN
  GOTO BAILOUT
ENDIF *(-- yesno <> y)
NEWPAGE
WRITE "ENSURE PRINTER IS READY, THEN PRESS ANY KEY TO CONTINUE." AT 10,5
PAUSE

NEWPAGE
WRITE "WORKING. . . PLEASE STANDBY." AT 10,20
SET MESSAGES OFF
SET ERROR MESSAGES OFF

*(-- Print instructor statements )
OUTPUT PRINTER
SET NULL " "
SET POINTER #1 STATUS1 FOR MEM_REC SORTED BY L:NAME F:NAME WHERE +
    INST_NUM EXISTS
    WHILE STATUS1 = 0 THEN
        SET VARIABLE TEMPNUM1 TO INST_NUM IN #1
        PRINT INST_STMT WHERE INST_NUM = .TEMPNUM1
        NEXT #1 STATUS1
    ENDMWHILE *(-- Print instructor statements)
OUTPUT SCREEN
SET NULL -0-
*(-- Move transactions to history table)
APPEND INST_REC TO INSTHIST
*(-- Prepare table for next month's entries)
DELETE ROWS FROM INST_REC WHERE INST_NUM EXISTS
*(-- Updates complete)

NEWPAGE
SET MESSAGES ON
SET ERROR MESSAGES ON
WRITE "Monthly Instructor Statements Complete." AT 7,10
WRITE "PRESS ANY KEY TO RETURN TO DOS." AT 10,15
PAUSE
NEWPAGE
RETURN
*(-- Bailout routine for immediate exit)
LABEL Bailout
NEWPAGE
WRITE "Returning to Main Menu Without Update." AT 7,10
*(-- End Of Program )
RETURN
$COMMAND
LES_STMT

******************************************************************************

PROGRAM: LES_STMT.CMD
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DESCRIPTION: UPDATES AIRCRAFT HOURS, COMPUTES AND PRINTS LESSOR STATEMENTS, AND PRINTS THE MONTHLY AIRCRAFT STATUS REPORT.
TABLES USED: LES_ACCT, LES_HIST, A/C_REC, A/C_HRS, A/CMAINT MAINHIST, HOURHIST, TEMP_HRS
VARIABLE FORMS USED: LES_FORM, HOB_FORM
REPORTS PRODUCED: LESSOR STATEMENT (LES_STMT), AIRCRAFT STATUS REPORT (A/C_STAT)

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NEWPAGE
WRITE "STATEMENTS ARE TO BE PRINTED ONCE A MONTH ONLY." AT 5,12
WRITE "MONTHLY UPDATES ARE AUTOMATICALLY PERFORMED AT BILLING." AT 7,8
WRITE "ENSURE A BACKUP COPY OF THE DATABASE HAS BEEN MADE." AT 9,10
WRITE "DO YOU WANT TO PROCEED? (Y/N) - " AT 11,17
SET VARIABLE YESNO TEXT
FILLIN YESNO USING " " AT 11,50
IF YESNO <> Y THEN
  GOTO BAILOUT
ENDIF *(-- yesno <> y)
NEWPAGE
WRITE "ENSURE PRINTER IS READY, THEN PRESS ANY KEY TO CONTINUE." AT 10,5
PAUSE
NEWPAGE
WRITE "WORKING...PLEASE STANDBY." AT 10,20
SET MESSAGES OFF
SET ERROR MESSAGES OFF
*(Perform account updates in preparation for this month's statements)
*(Update hobbs meter hours )
ASSIGN HOBSTART TO HOB_END + 0 IN A/C_HRS
*(-- Establish loop to enter hours information for each aircraft )
SET VARIABLE VA/C_NUM TEXT
SET VARIABLE VA/C_NUM TO 0
WHILE VA/C_NUM EXISTS THEN
  CLEAR VHOB_END
  CLEAR VHOBMAIN
CLEAR VHOB_OWN
*(-- Get A/C number )
SET VARIABLE VALID = FALSE
WHILE VALID = FALSE THEN
  NEWPAGE
  WRITE "UPDATE HOBS METER READINGS " AT 2,1
  WRITE "WHEN FINISHED PRESS ENTER TO CONTINUE " AT 4,1
  FILLIN VA/C_NUM USING "Enter Aircraft Number - " AT 6,5
  *(-- If no aircraft number entered, exit )
  IF VA/C_NUM FAILS THEN
    BREAK
  ENDIF *(-- VA/C_NUM fails )
  *(-- Look up aircraft number in A/C_HRS table )
  SET POINTER #1 STATUS1 FOR A/C_REC WHERE A/C_NUM = .VA/C_NUM
  *(-- If aircraft number not found, warn user )
  IF STATUS1 = 0 THEN
    SET VARIABLE VALID = TRUE
  ELSE
    WRITE "NO SUCH A/C NUMBER EXISTS!" AT 18,1
    WRITE "PRESS ANY KEY TO CONTINUE. " AT 20,1
    PAUSE
  ENDIF *(-- Status <> 0 )
  NEWPAGE
  DRAW HOB_FORM WITH VARIABLE VA/C_NUM
  WRITE "PRESS PGDN KEY TO ENTER DATA - ESC TO QUIT" AT 20,16
ENTER VARIABLE VHOB_END VHOBMAIN VHOB_OWN RETURN PGDN ESC
*(-- If escape, break loop )
IF #RETURN = ESC THEN
  BREAK
ENDIF *(-- Escape)
CHANGE HOB_END TO .VHOB_END IN A/C_HRS WHERE A/C_NUM = .VA/C_NUM
CHANGE HOBMAINT TO .VHOBMAIN IN A/C_HRS WHERE A/C_NUM = .VA/C_NUM
CHANGE HOBOwner TO .VHOB_OWN IN A/C_HRS WHERE A/C_NUM = .VA/C_NUM
ENDWHILE *( Valid = false)
ENL ..:ILE *(-- A/C exists)

NEWPAGE
WRITE "WORKING, PLEASE STAND BY" AT 6,10
*(-- Update column values in A/C_HRS )
ASSIGN HOB_USED TO HOB_END - HOBSTART IN A/C_HRS
ASSIGN HOB_NET TO HOB_USED - HOBMAINT IN A/C_HRS
ASSIGN HOBLEMSE TO HOB_NET - HOBOwner IN A/C_HRS
ASSIGN CUM_HRS TO CUM_HRS + HOB_USED IN A/C_HRS

NEWPAGE
WRITE "WORKING ON LESSOR STATEMENTS, PLEASE STANDBY" AT 6,5
*(-- Print lessor statements and compute lease payment )
OUTPUT PRINTER
SET NULL " ">
SET POINTER #2 STATUS2 FOR A/C_REC WHERE LEAS_RAT EXISTS
  WHILE STATUS2 = 0 THEN
SET VARIABLE TEMPNUM2 TO A/C_NUM IN #2
COMPUTE LABOR AS SUM LABR_CHG FROM A/CMAINT WHERE A/C_NUM = .TEMPNUM2
COMPUTE PART AS SUM PART.CHG FROM A/CMAINT WHERE A/C_NUM = .TEMPNUM2
SET VARIABLE ALLMAINT TO .LABOR + .PART
CHANGE TOTMAINT TO .ALLMAINT IN A/C_HRS WHERE A/C_NUM = .TEMPNUM2
PRINT LES_STMT WHERE A/C_NUM = .TEMPNUM2
PRINT MAINT WHERE A/C_NUM = .TEMPNUM2
*(-- Determine lease payment due)
SET VARIABLE VTIME TO HOBLEASE IN A/C_HRS WHERE A/C_NUM = .TEMPNUM2
SET VARIABLE VRATE DOLLAR
SET VARIABLE VRATE TO LEAS_RAT IN #2
SET VARIABLE VAMOUNT DOLLAR
SET VARIABLE VAMOUNT TO .VTIME X .VRATE
CHANGE LEASEAMT TO .VAMOUNT IN A/C_HRS WHERE A/C_NUM = .TEMPNUM2
*(-- Determine lease payment due completed)
NEXT #2 STATUS2
ENDWHILE *(-- Print lessor statements)
OUTPUT SCREEN
SET NULL -0-
*(-- set up for monthly a/c status report)
NEWPAGE
WRITE "WORKING ON AIRCRAFT STATUS REPORT, PLEASE STANDBY" AT 4,3
*(-- print a/c status report )
OUTPUT PRINTER
SET NULL " "
PRINT A/C_STAT
OUTPUT SCREEN
SET NULL -0-

*(-- Establish temporary table to maintain copy of CUM_HRS, HOB_END, and
        MEM_NUM when tables are cleared for next month's entries.)
DELETE ROWS FROM TEMP_HRS WHERE LIMIT = 100
APPEND A/C_HRS TO TEMP_HRS
*(-- Move transactions to history tables)
APPEND A/C_HRS TO HOURHIST
APPEND A/CMAINT TO MAINHIST

*(-- Prepare tables for next month's entries)
DELETE ROWS FROM A/C_HRS WHERE A/C_NUM EXISTS
*( DELETE ROWS FROM A/CMAINT WHERE A/C_NUM EXISTS )
*(-- Return CUM_HRS, HOB_END, and MEM_NUM to A/C_HRS )
APPEND TEMP_HRS TO A/C_HRS
*(-- Updates complete)

NEWPAGE
SET MESSAGES ON
SET ERROR MESSAGES ON
WRITE "Monthly Lessor Statements and A/C Status Reports Complete." AT 7,5
WRITE "PRESS ANY KEY TO CONTINUE" AT 10,18
PAUSE
NEWPAGE
RETURN

*(-- Bailout routine for immediate exit)
LABEL Bailout
NEWPAGE
WRITE " Returning to Main Menu Without Update." AT 7,10
WRITE " PRESS ANY KEY TO CONTINUE " AT 9,15
PAUSE
NEWPAGE
*(-- End Of Program )
RETURN
BIBLIOGRAPHY


Woolcock, Tom, Manager, Monterey Navy Flying Club.


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END

DTTC

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