Database Management System

WA-RD 89.1

Program Documentation

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**Abstract**
The database management system was created in DBase III Plus. Included in this database is all research project historical and administrative information necessary to generate budget, expenditure, and management reports. A menu system was created to enable the user to view and update the database information, update and print all reports, and enter information on new projects.

**Key Words**
Database, DBase III, Microcomputer

**Distribution Statement**
Unclassified
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<td>D. Main.prg</td>
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<td>E. Check.prg</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

To get into Dbase:

1. At the DOS "C:" prompt type:
2. At dBase "." prompt type:
3. This will give you the main menu
4. Now go from here!
REPORTS CONTAINED IN THE DATABASE FILES

1. Monthly Expenditure Report
2. Proposal Development Worksheet
3. Project Management Report
4. Project Implementation/Evaluation Report
5. Fy86 Work Program Revisions
6. Research Program by Functional Area
7. Research Program by HPR/MVF
8. Principal Investigator's List
DOCUMENTATION

MAIN.PRG

This program was written to compare the existing information in the database against the new information entered. If the fields are different then both of them will be printed out.

For every field in the DBF files IDENTIFY and DENTIFY, there is a comparison made in Main.prg. When a user enters new information it compares the information to the previous information and if it is different it prints all the information and then replaces the old with the new.

PRINT.PRG

This program is a menu which appears on the screen. It lists all the reports which a user can print. If you ever add new reports to the database you will have to create an .FRM file and put the name of the .FRM file into this program.

DBMENU.PRG

This program produces the first menu the user sees on the screen; with each option the user chooses it directs the user to a new program. If you choose "update" you are directed to the Update.prg. If you choose "print" you are directed to Print.prg. If you choose "view" you are directed to the BROWSE command. If you choose "enter" you are directed to the Main.prg. Type "Q" to exit the program.

CHECK.PRG

This program locates the item number the user enters and searches for it in the old data. If it is found, the user will only be able to update; if it is not found then the user enters in new data. The new data is then appended into the old database.

If new fields are added to IDENTIFY.DBF or DENTIFY.DBF then each field will have to be added to this program also.

UPDATE.PRG

This program is called from Dbmenu.prg. It allows the user to update each report. A separate program has been written for each report. The user can update individual reports because of this.
DIRECTORY OF FILES

Format (.fmt) files

A. BUDGET = format file for the budget report
B. SHE1 = format file for the equipment inventory
C. PI = format file for the pi report
D. BUDGET = data entry screen for HPR/MVF work program
E. EXPEND = data entry screen for monthly expenditure report
F. MGMTUPDT = data entry screen for project management report
G. DEVELMT = data entry screen for proposal development worksheet

Report form (.frm) files

A. DEVELOPM = proposal development worksheet
B. PILIST = report form for P.I. list
C. HPRBUDG = research program by HPR/MVF
D. HPRSUMM = summary sheet for HPRBUDG
E. MGNTRPT = report form for management report
F. MOEXPEND = report form for monthly expenditure report
G. SHE1 = inventory report form
H. HPRALPHA = research program worksheet sorted by functional area
I. ALPHASUM = summary sheet for HPRALPHA

Command (.pro) files

A. DBMENU = program for main mainu
B. IDENTIFY = program for the main database
C. MAIN = program to check if user has entered new information
D. SHE1 = program for the inventory
E. UPDATE = program to let the user update
F. PRINT = program to let the user print
G. MGNTRPT2 = print project management report
H. DEVELO = print proposal development worksheet
I. CHECK = program which checks old data against new data
J. HPRBUDG = print research program by HPR/MVF
K. UPDATE_M = update project management report
L. UPDATE_B = update research program reports
M. UPDATE_D = update proposal development worksheet
N. PRPT = print principal investigator list
O. HPRALPHA = print research program by functional area
P. MTHLYRPT = print monthly expenditure report
Q. MOEXPEND = update monthly expenditure report
Database (.DBF) files
A. IDENTIFY = contains all of the data
B. MAILABEL = mail label database
C. SHE1 = inventory database
D. IDENTIFY = second database for IDENTIFY.DBF
E. HE = second database for the inventory

Index (.NDX) files
A. ITEMSORT = by item number
B. FUNCSORT = by functional area and project type and project title
C. PISORT = by pi name and project title
D. STATUSOR = status and functional area and project type and project title
E. HPRSORT = by HPR_MVF and fund type and item number
F. SHE1 = index for the inventory database
<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT_NO</td>
<td>Number</td>
<td>Account number</td>
</tr>
<tr>
<td>ACT_FY84</td>
<td>Number</td>
<td>Actual project costs FY84</td>
</tr>
<tr>
<td>ACT_FY85</td>
<td>Number</td>
<td>Actual project costs FY85</td>
</tr>
<tr>
<td>AGMT_NO</td>
<td>Number</td>
<td>Agreement number</td>
</tr>
<tr>
<td>BUDG_NOTES</td>
<td>Character</td>
<td>Budget notes (contained in research work program budget worksheets)</td>
</tr>
<tr>
<td>CMTS_PI</td>
<td>Character</td>
<td>Comments on draft report to P.I. (contained in project management report)</td>
</tr>
<tr>
<td>CNTCT_CMTS</td>
<td>Character</td>
<td>P.I. Contact comments (contained in project management report)</td>
</tr>
<tr>
<td>CNTCT_DATE</td>
<td>Date</td>
<td>Last P.I. contact date (contained in project management report)</td>
</tr>
<tr>
<td>COMP_DATE</td>
<td>Date</td>
<td>Project completion date</td>
</tr>
<tr>
<td>CO_FNAME</td>
<td>Character</td>
<td>Co-P.I. first name</td>
</tr>
<tr>
<td>CO_LNAME</td>
<td>Character</td>
<td>Co-P.I. last name</td>
</tr>
<tr>
<td>CTRCT_EXEC</td>
<td>Date</td>
<td>Contract execution (contained on project management report)</td>
</tr>
<tr>
<td>DFT_DUE</td>
<td>Date</td>
<td>Draft report due date (contained in project management report)</td>
</tr>
<tr>
<td>DFT_RCVD</td>
<td>Date</td>
<td>Draft report received (contained in project management report)</td>
</tr>
<tr>
<td>DFT_RVW</td>
<td>Date</td>
<td>WSDOT draft report review complete (contained in project management report)</td>
</tr>
<tr>
<td>DIST_COMP</td>
<td>Date</td>
<td>Final report distribution complete (contained in project management report)</td>
</tr>
<tr>
<td>EST_FY86</td>
<td>Number</td>
<td>Estimated project cost FY86</td>
</tr>
<tr>
<td>EST_FY87</td>
<td>Number</td>
<td>Estimated project cost FY87</td>
</tr>
<tr>
<td>NAME</td>
<td>TYPE</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FINAL_RCVD</td>
<td>Date</td>
<td>Final report received (contained in project management report)</td>
</tr>
<tr>
<td>FUNC_AREA</td>
<td>Character</td>
<td>Functional area (administration, highway operations, materials, planning and multimodal, implementation projects, special programs, specia projects, national program)</td>
</tr>
<tr>
<td>FUND_TYPE</td>
<td>Character</td>
<td>Fund/source type (administration/HPR or MVF, TRB, type A &amp; B projects/HPR, other programs/HPR or MVF)</td>
</tr>
<tr>
<td>FY86EXPEND</td>
<td>Number</td>
<td>Current FY86 project expenditure</td>
</tr>
<tr>
<td>HPR_MVF</td>
<td>Character</td>
<td>HPR, RTAP, FHWA or MVF funds</td>
</tr>
<tr>
<td>ITEM_NO</td>
<td>Number</td>
<td>Item number</td>
</tr>
<tr>
<td>LINE</td>
<td>Character</td>
<td>Used for adding lines to reports</td>
</tr>
<tr>
<td>MARTY_FY86</td>
<td>Number</td>
<td>Marty's FY86 estimated project costs</td>
</tr>
<tr>
<td>MTH_EXPEND</td>
<td>Number</td>
<td>Current monthly expenditure</td>
</tr>
<tr>
<td>ORIG_SUBM</td>
<td>Number</td>
<td>Original proposal submitter</td>
</tr>
<tr>
<td>PART_AGENCY</td>
<td>Character</td>
<td>Participating proposal submitter</td>
</tr>
<tr>
<td>PI_FNAME</td>
<td>Character</td>
<td>P.I. first name</td>
</tr>
<tr>
<td>PI_LNAME</td>
<td>Character</td>
<td>P.I. last name</td>
</tr>
<tr>
<td>PI_PHONE</td>
<td>Character</td>
<td>P.I. phone</td>
</tr>
<tr>
<td>PREFY86</td>
<td>Number</td>
<td>Previous FY86 expenditure (used for calculating FY86 expenditure report)</td>
</tr>
<tr>
<td>PREV_QTR</td>
<td>Number</td>
<td>Previous quarter expenditure (used to calculate QTR_EXPEND for the monthly expenditure report)</td>
</tr>
<tr>
<td>PREV_TOTAL</td>
<td>Number</td>
<td>Previous total (used for calculating TOTAL_EXPND for monthly expenditure report)</td>
</tr>
<tr>
<td>PRE_PROP_C</td>
<td>Date</td>
<td>Pre-proposal conference (contained in the project development report)</td>
</tr>
<tr>
<td>NAME</td>
<td>TYPE</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PRNTG_COMP</td>
<td>Date</td>
<td>Final report printing complete (contained in project management report)</td>
</tr>
<tr>
<td>PROJ_MGR</td>
<td>Character</td>
<td>Project manager</td>
</tr>
<tr>
<td>PROJ_TITL</td>
<td>Character</td>
<td>Project title</td>
</tr>
<tr>
<td>PROJ_TYPE</td>
<td>Character</td>
<td>Project type (bridge or PCC programs; district, executive, TRAC, or city/county special programs; demonstration projects, experimental projects, experimental features, implementation projects, or RTAP program)</td>
</tr>
<tr>
<td>PROP_ACCEPT</td>
<td>Date</td>
<td>WSDOT final proposal acceptance (contained in project development report)</td>
</tr>
<tr>
<td>PROP_COMP</td>
<td>Date</td>
<td>Draft proposal complete (actual date contained in project development report)</td>
</tr>
<tr>
<td>PROP_EST</td>
<td>Date</td>
<td>Draft proposal complete (estimated date contained in project development report)</td>
</tr>
<tr>
<td>PROP_FHWA</td>
<td>Date</td>
<td>Proposal to FHWA for approval (contained in project development report)</td>
</tr>
<tr>
<td>QTRPT_RCVD</td>
<td>Date</td>
<td>Quarterly progress report received (contained in project management report)</td>
</tr>
<tr>
<td>QTR_EXPEND</td>
<td>Number</td>
<td>Current quarter expenditure</td>
</tr>
<tr>
<td>RES_AGENCY</td>
<td>Character</td>
<td>Research agency</td>
</tr>
<tr>
<td>REV_FY86</td>
<td>Number</td>
<td>Revised FY86 expenditure</td>
</tr>
<tr>
<td>RPT_PRNTR</td>
<td>Date</td>
<td>Final report to printer (contained in project management report)</td>
</tr>
<tr>
<td>RVW_CONF</td>
<td>Date</td>
<td>Proposal review conference (contained in project development report)</td>
</tr>
<tr>
<td>RVW_DOT</td>
<td>Date</td>
<td>Draft proposal review (contained in project development report)</td>
</tr>
<tr>
<td>START_DATE</td>
<td>Date</td>
<td>Project start date</td>
</tr>
<tr>
<td>NAME</td>
<td>TYPE</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>STATUS</td>
<td>Character</td>
<td>Project status (P=proposed, A=active, C=completed)</td>
</tr>
<tr>
<td>STMT_APPRV</td>
<td>Date</td>
<td>Statement approved (contained in project development report)</td>
</tr>
<tr>
<td>STMT_SUBMT</td>
<td>Date</td>
<td>Statement submitted (contained in project development report)</td>
</tr>
<tr>
<td>TASK_NO</td>
<td>Number</td>
<td>Task number</td>
</tr>
<tr>
<td>TECH_CNTCT</td>
<td>Character</td>
<td>Technical contact</td>
</tr>
<tr>
<td>TOTAL_AUTH</td>
<td>Number</td>
<td>Total authorized dollars</td>
</tr>
<tr>
<td>TOTAL_COST</td>
<td>Number</td>
<td>Total project cost or total estimated cost</td>
</tr>
<tr>
<td>TOTAL_EXPN</td>
<td>Number</td>
<td>Total dollars expended to date</td>
</tr>
</tbody>
</table>
Figure 1. Dbase Program Chart.
* Dbmenu.prg
* This program displays the main screen.
CLEAR ALL
SET TALK OFF
FLG = .T.
**
DO WHILE FLG
CLEAR
@ 1,30 SAY "M A I N   M E N U"
@ 1,0 SAY TIME()
@ 1,72 SAY DTOC(DATE())
@3,0 SAY "=================================
@3,40 SAY "=================================
@ 6,15 SAY "Do you want to -"
@ 8,20 SAY "A) Update a report?"
@10,20 SAY "B) Print a report?"
@12,20 SAY "C) View the data?"
@14,20 SAY "D) Enter a new project?"
@17,15 SAY "Enter 'Q' if you wish to Quit"
@ 20,0 SAY ""
ACCEPT "Enter Choice " TO ANS
ANS = UPPER(ANS)
***
DO case
CASE ANS = "A"
   Do Update
CASE ANS = "B"
   do Print
CASE ANS = "C"
   USE Identify.dbf
   BROWSE
CASE ANS = "D"
   DO main
CASE ANS = "Q"
   FLG = .F.
   CLEAR
   RETURN
ENDCASE
***
ENDDO
**
* Print.prg
* This menu program is used for printing the reports.
SET TALK OFF
CLEAR ALL
FLAG = .T.
**
DO WHILE FLAG
CLEAR
@1,25 SAY "- PRINTING OF RESEARCH REPORTS -"
@1,0 SAY TIME()
@1,70 SAY DTIME()
@3,0 SAY "=================================================================="
@3,40 SAY "=================================================================="
@5,5 SAY "Enter the letter for the report you would like to print:"
@6,5 SAY "  (only one at a time)"
@8,5 SAY "  A. Monthly Expenditure Report   "
@9,5 SAY "  B. Proposal Development Worksheet   "
@10,5 SAY "  C. Project Management Report   "
@11,5 SAY "  D. Completed Research Projects Report   "
@12,5 SAY "  E. FY 86 Work Program Revisions   "
@13,5 SAY "  F. Research Program by Functional Area   "
@14,5 SAY "  G. Research Program by HPR/MVF Funding   "
@15,5 SAY "  H. Principal Investigator's List   "
@17,5 SAY "  M. Return to Main Menu   "
@20,5 SAY "  
ACCEPT "ENTER CHOICE " TO X
X = UPPER(X)
***
DO CASE
CASE X = "A"
  DO Mthlyrpt
CASE X = "B"
  DO Devel
CASE X = "C"
  DO Mgmtrep2
CASE X = "D"
  DO Comprpt
CASE X = "E"
  CLEAR
  @ 5,5 SAY "This report has not been written."
  @ 6,5 SAY "You will be returned to the Main Menu"
  WAIT
  DO MAIN
CASE X = "F"
  DO Hpralpha
CASE X = "G"
  DO Hprbudg
CASE X = "H"
  DO Pilist
CASE X = "M"
  CLEAR
  RETURN TO MASTER
OTHERWISE
  CLEAR
    @ 5,5 SAY "This is not one of the possible choices."
    @ 15,1 say " "
    WAIT
ENDCASE
***
UPDATE.PRG

* Update.prg
* This menu program is used for updating the reports.
SET TALK OFF
CLEAR ALL
FLAG = .T.
**
DO WHILE FLAG
CLEAR
@1,25 SAY "- UPDATING OF RESEARCH REPORTS -"
@1,0 SAY TIME()
@1,70 SAY Dtoc DATE()
@3,0 SAY "++++++++++++++++++++++++++++++++++++++"
@3,40 SAY "++++++++++++++++++++++++++++++++++++++"
@5,5 SAY "Enter a 1-10 for the report you would like to update:"
@6,5 SAY " (enter only one number)"
@8,5 SAY "A. Monthly Expenditure Report"
@9,5 SAY "B. Proposal Development Worksheet"
@10,5 SAY "C. Project Management Report"
@11,5 SAY "D. Project Implementation/Evaluation Report"
@12,5 SAY "E. FY 86 Work Program Revisions"
@13,5 SAY "F. Research Program by Functional Area"
@14,5 SAY "G. Research Program by HPR/MVF Funding"
@15,5 SAY "H. Principal Investigator's List"
@17,5 SAY "M. Return to Main Menu"
@20,5 SAY ""
ACCEPT "ENTER CHOICE" TO X
X = UPPER(X)
***
DO CASE
CASE X = "A"
   DO Moexpend
CASE X = "B"
   DO Update_d
CASE X = "C"
   DO Update_m
CASE X = "D"
   CLEAR
   @ 5,5 SAY "This report has not been written."
   @ 6,5 SAY "You will be returned to the Update Menu"
   @15,1 SAY ""
   WAIT
CASE X = "E"
   CLEAR
   @ 5,5 SAY "This report has not been written."
   @ 6,5 SAY "You will be returned to the Update Menu"
   @15,1 SAY ""
   WAIT
CASE X = "F"
   DO Update_b
CASE X = "G"
   DO Update_b
CASE X = "H"
   DO Pirpt
CASE X = "M"
   RETURN TO MASTER
OTHERWISE
   CLEAR
   @ 5,5 SAY "This is not one of the possible choices."
   @ 15,1 SAY ""
WAIT
ENDCASE
***
ENDDO
**
MAIN.PRG

SET TALK OFF
*
FLAG = .T.
CLEAR
DO WHILE FLAG = .T.
SELECT A
USE IDENTIFY INDEX ID2
SELECT B
USE IDENTIFY INDEX D3
SELECT A
CLEAR
@3,0 SAY "ENTER ITEM NO. (TYPE 'QUIT' IF DONE)"
ACCEPT TO ITEMNO
L = LEN(ITEMNO)
ITEMNO = ITEMNO + SPACE(4-L)
L = LEN(ITEMNO)
*
IF ITEMNO="QUIT"
   FLAG = .F.
ENDIF
LOCATE FOR ITEM_NO = ITEMNO
IF .NOT. EOF()
   SET FORMAT TO IDENTIFY
   CHANGE ALL FOR ITEM_NO = ITEMNO
ELSE
   APPEND BLANK
   ITEM_NO = ITEMNO
   SET FORMAT TO IDENTIFY
   READ
   ENDIF
*
SELECT B
LOCATE FOR ITEM_NO = ITEMNO
IF EOF()
   APPEND BLANK
   ITEM_NO=A->ITEM_NO
   ACCT_NO=A->ACCT_NO
   AGMT_NO=A->AGMT_NO
   TASK_NO=A->TASK_NO
   PROJ_NO=A->PROJ_NO
   PROJ_TITL=A->PROJ_TITL
   STATUS=A->STATUS
   START_DATE=A->START_DATE
   COMP_DATE=A->COMP_DATE
   FUNC_AREA=A->FUNC_AREA
   PROJ_TYPE=A->PROJ_TYPE
   FUND_TYPE=A->FUND_TYPE
   HPR_MVF=A->HPR_MVF
   ORIG_SUBM=A->ORIG_SUBM
   PI_LNAME=A->PI_LNAME
   PI_FNAME=A->PI_FNAME
   PI_PHONE=A->PI_PHONE
   PART_AGENCY=A->PART_AGENCY
   PROJ_MGR=A->PROJ_MGR
   RES_AGENCY=A->RES_AGENCY
   TECH_CNTCT=A->TECH_CNTCT
   MARTY_FY86=A->MARTY_FY86
   EST_FY86=A->EST_FY86
   EST_FY87=A->EST_FY87
ACT_FY84=A->ACT_FY84
ACT_FY85=A->ACT_FY85
BUDG_NOTES=A->BUDG_NOTES
TOTAL_COST=A->TOTAL_COST
TOTAL_AUTH=A->TOTAL_AUTH
TOTAL_EXPN=A->TOTAL_EXPN
MTH_EXPEND=A->MTH_EXPEND
PREV_QTR=A->PREV_QTR
QTR_EXPEND=A->QTR_EXPEND
PREVFY86=A->PREVFY86
FY86EXPEND=A->FY86EXPEND
REV_FY86=A->REV_FY86
STMT_SUBMT=A->STMT_SUBMT
STMT_APPRV=A->STMT_APPRV
PRE_PROP_C=A->PRE_PROP_C
PROP_EST=A->PROP_EST
PROP_COMP=A->PROP_COMP
RVW_DOT=A->RVW_DOT
RVW_CONF=A->RVW_CONF
PROP_ACCEPT=A->PROP_ACCEPT
PROP_FHWA=A->PROP_FHWA
CTRCT_EXEC=A->CTRCT_EXEC
CO_LNAME=A->CO_LNAME
CO_FNAME=A->CO_FNAME
CNTCT_DATE=A->CNTCT_DATE
QTRPT_RCVD=A->QTRPT_RCVD
DPT_DUE=A->DPT_DUE
DPT_RCVD=A->DPT_RCVD
DPT_RWV=A->DPT_RWV
CMTS_PI=A->CMTS_PI
FINAL_RCVD=A->FINAL_RCVD
RPT_PRNTR=A->RPT_PRNTR
PRNTG_COMP=A->PRNTG_COMP
DIST_COMP=A->DIST_COMP
RPT_TYPES=A->RPT_TYPES
COMMENTS=A->COMMENTS
LINE=A->LINE
ENDIF
ENDDO
DO check.prg
CLEAR
CLEAR all
SET TALK OFF
FLAG = .T.
SELECT a
USE identify index id2
SELECT b
USE identify index d3
SELECT A
@ 5,5 SAY "ENTER IN AN ITEM NUMBER"
ACCEPT TO ITEMNO
LOCATE FOR ITEM_NO = ITEMNO
SELECT B
LOCATE FOR ITEM_NO = ITEMNO
SELECT A
DO WHILE FLAG = .T.
CLEAR
IF ACCT_NO = B->ACCT_NO
ELSE
  @6,5 SAY "ACCT_NO:" GET ACCT_NO
  @6,25 SAY "ORIG ACCT_NO"
  @6,37 SAY B->ACCT_NO
ENDIF
IF AGMT_NO = B->AGMT_NO
ELSE
  @7,5 SAY "AGMT_NO:" GET AGMT_NO
  @7,25 SAY "ORIG AGMT_NO"
  @7,37 SAY B->AGMT_NO
ENDIF
IF TASK_NO = B->TASK_NO
ELSE
  @8,5 SAY "TASK_NO:" GET TASK_NO
  @8,25 SAY "ORIG TASK_NO"
  @8,37 SAY B->TASK_NO
ENDIF
IF PROJ_NO = B->PROJ_NO
ELSE
  @9,5 SAY "PROJ_NO" GET PROJ_NO
  @9,25 SAY "ORIG_PROJ_NO"
  @9,37 SAY B->PROJ_NO
ENDIF
IF PROJ_TITL = B->PROJ_TITL
ELSE
  @9,5 SAY "PROJ_TITL:" GET PROJ_TITL
  @9,25 SAY "ORIG_PROJ_TITL"
  @9,39 SAY B->PROJ_TITL
ENDIF
IF STATUS = B->STATUS
ELSE
  @10,5 SAY "STATUS:" GET STATUS
  @10,25 SAY "ORIG_STATUS"
  @10,39 SAY B->STATUS
ENDIF
IF START_DATE = B->START_DATE
ELSE
  @11,5 SAY "START_DATE:" GET START_DATE
  @11,25 SAY "ORIG_START_DATE"
  @11,39 SAY B->START_DATE
ENDIF
IF COMP_DATE = B->COMP_DATE
ELSE
    @12,5 SAY "COMP_DATE:" GET COMP_DATE
    @12,25 SAY "ORIG_COMP_DATE"
    @12,39 SAY B->COMP_DATE
ENDIF
IF FUNC_AREA = B->FUNC_AREA
ELSE
    @13,5 SAY "FUNC_AREA:" GET FUNC_AREA
    @13,25 SAY "ORIG_FUNC_AREA"
    @13,39 SAY B->FUNC_AREA
ENDIF
IF PROJ_TYPE = B->PROJ_TYPE
ELSE
    @14,5 SAY "PROJ_TYPE:" GET PROJ_TYPE
    @14,25 SAY "ORIG_PROJ_TYPE"
    @14,39 SAY B->PROJ_TYPE
ENDIF
IF FUND_TYPE = B->FUND_TYPE
ELSE
    @15,5 SAY "FUND_TYPE:" GET FUND_TYPE
    @15,25 SAY "ORIG_FUND_TYPE"
    @15,39 SAY B->FUND_TYPE
ENDIF
IF PI_LNAME = B->PI_LNAME
ELSE
    @19,5 SAY "PI_LNAME:" GET PI_LNAME
    @19,25 SAY "ORIG_PI_LNAME"
    @19,40 SAY B->PI_LNAME
ENDIF
IF MARTY_FY86 = B->MARTY_FY86
ELSE
    @33,5 SAY "MARTY_FY86:" GET MARTY_FY86
    @33,25 SAY "ORIG_MARTY_FY86"
    @33,40 SAY B->MARTY_FY86
ENDIF
IF EST_FY86 = B->EST_FY86
ELSE
    @33,5 SAY "EST_FY86:" GET EST_FY86
    @33,25 SAY "ORIG_EST_FY86"
    @33,40 SAY B->EST_FY86
ENDIF
IF EST_FY87 = B->EST_FY87
ELSE
    @34,5 SAY "EST_FY87:" GET EST_FY87
    @34,25 SAY "ORIG_EST_FY87"
    @34,40 SAY B->EST_FY87
ENDIF
IF ACT_FY84 = B->ACT_FY84
ELSE
    @35,5 SAY "ACT_FY84:" ACT_FY84
    @35,25 SAY "ORIG_ACT_FY84"
    @35,40 SAY B->ACT_FY84
ENDIF
IF ACT_FY85 = B->ACT_FY85
ELSE
    @36,5 SAY "ACT_FY85:" GET ACT_FY85
    @36,25 SAY "ORIG_ACT_FY85"
    @36,40 SAY B->ACT_FY85
ENDIF
IF TOTAL_COST = B->TOTAL_COST
ELSE
   @37,5 SAY "TOTAL_COST:" GET TOTAL_COST
   @37,25 SAY "ORIG_TOTAL_COST"
   @37,40 SAY B->TOTAL_COST
ENDIF
IF TOTAL_AUTH = B->TOTAL_AUTH
ELSE
   @38,5 SAY "TOTAL_AUTH:" GET TOTAL_AUTH
   @38,25 SAY "ORIG_TOTAL_AUTH"
   @38,40 SAY B->TOTAL_AUTH
ENDIF
ENDDO