

Card Details

Design Document

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1) Key Objectives

Developing a Simple Cards System and introducing the developer to the following Sub-systems/Concepts in Mainframe Technology.

- Fundamentals of CICS.
- Basic Mapping Support (BMS).
- Pseudo-Conversational Coding.
- VSAM File definition
- Batch Process – Retrieve VSAM data thru COBOL program and Report generation

2) Terminology

None

3) Files to be defined:

VSAM Files:

AMED – Card Details File

AMBS – Account File

File Format:

AMED:

Key: Org/Card Number – 22 bytes

<u>Field Name</u>	<u>Format</u>	<u>Length</u>	<u>Description</u>
AMED-ORG	Numeric	03	Org
AMED-CARD-NBR	Alphanumeric	19	Card Number
AMED-ACCT-NBR	Alphanumeric	19	Account Number
AMED-EMBOSS-NAME	Alphanumeric	30	Embosser Name
AMED-EXPIRY	Date	07	Expiry Date
AMED-CVC-NBR	Numeric	03	CVC Number
AMED-EMBOSS-PHONE	Numeric	10	Mobile Number
AMED-CRLIM	Numeric	S9(09)V99	Credit Limit
AMED-CURR-BAL	Numeric	S9(09)V99	Current Balance
AMED-OPEN-TO-BUY	Numeric	S9(09)V99	Open to Buy

AMBS:

Key: Org/Account Number – 22 bytes

<u>Field Name</u>	<u>Format</u>	<u>Length</u>	<u>Description</u>
AMBS-ORG	Numeric	03	Org
AMBS-ACCT	Alphanumeric	19	Account Number

AMBS-LOGO	Numeric	03	Logo
AMBS-ACCT-NAME	Alphanumeric	20	Account Name

4) Requirements Analysis

Data Requirements - Online Screens

This application will Add, Update and Delete Cards of Cards System.

The system will have the following on-line screens.

1. Main Menu Screen:

This will display all the available options.

2. Add New Embosser Screen:

This screen is for adding a new Embosser Details.

3. Update Embosser Screen:

This screen is for updating details of the Embosser.

4. Delete Embosser Screen:

This screen is for deleting the Embosser.

Main Menu Screen:

AR01	EMBOSSER DETAILS MAIN MENU	MM/DD/YY
1. ADD EMBOSSER DETAILS 2. UPDATE EMBOSSER DETAILS 3. DELETE EMBOSSER DETAILS 4. EXIT		
OPTION : X		
PF3 – EXIT		

Field	Description
OPTION	Option to be chosen from the screen amongst 1, 2, 3 or 4.

User Input:

- Choose from the one of the 4 options available on the screen.

Process:

- The system should navigate to the next screens when Enter key is pressed after entering the Option No. in the Option Entry area.

Validations:

- Program will throw an error message **"INVALID OPTION ENTERED"** if incorrect option number is entered.
- Program will throw an error message **"INCORRECT PFKEY – PRESS THE CORRECT PFKEY"** if any PFKEY other than those specified in the screen is pressed.

Note:

- The Date on the top right of the screen should be the Current Date.

Add Embosser Details Screen

AR02	EMBOSSER DETAILS ADD SCREEN	MM/DD/YY
ORG	(999)	
CARD NUMBER	(XXXXXXXXXXXXXXXXXXXX)	
ACCOUNT NUMBER	(XXXXXXXXXXXXXXXXXXXX)	
EMBOSSER NAME	(XXXXXXXXXXXXXXXXXXXX)	
EXPIRY DATE	(99/99/99)	
CVC	(999)	
EMBOSSER PHONE	(1234567890)	
CREDIT LIMIT	(123456789.99)	
CURR BALANCE	(123456789.99)	
PF3 – MAIN MENU	PF5 – SAVE	PF6 – CLEAR DETAILS

Field	Description
ORG	Organization
Card Number	Card Number assigned
Account Number	Account Number assigned
Credit Limit	Credit Limit on the Card
Current Balance	Current Balance on the Card
CVC	CVC on the Card
Card Expiry	Expiry Date on the Card
Embosser Phone	Mobile number of the Card holder

User Input:

- The User should provide all the field details on the screen

Process:

- When PF5 is pressed, the Open To Buy (Credit Limit – Current Balance) should be calculated in the program and all fields along with the OTB should be added on to the AMED File.
- When PF3 is pressed, the Main Menu screen should be displayed
- When PF6 is pressed, the data values entered in the screen should be cleared
- After the New Account has been added in the AMED File, the following message should appear on the screen – **“Card Details Added Successfully”**.

Validations:

- Program will throw an error message "**Card Already Existing**" if the ORG/Card Number combination is already existing in the file. The cursor should be positioned at the ORG field
- Program will throw an error message "**ENTER VALUE**" if any field is not specified. The cursor should be positioned at the corresponding field.
- Program should throw an error message "**WRONG DATA ENTERED**" if data entered by the User are not according to the Type of Data i.e. Numeric, Alphabetic etc. Check should be made for all fields on the screen.
- Program will throw an error message " **Account Not Existing**" if the ORG/Account Number combination is not existing in the Account File. The cursor should be positioned at the field in error.
-
- Program will throw an error message "**INCORRECT PFKEY – PRESS THE CORRECT PFKEY**" if any PFKEY other than those specified in the screen is pressed.

Update Embosser Details Screen

AR03	EMBOSSER DETAILS UPDATE SCREEN	MM/DD/YY
ORG	(999)	
CARD NUMBER	(XXXXXXXXXXXXXXXXXXXX)	
ACCOUNT NUMBER	(XXXXXXXXXXXXXXXXXXXX)	
EMBOSSER NAME	(XXXXXXXXXXXXXXXXXXXX)	
EXPIRY DATE	(99/99/99)	
CVC	(999)	
EMBOSSER PHONE	(1234567890)	
CREDIT LIMIT	(123456789.99)	
CURR BALANCE	(123456789.99)	
OPEN TO BUY	123456789.99	
PF3 – MAIN MENU PF5 – UPDATE ACCOUNT DETAILS PF6 – CLEAR DETAILS		

Field	Description
ORG	Organization
Card Number	Card Number assigned
Account Number	Account Number assigned
Credit Limit	Credit Limit on the Card
Current Balance	Current Balance on the Card
Open To Buy	Credit Limit – Current Balance
CVC	CVC on the Card
Card Expiry	Expiry Date on the Card
Embosser Phone	Mobile number of the Card holder

User Input:

- Enter Org and Card Number on the screen

Process:

- Once the Org/Card Number has been entered and on pressing Enter, the Account details should be fetched from the AMED File and displayed on the screen appropriately.
- The Open To Buy Field and Expiry Date will be protected and only be a display fields

- When any of the field is modified and PF5 is pressed, the updated values should be displayed
- When PF3 is pressed, the Main Menu screen should be displayed
- When PF6 is pressed, the data values entered in the screen should be cleared
- Once the record has been updated, the entire updated set of values need to appear on the screen for verification along with the message – **"Embosser Details Updated Successfully"**.

Validations:

- Program will throw an error message **"ENTER VALUE"** if the Org or Account Number field is not provided. The cursor should be positioned at the corresponding field.
- Program should throw an error message **"WRONG DATA ENTERED"** if data entered by the User is not according to the Type of Data i.e. Numeric, Alphabetic etc. Check should be made for all fields on the screen.
- Program will throw an error message **"INVALID ACCOUNT NUMBER"** if the Account number is not present in the file.
- Program will throw the message **"PLEASE GET CARD DETAILS FIRST BY PRESSING ENTER"** if the User presses PF5 before pressing Enter.
- Program will throw an error message **"INCORRECT PFKEY – PRESS THE CORRECT PFKEY"** if any PFKEY other than those specified in the screen is pressed.

Delete Embosser Details Screen

AR04	EMBOSSER DETAILS DELETE SCREEN	MM/DD/YY
ORG	(999)	
CARD NUMBER	(XXXXXXXXXXXXXXXXXXXXX)	
ACCOUNT NUMBER	XXXXXXXXXXXXXXXXXXXX	
EMBOSSER NAME	XXXXXXXXXXXXXXXXXXXX	
EXPIRY DATE	99/99/99	
CVC	999	
EMBOSSER PHONE	1234567890	
CREDIT LIMIT	123456789.99	
CURR BALANCE	123456789.99	
OPEN TO BUY	123456789.99	
PF3 – MAIN MENU PF5 – DELETE ACCOUNT PF6 – CLEAR DETAILS		

Field	Description
ORG	Organization
Card Number	Card Number assigned

User Input:

- Enter Org and Card Number on the screen

Process:

- Once the Org/Card Number has been entered and on pressing Enter, the Card details should be fetched from the AMED File and displayed on the screen appropriately.
- All the fields except the ORG/ Card Number will be protected and only be a display fields
- When PF3 is pressed, the Main Menu screen should be displayed
- When PF6 is pressed, the data values entered in the screen should be cleared
- Once the record is deleted, the message – “**Card Details Deleted Successfully**” has to be displayed.

Validations:

- Program will throw an error message “**ENTER VALUE**” if the Org or Card Number field is not provided. The cursor should be positioned at the corresponding field.

- Program will throw an error message **"INVALID CARD NUMBER"** if the Card number is not present in the file.
- Program will throw the message **"PLEASE GET CARD DETAILS FIRST BY PRESSING ENTER"** if the User presses PF5 before pressing Enter.
- Program will throw an error message **"INCORRECT PFKEY – PRESS THE CORRECT PFKEY"** if any PFKEY other than those specified in the screen is pressed.

5) Batch Process

5.1) Report 1

Create a Daily report of all the Cards based on ORG/Account from the AMED File

- Define Header structures in the program itself.
- The Report should have 20 entries per page.
- The Headers should appear on every New Page.
- Whenever the Account Number changes, the Account totals should be printed.
- Whenever the ORG changes, the ORG totals should be printed.
- Open To Buy will be calculated as Credit Limit – Current Balance
- The Grand Totals should come on the final page of the Report

```
1234567890123456789012345678901234567890123456789012345678901234567890
----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8
DD/MM/CCYY                EMBOSSEER DETAILS REPORT                PAGE : XX
```

```
ORG      : XXX
ACCOUNT  : 1234567890123456789
```

<u>CARD NUMBER</u>	<u>EMBOSSEER NAME</u>	<u>CREDIT LIMIT</u>	<u>CURR BALANCE</u>	<u>OPEN TO BUY</u>
0001234567890123456	EMBOSS NAME 1	000010000.00	000002500.00	000007500.00
0001234567890123457	EMBOSS NAME 2	000010000.00	000007500.00	000002500.00
ACCOUNT TOTALS :		000020000.00	000010000.00	000010000.00

```
DD/MM/CCYY                EMBOSSEER DETAILS REPORT                PAGE : XX
```

```
ORG      : XXX
ACCOUNT  : 1234567890123456787
```

<u>CARD NUMBER</u>	<u>EMBOSSEER NAME</u>	<u>CREDIT LIMIT</u>	<u>CURR BALANCE</u>	<u>OPEN TO BUY</u>
0001234567890123456	EMBOSS NAME 1	000010000.00	000002500.00	000007500.00
0001234567890123457	EMBOSS NAME 2	000010000.00	000007500.00	000002500.00
ACCOUNT TOTALS :		000020000.00	000010000.00	000010000.00

```
ORG TOTALS :                000040000.00 000020000.00 000020000.00
```

```
GRAND TOTAL :                000040000.00 000020000.00 000020000.00
```

5.2) Report 2

Create a Daily report of all the Cards based on the Expiry Date from the AMED File

- Define Header structures in the program itself.
- The Report should have 20 entries per page.
- The Headers should appear on every New Page.
- Whenever the EXPIRY DATE changes, the total number of accounts for that status should be printed.
- The Grand Totals should come on the final page of the Report

1234567890123456789012345678901234567890123456789012345678901234567890			
-----1-----2-----3-----4-----5-----6-----7-----8			
DD/MM/CCYY		CARD DETAILS REPORT	
PAGE : XX			
EXPIRY DATE : DD/MM/YY			
<u>CARD NUMBER</u>	<u>ACCOUNT NUMBER</u>	<u>EMBOSS NAME</u>	<u>CREDIT LIMIT</u>
0001234567890123456	0001234567890123456	EMBOSS NAME1	000002500.00
0001234567890123457	0001234567890123456	EMBOSS NAME2	000002500.00
TOTAL NUMBER OF CARDS : 2			
DD/MM/CCYY		CARD DETAILS REPORT	
PAGE : XX			
EXPIRY DATE : DD/MM/YY			
<u>CARD NUMBER</u>	<u>ACCOUNT NUMBER</u>	<u>EMBOSS NAME</u>	<u>CREDIT LIMIT</u>
0001234567890123456	0001234567890123456	EMBOSS NAME1	000002500.00
0001234567890123457	0001234567890123456	EMBOSS NAME2	000002500.00
TOTAL NUMBER OF CARDS : 2			
GRAND TOTAL : 4			
