

Application for Metro Card Management

Need to prepare a console application for the Metro Card Management System.

The application should allow to do below process.

- 1. New User Registration**
- 2. Login User**
- 3. Exit**

New User Registration:

Need to get the below User's details and add new user to the system

- UserName
- Phone Number
- Balance

Add the above details to the User Registration Details and display the message "your card number is CMRL1001" -Card number(Auto generation- CMRL1001).

Login User:

1. Get the card number from the user and check whether the card number is exists.
2. If exist, display the below sub menu options
 - a. Balance Check**
 - b. Recharge**
 - c. View Travel History**
 - d. Travel**
 - e. Exit**
3. Else, display "the card number you entered is not a valid one"

a. Balance Check

Display the balance amount of the user object which is related to the card number.

b. Recharge

Get the amount to be recharged and add the recharged amount to the balance amount of the user object which is related to the card number.

c. View Travel History

Display list of the travel history objects which is related to the card number.

d. Travel

1. Show the Ticket fair details where the user wishes to travel by getting TicketID.
2. Check the ticketID is valid. Else show "Invalid user id".
3. IF ticket is valid then, Check the balance from the user object whether it has sufficient balance to travel.
4. If "Yes" deduct the respective amount from the balance and add the travel details like Card number, From and ToLocation, Travel Date, Travel cost, Travel ID (auto generation) in his travel history.
5. If "No" ask him to recharge and go to the "Existing User Service" menu.

e. Exit

Go back to the main menu.

Exit

Close the application.

Personal Details Class:

Personal Registration Class should have below properties.

Properties:

- UserName
- Phone Number

IBalance interface:

IBalance interface should have below properties and methods.

Properties:

- Balance

Methods:

- WalletRecharge
- DeductBalance

User Details Class inherits Personal details class and IBalance:

User Registration Class should have below properties and methods.

Properties:

- CardNumber(Auto generation- CMRL1001)
- Balance

Methods:

- WalletRecharge
- DeductBalance

Travel Details Class:

Travel Details Class should have below properties:

Properties:

- a. TravelId (Auto Generated -TID2001)
- b. Card Number
- c. FromLocation
- d. ToLocation
- e. Date
- f. Travel Cost

TicketFair Details Class:

Ticket Fair Details Class should have below properties:

Properties:

- TicketID (Auto Generated – MR3001)
- FromLocation
- ToLocation
- TicketPrice

Default details of User Details class

CardNumber	UserName	Phone	Balance
CMRL1001	Ravi	9848812345	1000
CMRL1002	Baskaran	9948854321	1000

Default Travel history Details

TravelID	CardNumber	FromLocation	ToLocation	Date	TravelCost
TID2001	CMRL1001	Airport	Egmore	10/10/2023	55
TID2002	CMRL1001	Egmore	Koyambedu	10/10/2023	32
TID2003	CMRL1002	Alandur	Koyambedu	10/11/2023	25
TID2004	CMRL1002	Egmore	Thirumangalam	10/11/2023	25

Default Ticket Fair Details

TicketID	FromLocation	ToLocation	Fair
MR3001	Airport	Egmore	55
MR3002	Airport	Koyambedu	25
MR3003	Alandur	Koyambedu	25
MR3004	Koyambedu	Egmore	32
MR3005	Vadapalani	Egmore	45
MR3006	Arumbakkam	Egmore	25
MR3007	Vadapalani	Koyambedu	25
MR3008	Arumbakkam	Koyambedu	16