MID LAB TASK

The programmer have to create an Account management system, which will be a console-based application. The system should have an Account class, which will have three child classes: Savings, Current, and Loan. All the account holders should have name, id, opening date, address and balance. ID should be auto generated from your system with following format AS-XXXX, AC-XXXX, AL-XXXX for savings, current and loan account respectively. Joining date and address should be of custom type where the later will have apartment number, road number/name, district and country. Account holders can do certain operation such as Deposit(double amount), Withdraw(double amount), Transfer(string sender, string receiver, double amount).

For Savings Account --- No limitation of deposit but account holder can only withdraw maximum 2000 taka per transaction if and only if the account has sufficient balance.

For Current Account --- Minimum 500 taka needs to deposit but account holder can only withdraw maximum 5000 taka per transaction if and only if the account has sufficient balance.

For Loan Account --- No limitation of deposit also account holder can only withdraw up to balance of the account at once, where every transaction will cost 50 taka fee from the existing balance and balance can't be less than zero.

Transfer can be done between all accounts in the collection where there should be one receiver and one sender. If you cannot withdraw from an account certainly, you cannot deposit. In addition, this method needs to be static.

A container class called FinancialAccount will hold the collection of all the Accounts, where you should have methods for adding new account, delete, search individual account and show all accounts information. Id of an account can be used as an identifier for the collection. There will be method call StartSystem(), which will prompt user for following operations:

1. Add new Account [when pressed all the information should be given as input also do validation before adding and once account has been created Show "Account created successfully" and get back to option menu again. In case of failure also show some message and return to option menu]
2. Search Account [When pressed take ID as input and then search for the account also show notification and account information. Incase unavailable show only notification and then redirect to main option menu.]
3. Show All Account Information [After showing all accounts information redirect to main option menu]
4. Delete Account [When pressed take ID as input and then show delete notification. Incase unavailable also show notification and then redirect to main option menu.]
5. Deposit [When pressed take ID and amount as input then search the collection for availability and do the deposit operation and show notification of success or failure as well as that accounts full information with updated account balance and then redirect to main option menu]
6. Withdraw [When pressed take ID and amount as input then search the collection for availability do the withdraw operation and show notification of success or failure as well as that accounts full information with updated account balance and then redirect to main option menu]
7. Transfer [When pressed take both sender and receiver ID and amount as input then do the transfer operation and show notification of success or failure as well as that accounts full information with updated account balance and then redirect to main option menu].

8. Check Balance [Pressing 8 will take id of the account as input and will only show the current balance of the account if account is available]
9. Exit System [Pressing 9 will shut down the system any other invalid value will prompt try again and redirect to main option menu.]

static void Main(String[] args)
{
   StartSystem();
}

Follow all the rules and conventions for coding purpose. Any kind of cheating will be dealt strictly. You have to share your screen to show the code during the mid viva session. Please don't alter the Main method which is given and also don't alter the signature of the given methods. You can declare any method, properties or other necessary components as per your requirement. Partial marking will be given in case of incomplete task.