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| **Title** | **Application for Bank Account** |
| **Module(s) Covered** | C# |
| **Duration** | 3 Hours |
| **Maximum Marks** | 50 |
| **Note** | Make assumptions as needed and applicable |
| **Deliverables** | Code base for the above scenario |

**Account**

**Properties**

Account Number: Integer

UserName: String

Balance: Integer

**Methods**

OpenAccount ()

CloseAccount ()

EditAccount ()

Deposit ()

Withdrawal ()

Check\_Balance ()

**ITransaction**

P**roperties**

FromAccount: Integer

ToAccount: Integer

**Methods**

TransferAmount ()

**IROI**

P**roperties**

TypeOfAccount: String

**Methods**

GetRateofInterest ()

**Current Account**

**Properties**

MinBalanceRequired: Integer

**Methods**

GetAccountDetails ()

**Saving Account**

**Properties**

MaxAmountPerDay: Integer

**Methods**

GetAccountDetails ()

1. Create an abstract class of Account (2)
2. Create the classes of Saving Account and Current Account inherited from the Account Class(3)
3. Set AccountNumber Property as Read-only Property. (3)
4. Use Constructor and Destructor. (3)
5. Implement an OpenAccount () to add a new account and generate a new unique account number. (3)
6. Set validation for an account opening balance as Rs. 1000 min balance. (3)
7. Capture UserDetails as UserName while opening a new account. (3)
8. Use Static Variables to generate 12 digits account number. (3)
9. Use Abstract and Virtual Functions and Static variables wherever required. (3)
10. Implement RemoveAccount () to remove the account permanently and there must be 0 balances at the time of Removing Account. (3)
11. Implement EditAccount () to Edit the UserName and User should not be able to edit the account number. (3)
12. Raise a User defined Exception if the Available balance goes below MinBalanceRequired.(3)
13. Raise a User defined Exception if the MaxAmountPerDay is exceeding the limit. (3)
14. Implement IROI interface in Saving Account and Current Account Classes to get the GetRateofInterest (). (3)
15. Implement ITransaction interface in Saving Account and Current Account Classes to Transfer Money from one account to other account. (3)
16. Implement GetAccountDetails () to get the account details as AccountNumber, AvailableBalance and UserName. (3)
17. Use appropriate Data Structure like: ArrayList, List and Sorted List. (3)