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| **Name: Mir Monjur Morshed** | **Id: 19-40913-2** | **Sec: M** | **Time: 1 Hour** |

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| --- |
| **Account** |
| String accountNo  double balance |
| Account( )  Account(String accountNo, double balance)  void setAccountNo(String accountNo)  void setBalance(double balance)  String getAccountNo( )  double getBalance( )  boolean depositAmount(double amount)  boolean withdrawAmount(double amount)  void showDetails( ) |

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| --- |
| **Customer** |
| int nid  String name  Account accounts[ ] |
| Customer(int nid, String name, int size)  void setNid(int nid)  void setName(String name)  int getNid( )  String getName( )  void insertAccount(Account a)  void removeAccount(Account a)  void showAllAccounts( ) |

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| **SavingsAccount** |
| double interestRate |
| SavingsAccount( )  SavingsAccount(String accountNo, double balance, double interestRate)  void setInterestRate (double interestRate)  double getInterestRate( ) |

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| --- |
| **FixedAccount** |
| int tenureYear |
| FixedAccount( )  FixedAccount(String accountNo, double balance, int tenureYear)  void setTenureYear(int tenureYear)  int getTenureYear( ) |

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| --- |
| **Start** |
| Write a class named ***Start*** that contains the main method. Inside the main method create three objects of ***FixedAccount*** and three objects of ***SavingsAccount*** using their parameterized constructor and object references of ***Account***. Create two objects of ***Customer***. Demonstrate all the methods of Customer class. |

***Submission Guideline:***

1. Fill up the necessary information at the beginning of the file.
2. Copy and Paste all the codes in this file.
3. Save the file.
4. Rename the file as per your ID. For example, if your id is 12-21219-2, you have to rename the file as LT5\_12-21219-2.docx.
5. Upload the file in Teams.

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import java.lang.\*;

public class Account

{

private String accountNo;

private double balance;

public Account()

{

System.out.println("Empty constructor Account");

}

public Account(String accountNo, double balance)

{

System.out.println("Parameterize constructor Account");

this.accountNo = accountNo;

this.balance = balance;

}

public void setAccountNo(String accountNo)

{

this.accountNo=accountNo;

}

public void setBalance(double balance)

{

this.balance=balance;

}

public String getAccountNo()

{

return accountNo;

}

public double getBalance()

{

return balance;

}

public boolean depositAmount(double amount)

{

if(amount>0)

{

balance = balance + amount;

System.out.println("Amount Deposited :"+amount);

System.out.println("Your new Balance is :"+balance);

return true;

}

else

{

System.out.println("Deposite not possible..");

return false;

}

}

public boolean withdrawAmount(double amount)

{

if(amount>0 && amount<=balance)

{

balance=balance-amount;

System.out.println("Amount Withdraw :"+amount);

System.out.println("Your current balance is :"+balance);

return true;

}

else

{

System.out.println("Withdraw not possible..");

return false;

}

}

public void showDetails()

{

System.out.println("Account Number: "+accountNo);

System.out.println("Account Balance: "+balance);

}

}

import java.lang.\*;

public class FixedAccount extends Account

{

private int tenureYear;

public FixedAccount()

{

System.out.println("Empty construstor Fixed Account");

}

public FixedAccount(String accountNo,double balance,int tenureYear)

{

super(accountNo, balance);

this.tenureYear=tenureYear;

System.out.println("Parameterize construstor Fixed Account");

}

public void setTenureYear(int tenureYear)

{

this.tenureYear=tenureYear;

}

public int getTenureYear()

{

return tenureYear;

}

}

import java.lang.\*;

public class SavingsAccount extends Account

{

private double interestRate;

public SavingsAccount()

{

System.out.println("Empty constructor Savings Account");

}

public SavingsAccount(String accountNo, double balance, double interestRate)

{

super(accountNo,balance);

this.interestRate=interestRate;

System.out.println("Parameterize constructor Savings Account");

}

public void setInterestRate(double interestRate)

{

this.interestRate=interestRate;

}

public double getInterestRate()

{

return interestRate;

}

}

import java.lang.\*;

public class Customer

{

private int nid;

private String name;

private Account accounts[];

public Customer(int nid, String name,int size)

{

System.out.println("Parameterize construstor Customer");

this.nid = nid;

this.name = name;

accounts = new Account[size];

}

public void setNid(int nid)

{

this.nid = nid;

}

public void setName(String name)

{

this.name = name;

}

public int getNid()

{

return nid;

}

public String getName()

{

return name;

}

public void insertAccount(Account a)

{

boolean flag = false;

for(int i =0;i<accounts.length;i++)

{

if(accounts[i] == null)

{

accounts[i]=a;

flag = true;

break;

}

}

if(flag == true)

{

System.out.println("Inserted");

}

else

{

System.out.println("Can Not Insert");

}

}

public void removeAccount(Account a)

{

boolean flag = false;

for(int i=0; i<accounts.length; i++)

{

if(accounts[i] == a)

{

accounts[i] = null;

flag = true;

break;

}

}

if(flag==true)

{

System.out.println("Removed.....");

}

else

{

System.out.println("can not possible to Remove");

}

}

public void showAllAccount()

{

for(int i=0; i<accounts.length; i++)

{

if(accounts[i] != null)

{

System.out.println("...........\n");

System.out.println("accounts["+i+"] Account Number: "+accounts[i].getAccountNo());

System.out.println("accounts["+i+"] Account Balance: "+accounts[i].getBalance());

}

}

}

}

import java.lang.\*;

public class Start

{

public static void main(String args[])

{

Account a1 = new FixedAccount("F387138",25000,5);

Account a2 = new FixedAccount("F912837",30000,6);

Account a3 = new FixedAccount("Fsd3123",35000,7);

Account a4 = new SavingsAccount("S120812",40000,12);

Account a5 = new SavingsAccount("S921972",45000,15);

Account a6 = new SavingsAccount("S092821",50000,18);

System.out.println(" \n...................................................\n ");

Customer c1= new Customer(12312312,"Monjur",10);

Customer c2= new Customer(12312333,"Morshed",10);

System.out.println(" \n...................................................\n ");

System.out.println("Customer NID no: "+c1.getNid());

System.out.println("Customer Name: "+c1.getName());

c1.insertAccount(a1);

c1.insertAccount(a2);

c1.insertAccount(a3);

c1.insertAccount(a4);

c1.insertAccount(a5);

c1.insertAccount(a6);

System.out.println(" \n...................................................\n ");

c1.showAllAccount();

System.out.println(" \n...................................................\n ");

c1.removeAccount(a1);

c1.removeAccount(a2);

c1.removeAccount(a3);

c1.removeAccount(a4);

c1.removeAccount(a5);

c1.removeAccount(a6);

System.out.println(" \n...................................................\n ");

System.out.println("Customer NID no: "+c2.getNid());

System.out.println("Customer Name: "+c2.getName());

c2.insertAccount(a1);

c2.insertAccount(a2);

c2.insertAccount(a3);

c2.insertAccount(a4);

c2.insertAccount(a5);

c2.insertAccount(a6);

System.out.println(" \n...................................................\n ");

c2.showAllAccount();

System.out.println(" \n...................................................\n ");

c2.removeAccount(a1);

c2.removeAccount(a2);

c2.removeAccount(a3);

c2.removeAccount(a4);

c2.removeAccount(a5);

c2.removeAccount(a6);

}

}