```
class Account{
    public static void main(String[] args){
        double balance = 600;
        System.out.println("Amount to withdraw");
        double amount = 500;

        if (amount <= 0 || amount > balance){
           System.out.println("Withdrawal has failed");
        }else{
            balance-=amount;
            System.out.println("Withdrawal has succeeded");
        }
    }
}
```

Execution Result

Output:

> Amount to withdraw
> Withdrawal has succeeded

```
class Account{
    public static void main(String[] args){
        double balance = 600;
        System.out.println("Amount to withdraw");
        double amount = 500;
        if(amount<=0){
            System.out.println("Withdrawal has failed as the amount is negative");
        }
        else if(amount>balance){
            System.out.println("Withdrawal has failed as the balance is low");
        }
        else{
            balance-=amount;
            System.out.println("Withdrawal has succeeded");
        }
    }
}
```

Execution Result

Output:

> Amount to withdraw
> Withdrawal has succeeded

```
class Account {
  public static void main(String[] args) {
    int choice = 0;
    choice = 2;   // Input taken from user
    switch(choice) {  // choice passed to switch statement
      // choice has to match the case value to execute the statements in that case option.
      case 1:         // new record entry: newEntry()
        System.out.println("Entry deposition");
        break;

      case 2:         // displaying details of account: display()
        System.out.println("Display operation");
        break;        // break keyword is used to exit from the switch block.

      case 3:         // deposit operation: deposit()
        System.out.println("Deposit operation");
        break;

      default:        // If no case matches, default will be executed.
        System.out.println("Invalid choice");
    }
  }
}
```

Execution Result

Output:

```
Display operation
```

```
import java.util.Scanner;
class Account {
  public static void main(String[] args) {
    double balance = 0;
    double minbal = 500;
    double depositAmt = 0;
    //Scanner sc = new Scanner(System.in);  uncomment when working in eclipse

    do {
      System.out.println("$100 have been added to the account");
      depositAmt +=100;                    // harcode different depositAmt values
      //depositAmt = sc.nextInt();         uncomment when working in eclipse
    } while(depositAmt < minbal);
    balance = depositAmt;
    System.out.println("Transaction Complete");
  }
}
```

Execution Result

Output:

```
$100 have been added to the account
$100 have been added to the account
$100 have been added to the account
$100 have been added to the account
$100 have been added to the account
Transaction Complete
```

```java
import java.util.Scanner;
class Account {
  public static void main(String[] args) {
    double balance = 0;
    double minbal = 500;
    double depositAmt = 0;
    //Scanner sc = new Scanner(System.in);      // uncomment when working in eclipse
    while(depositAmt < minbal) {
      System.out.println("$100 have been added to account");
      //depositAmt = sc.nextInt();              // harcode different depositAmt values
                                                // uncomment when working in eclipse
      depositAmt +=100;
    }
    balance = depositAmt;
    System.out.println("Transaction Complete");
  }
}
```

Execution Result

Output:

```
$100 have been added to account
$100 have been added to account
$100 have been added to account
$100 have been added to account
$100 have been added to account
Transaction Complete
```

```
class Account {
  public static void main(String[] args) {
    double balance = 6000, rateOfInterest = 0.10, interest = 0;
    double withdrawal = 500, deposit = 600;
    for(int i = 1; i <= 12; ++i) {
      balance += deposit;
      balance -= deposit;
      interest = balance * rateOfInterest;
      balance += interest;
      System.out.println("The interest for the month " + i + " is " + interest);
    }
    System.out.println("The balance at the end of the year is " + balance);
  }
}
```

Execution Result

Output:

```
The interest for the month 1 is 600.0
The interest for the month 2 is 660.0
The interest for the month 3 is 726.0
The interest for the month 4 is 798.6
The interest for the month 5 is 878.46
The interest for the month 6 is 966.3060000000002
The interest for the month 7 is 1062.9366000000002
The interest for the month 8 is 1169.2302600000003
The interest for the month 9 is 1286.1532860000004
The interest for the month 10 is 1414.7686146000005
The interest for the month 11 is 1556.2454760600006
The interest for the month 12 is 1711.8700236660006
The balance at the end of the year is 18830.570260326007
```

```java
class Bank {
  public static void main(String[] args) {
    int[] phone = new int[3];   // primitive type array
    phone[0] = 7120686;
    phone[1] = 7120687;       // inserting element in an array
    phone[2] = 7120684;
    int count = 1;
    for(int i = 0; i < phone.length; ++i) {   // traversing an array
      System.out.println("phone number " + count + ": " + phone[i]);
      ++count;
    }
  }
}
```

Execution Result

Output:

```
phone number 1: 7120686
phone number 2: 7120687
phone number 3: 7120684
```

```java
class bank{
    public static void main(String[] args){
        Customer[] customer = new Customer[2]; //Reference type Array
        Customer customer1 = new Customer("Anil", "Acc12345");
        Customer customer2 = new Customer("Ajay", "Acc12346");
        customer[0] = customer1; //storing in the array
        customer[1] = customer2;
        for(int i=0;i<customer.length;i++){ //traversing the array
            Customer customeObject = customer[i]; //retrieving customer Object
            String name = customeObject.displayCustomerName();
            System.out.println("the customer name is..."+name);

        }
    }
}

class Customer{
    private String name;
    private String customerId;

    Customer(String uname, String ucustomerId){
        name = uname;
        customerId = ucustomerId;
    }

    public String displayCustomerName(){
        return name;
    }
}
```

Execution Result

Output:

```
the customer name is...Anil
the customer name is...Ajay
```

```java
class Acccount{
    public static void main(String[] args){
        double balance = 6000;
        double rateOfInterest = 0.10;
        double interest = 0;
        double withdrawal = 500;
        double deposit = 600;
        int[] arr = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12};
        for(int i: arr) {   // The iteration in the loop happens automatically. The value is assigned to
                    //variable i from the array in every iteration of the loop.
            balance += deposit;   // Loop will repeat the statements in its body till the last element is reached in the array.
            balance -= withdrawal;
            interest = balance * rateOfInterest;
            balance += interest;
            System.out.println("The interest for the month " + i + " is " + interest);
            }
        }
}
```

Execution Result

Output:

```
The interest for the month 1 is 610.0
The interest for the month 2 is 681.0
The interest for the month 3 is 759.1
The interest for the month 4 is 845.0100000000001
The interest for the month 5 is 939.5110000000001
The interest for the month 6 is 1043.4621000000002
The interest for the month 7 is 1157.8083100000001
The interest for the month 8 is 1283.5891410000004
The interest for the month 9 is 1421.9480551000004
The interest for the month 10 is 1574.1428606100003
The interest for the month 11 is 1741.5571466710005
The interest for the month 12 is 1925.7128613381003
```

```java
class Bank {
  private String bankName, area;
  private String phoneNumber;
  Bank() {    // Default constructor
    bankName = "IBank";
    area = "Gandhi Nagar";
    phoneNumber = "9876543210";
  }
  Bank(String bname, String barea, String phoneNo) {  // Parameterized constructor
    bankName = bname;
    area = barea;
    phoneNumber = phoneNo;
  }
  void displayBankDetails(){
      System.out.println("bank Name: " + bankName);
      System.out.println("Area of bank: " + area);
      System.out.println("Phone number of bank: " + phoneNumber);
  }

  public static void main(String[] args){
      Bank bank1 = new Bank();  //call default constructor
      Bank bank2 = new Bank("IBank", "Jaydev Nagar", "8876543219"); //call Parameterized constructor

      bank1.displayBankDetails();
      System.out.println("**********************");
      bank2.displayBankDetails();
  }
}
```

Execution Result

Output:

```
bank Name: IBank
Area of bank: Gandhi Nagar
Phone number of bank: 9876543210
**********************
bank Name: IBank
Area of bank: Jaydev Nagar
Phone number of bank: 8876543219
```

```java
class Bank {
    private String bankName; //instance variable
    private String area;
    private String phoneNumber;

    Bank(String bankName, String area, String phoneNumber) { // Parameterized constructor

        this.bankName = bankName;   //this keyword is used to assign
        this.area = area;           //the value for instance variables
        this.phoneNumber = phoneNumber;

    }

    void displayBankDetails(){
        System.out.println("bank Name: " + bankName);
        System.out.println("Area of bank: " + area);
        System.out.println("Phone number of bank: " + phoneNumber);

    }

    public static void main(String[] args){

        Bank bank = new Bank("IBank", "Jaydev Nagar", "8876543210"); //call default constructor
        bank.displayBankDetails();

    }

}
```

Execution Result

Output:

```
bank Name: IBank
Area of bank: Jaydev Nagar
Phone number of bank: 8876543210
```

```
class Loan {
  int tenure;
  double principal;
  float interestRate;
  String accountNumber;
  public double calculateEMI(){
      double simpleInterest = (principal*interestRate*tenure)/100;
      return (simpleInterest+principal)/tenure;
  }
}
class HomeLoan extends Loan {
  HomeLoan() {
    tenure = 5; //reusing super class member variables
    principal = 20000;
    interestRate = 8.5f;
    accountNumber = "Acc12345";
  }

public static void main(String[] args) {
    HomeLoan hloan = new HomeLoan();
    double amount = hloan.calculateEMI();   // sub class Object
                                            // invoking super class method
    System.out.println("emi per year..." + amount);
  }
}
```

Execution Result

Runtime Exception

Error: Could not find or load main class member

```java
class Loan{
    private float interest;

    Loan(){
        interest = 8.5f;
    }

    //calculateEMI overloaded methods
    public double calculateEMI(int tenure, double principal){
        double simpleInterest = (principal * interest * tenure) / 100;
        return (simpleInterest+principal)/tenure;
    }
    public double calculateEMI(double principal, int tenure){
        double simpleInterest = (principal * interest * tenure) / 100;
        return (simpleInterest+principal)/tenure;
    }
    public double calculateEMI(int tenure, double principal, float interest){
        double simpleInterest = (principal * interest * tenure) / 100;
        return (simpleInterest+principal)/tenure;
    }

    public static void main(String[] args){
        Loan loan = new Loan();
        double result = loan.calculateEMI(20000d, 5); //d means double
        double value = loan.calculateEMI(5, 20000d);
        double val = loan.calculateEMI(5, 20000, 9.5f); // f means float

        System.out.println("EMI per year is..." + result);
        System.out.println("EMI per year is..." + value);
        System.out.println("EMI per year is..." + val);

    }
}
```

Execution Result

Output:

```
EMI per year is...5700.0
EMI per year is...5700.0
EMI per year is...5900.0
```