Name:Satlas Rohit B

Regno:2024503305

Java Assignment-2

Week-2

2.1 Code

```
class BankAccount {
static int totalAccounts = 0;
int accountNumber;
int balance;
BankAccount(int accNo, int initialBalance) {
accountNumber = accNo;
balance = initialBalance;
totalAccounts++; // increases when new account is created
}
void deposit(int amount) {
int depositAmount = amount; // local variable
balance += depositAmount;
System.out.println("Account " + accountNumber +
                   " deposited: " + depositAmount +
                   " | New Balance: " + balance);
}
}
public class BankSystemDemo {
public static void main(String[] args) {
```

```
BankAccount acc1 = new BankAccount(101, 500);

BankAccount acc2 = new BankAccount(102, 1000);

acc1.deposit(200);

acc2.deposit(500);

System.out.println("Total accounts created: " +
BankAccount.totalAccounts);

}

}
```

Output:

```
Name:B.Satlas Rohit
Regno : 2024503305
Account 101 deposited: 200 | New Balance: 700
Account 102 deposited: 500 | New Balance: 1500
Total accounts created: 2
```

2.2 Code

```
import java.util.Scanner;

class Main {

   public static void main(String[] args) {

      Scanner scan=new Scanner(System.in);

      System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");

      double[] dayaverage=new double[5];

      double weekaverage=0;

      Double[][] attendence=new Double[5][8];

      System.out.println("Attendance Calculation");

      for(int i=0;i<5;i++){

         System.out.println("Attendance for day "+(i+1));

         for(int j=0;j<8;j++){

            attendence[i][j]=scan.nextDouble();

         }
```

```
        }
        for(int i=0;i<5;i++){
            int average=0;
            for(int j=0;j<8;j++){
                average+=attendence[i][j];
            }
            dayaverage[i]=average;
        }
        for(int i=0;i<5;i++){
            System.out.println("Attendance Percetage for day"+(i+1)+":"+dayaverage[i]/8);
            weekaverage+=dayaverage[i]/8;
        }
        System.out.println("Attendance fro Week Average: "+weekaverage/5);
    }
}
```

Output:

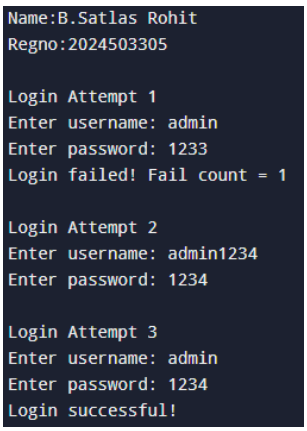
```
Name:B.Satlas Rohit
Regno:2024503305
Attendance Calculation
Attendance for day 1
1 1 1 1 1 1 0 0
Attendance for day 2
1 1 1 1 1 0 0 0
Attendance for day 3
0 0 0 0 0 0 0 0
Attendance for day 4
1 1 1 1 1 1 1 1
Attendance for day 5
0 0 0 0 1 1 1 1
Attendance Percetage for day1:0.75
Attendance Percetage for day2:0.625
Attendance Percetage for day3:0.0
Attendance Percetage for day4:1.0
Attendance Percetage for day5:0.5
Attendance fro Week Average: 0.575
```

2.3 Code

```
import java.util.Scanner;
public class LoginSystem {
```

```
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");
        int failCount = 0;
        for (int i = 1; i <= 3; i++) {
            System.out.println("\nLogin Attempt " + i);
            System.out.print("Enter username: ");
            String username = sc.nextLine();
            System.out.print("Enter password: ");
            String password = sc.nextLine();
            if (username.equals("admin") && password.equals("1234")) {
                System.out.println("Login successful!");
            }
            else if (!username.equals("admin") && !password.equals("1234")) {
                failCount++;
                System.out.println("Login failed! Fail count = " + failCount);
            }
        }
        sc.close();
    }
}
```

Output:



2.4 Code

```
import java.util.Scanner;
public class VaccineEligibility {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");
      System.out.print("Enter patient age: ");
      int age = sc.nextInt();
      if (age >= 18 && age <= 65) {
         System.out.println("Eligible for vaccination.");
         System.out.print("Enter appointment number: ");
         int appNo = sc.nextInt();
         if (appNo >= 100 && appNo <= 999) {
            if (appNo % 2 == 0) {
               System.out.println("Assigned: Priority Slot");
            } else {
               System.out.println("Assigned: Regular Slot");
            }
            int lastDigit = appNo % 10;
          switch (lastDigit) {
               case 1:
                  System.out.println("Gift: Pen");
                  break;
               case 2:
                  System.out.println("Gift: Mask");
                  break;
               case 3:
                  System.out.println("Gift: Sanitizer");
                  break;
```

```
                default:
                    System.out.println("No special gift.");
            }
        } else {
            System.out.println("Invalid appointment number (must be 3 digits).");
        }
    } else {
        System.out.println("Not eligible for vaccination (Age must be 18–65).");
    }

    sc.close();
  }
}
```

Output:

```
Name:B.Satlas Rohit
Regno:2024503305
Enter patient age: 36
? Eligible for vaccination.
Enter appointment number: 234
Assigned: Priority Slot
No special gift.
```

2.5 Code

```
import java.util.Scanner;
public class VowelFrequency {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");
      System.out.print("Enter a string: ");
      String input = sc.nextLine();
      input = input.toLowerCase();
      char[] chars = input.toCharArray();
```

```
        int countA = 0, countE = 0, countI = 0, countO = 0, countU = 0;
        for (char ch : chars) {
            switch (ch) {
                case 'a':
                    countA++;
                    break;
                case 'e':
                    countE++;
                    break;
                case 'i':
                    countI++;
                    break;
                case 'o':
                    countO++;
                    break;
                case 'u':
                    countU++;
                    break;
            }
        }
        System.out.println("\nVowel Frequencies:");
        System.out.println("a: " + countA);
        System.out.println("e: " + countE);
        System.out.println("i: " + countI);
        System.out.println("o: " + countO);
        System.out.println("u: " + countU);
        sc.close();
    }
}
```

Output:

```
Name:B.Satlas Rohit
Regno:2024503305
Enter a string: Sample

Vowel Frequencies:
a: 1
e: 1
i: 0
o: 0
u: 0
```

2.6 Code

```
import java.util.Scanner;
public class MatrixRowSum {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");
        int[][] matrix = new int[3][3];
        int[] rowSum = new int[3];
        System.out.println("Enter 3x3 matrix elements:");
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                System.out.print("Element [" + (i+1) + "][" + (j+1) + "]: ");
                matrix[i][j] = sc.nextInt();
            }
        }
        for (int i = 0; i < 3; i++) {
            int sum = 0;
            for (int j = 0; j < 3; j++) {
                sum += matrix[i][j];
            }
```

```
            rowSum[i] = sum;
            System.out.println("Sum of row " + (i+1) + ": " + sum);
        }
        int maxSum = rowSum[0];
        int rowNumber = 1;
        for (int i = 1; i < 3; i++) {
            if (rowSum[i] > maxSum) {
                maxSum = rowSum[i];
                rowNumber = i + 1;
            }
        }
        System.out.println("Row with highest sum: Row " + rowNumber);

        sc.close();
    }
}
```

Output:

```
Name:B.Satlas Rohit
Regno:2024503305
Enter 3x3 matrix elements:
Element [1][1]: 3
Element [1][2]: 5
Element [1][3]: 2
Element [2][1]: 3
Element [2][2]: 5
Element [2][3]: 1
Element [3][1]: 6
Element [3][2]: 4
Element [3][3]: 3
Sum of row 1: 10
Sum of row 2: 9
Sum of row 3: 13
Row with highest sum: Row 3
```

2.7 Code

```
import java.util.Scanner;
public class TrafficLight {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.println("Name:B.Satlas Rohit\nRegno:2024503305");
      System.out.print("Enter traffic light color (red, yellow, green): ");
      String color = sc.nextLine().toLowerCase();
      switch (color) {
         case "red":
            System.out.println("Stop");
            break;
         case "yellow":
            System.out.println("Ready to move");
            break;
         case "green":
            System.out.println("Go");
            break;
         default:
            System.out.println("Invalid color");
      }
      sc.close();
   }
}
```

Output:

```
Name:B.Satlas Rohit
Regno:2024503305
Enter traffic light color (red, yellow, green): red
Stop
```