Journal – 2

1) Bank Account Details

```
import java.util.*;
public class BankAccount
{
   private String depositorName;
   private int accountNumber;
   private String accountType;
   private double balance;

   // Constructor with no arguments
   public BankAccount() {
      this("", 0, "Savings", 0.0);
   }

   // Constructor with name and account number arguments
   public BankAccount(String name, int accountNumber) {
      this(name, accountNumber, "Savings", 0.0);
   }

   // Constructor with all arguments
   public BankAccount(String name, int accountNumber, String accountType, double balance) {
      this.depositorName = name;
      this.accountNumber = accountNumber;
      this.accountType = accountType;
      this.balance = balance;
   }

   // Method to assign initial values
   public void setInitialValues(String name, int accountNumber, String accountType, double
balance) {
      this.depositorName = name;
      this.accountNumber = accountNumber;
      this.accountType = accountType;
      this.balance = balance;
   }

   // Method to deposit an amount
   public void deposit(double amount) {
      if(amount > 0) {
         balance += amount;
```

```
            System.out.println("Deposit successful. New balance is " + balance);
        } else {
            System.out.println("Invalid amount. Please enter a positive amount to deposit.");
        }
    }

    // Method to withdraw an amount after checking balance
    public void withdraw(double amount) {
        if(amount <= 0) {
            System.out.println("Invalid amount. Please enter a positive amount to withdraw.");
        } else if(amount > balance) {
            System.out.println("Insufficient balance. You can withdraw up to " + balance);
        } else {
            balance -= amount;
            System.out.println("Withdrawal successful. New balance is " + balance);
        }
    }

    // Method to display name and balance
    public void display() {
        System.out.println("Depositor name: \n" + depositorName);
        System.out.println("Account number: \n" + accountNumber);
        System.out.println("Account type: \n" + accountType);
        System.out.println("Current balance: \n" + balance);
    }
    public static void main(String args[]){
        Scanner s=new Scanner(System.in);
     // Create an instance of BankAccount with no arguments
BankAccount account1 = new BankAccount();
// Set initial values using setInitialValues method
account1.setInitialValues("John Smith", 12345, "Savings",0.0);
// Deposit 500
System.out.println("Enter the amount That You want to Deposit:");
double depositAmount=s.nextDouble();
account1.deposit(depositAmount);
// Withdraw 200
System.out.println("Enter the amount That You want to Withdrawr:");
double withdrawAmount=s.nextDouble();
account1.withdraw(withdrawAmount);
// Display account information
    }
}
```

```
C:\Users\21bca74>set path=C:\Program Files (x86)\Java\jdk1.8.0_161\bin

C:\Users\21bca74>v:

V:\>cd kush

V:\kush>cd sem4

V:\kush\sem4>cd JAVA

V:\kush\sem4\JAVA>javac BankAccount.java

V:\kush\sem4\JAVA>java BankAccount
Enter the amount That You want to Deposit:
2100
Deposit successful. New balance is 2100.0
Enter the amount That You want to Withdrawr:
1000
Withdrawal successful. New balance is 1100.0

V:\kush\sem4\JAVA>
```

2) Print Floyd's triangle

```
import java.util.*;
class Program2
{
    public static void main(String[] args)
    {
            int n = 5;
            int i, j, k = 1;
            for (i = 1; i <= n; i++)
            {
                    for (j = 1; j <= i; j++)
                    {
                            System.out.print(k + " ");
                            k++;
                    }
                    System.out.println();
            }
    }
}
```

```
V:\kush\sem4\JAVA>javac Program2.java

V:\kush\sem4\JAVA>java Program2
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15

V:\kush\sem4\JAVA>
```

3) Find Batsman's and bowler's Average

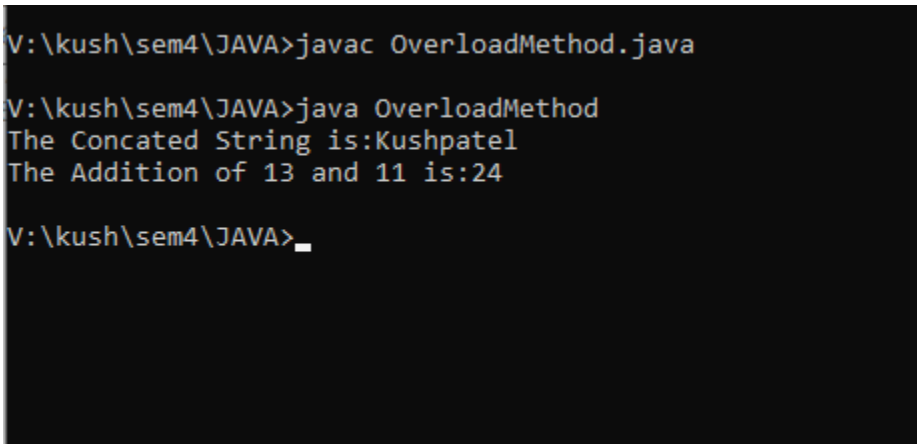
```
class Crickter
{
   public String name;
   public double matchPlayed;
   public void setValues(String name,double matchPlayed)
     {
      this.name=name;
      this.matchPlayed=matchPlayed;
   }
}
class Batsman extends Crickter
{
   public double totalruns;
   public double avarageRuns(double totalruns)
     {
      this.totalruns=totalruns;
      return this.totalruns/matchPlayed;
   }

}
class Bowler extends Crickter
{
   public double wickets;
   public double avarageWickets(double wickets)
     {
      this.wickets=wickets;
      return this.wickets/matchPlayed;
   }
}
class main
{
   public static void main(String args[])
     {
      Batsman bm=new Batsman();
      bm.setValues("Sachin Tendulkar",782);
      double avgRuns=bm.avarageRuns(34357);
      System.out.println("Batsman Information\n");
      System.out.println("Batsman Name:"+bm.name);
```

```
        System.out.println("Batsman Run:"+bm.totalruns);
        System.out.println("Batsman Match Played:"+bm.matchPlayed);
        System.out.println("Batsman Avg Runs:"+avgRuns);
        Bowler br=new Bowler();
        br.setValues("Muttiah Muralitharan",583);
        double avgWickets=br.avarageWickets(1347);
        System.out.println("\nBowler Information\n");
        System.out.println("Bpwler Name:"+br.name);
        System.out.println("Bpwler Wicketcs:"+br.wickets);
        System.out.println("Bpwler Match Played:"+br.matchPlayed);
        System.out.println("Bpwler Avg Wickets:"+avgWickets);
    }
}
```

```
V:\kush\sem4\JAVA>javac  main.java

V:\kush\sem4\JAVA>java  main
Batsman Information

Batsman Name:Sachin Tendulkar
Batsman Run:34357.0
Batsman Match Played:782.0
Batsman Avg Runs:43.93478260869565

Bowler Information

Bpwler Name:Muttiah Muralitharan
Bpwler Wicketcs:1347.0
Bpwler Match Played:583.0
Bpwler Avg Wickets:2.3104631217838767

V:\kush\sem4\JAVA>
```

4) Method overloaded

```
class OverloadMethod
{
   public void display(String s1,String s2)
     {
      System.out.println("The Concated String is:"+(s1+s2));
   }
   public void display(int a,int b)
     {
      System.out.println("The Addition of "+a+" and "+b+" is:"+(a+b));
   }
   public static void main(String args[])
     {
      OverloadMethod o=new OverloadMethod();
      o.display("Kamlesh","Kumawat");
      o.display(13,11);
   }
}
```



5) Check string palindrome or not

```
import java.util.*;
class Palindrome
{
  public static void main(String args[])
  {
    String original, reverse = "";
    Scanner in = new Scanner(System.in);
    System.out.println("Enter a string to check if it is a palindrome");
    original = in.nextLine();
    int length = original.length();
    for ( int i = length - 1; i >= 0; i-- )
      reverse = reverse + original.charAt(i);
    if (original.equals(reverse))
      System.out.println("Entered is a palindrome.");
    else
      System.out.println("Entered isn't a palindrome.");
  }
}
```

```
V:\kush\sem4\JAVA>javac Palindrome.java

V:\kush\sem4\JAVA>java Palindrome
Enter a string to check if it is a palindrome
saras
Entered is a palindrome.

V:\kush\sem4\JAVA>javac Palindrome.java

V:\kush\sem4\JAVA>java Palindrome
Enter a string to check if it is a palindrome
kush
Entered isn't a palindrome.
```

6) String Sorting in alphabetic format

```
import java.util.Arrays;
import java.util.Scanner;
public class SortingString
{
  public static void main(String args[])
  {
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter a string value: ");
    String str = sc.nextLine();
    char charArray[] = str.toCharArray();
    Arrays.sort(charArray);
    System.out.println     (new String(charArray));
  }
}
```

```
V:\kush\sem4\JAVA>javac SortingString.java

V:\kush\sem4\JAVA>java SortingString
Enter a string value:
kush
hksu

V:\kush\sem4\JAVA>javac SortingString.java

V:\kush\sem4\JAVA>java SortingString
Enter a string value:
kush
hksu

V:\kush\sem4\JAVA>
```

7) Find Area

```
interface Area{
   public void Calculatearea();
}
class rectangle implements Area{
   float x,y;
   public rectangle(float x,float y){
      this.x=x;
      this.y=y;
   }
   public void Calculatearea(){
      System.out.println("The Area of Rectangle is:"+(this.x*this.y));
   }
}
class triangle implements Area{
   float x,y;
   public triangle(float x,float y){
      this.x=x;
      this.y=y;
   }
   public void Calculatearea(){
      System.out.println("The Area of Triangle is:"+((this.x*this.y)/2));

   }
}
class square implements Area{
   float x;
   public square(float x){
      this.x=x;
   }
   public void Calculatearea(){
      System.out.println("The Area of Square is:"+(this.x*this.x));
   }
}
class CalculateArea{
   public static void main(String args[]){
      //hare hight=20 and width=40
      rectangle re=new rectangle(20,40);
      re.Calculatearea();
```

```
        //hare base=20 and hight=40
        triangle tr=new triangle(20,40);
        tr.Calculatearea();
        //hare hight=40
        square sq=new square(40);
        sq.Calculatearea();
    }
}
```

```
V:\kush\sem4\JAVA>javac CalculateArea.java

V:\kush\sem4\JAVA>java CalculateArea
The Area of Rectangle is:800.0
The Area of Triangle is:400.0
The Area of Square is:1600.0

V:\kush\sem4\JAVA>
```

8) Exception Handling

```
class OddException extends Exception{
   OddException(String str){
      System.out.println(str);
   }
}
class ExceptionHandaling{
   public static void main(String args[]){
      int a=Integer.parseInt(args[0]);
      try{
         if(a%2==0){
            System.out.println("The "+a+" is Even.");
         }
         else{
            throw new OddException("Number Consist Odd Value.");
         }

      }
      catch(OddException e){
         System.out.println(e);;
      }

   }
}
```

```
V:\kush\sem4\JAVA>javac ExceptionHandaling.java

V:\kush\sem4\JAVA>java ExceptionHandaling
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 0
        at ExceptionHandaling.main(ExceptionHandaling.java:8)

V:\kush\sem4\JAVA>
```

9) **Student Name and age in descending order.**

```
import java.util.*;
class StudentDetail{
   public static void main(String args[])
         {
      String
StdName[]={"Yash","Divyang","Kaushik","Ajay","Kamlesh","Shivraj","Abhay","Ch
etan","Vivek","Brijesh"};
      int age[]={18,18,18,18,19,19,19,19,18,18};
      int n=9;
      String temp;
      for (int i=0; i<=n;i++)
                  {
         for (int j=i+1;j<=n;j++)
                                    {
            // to compare one string with other strings
            if (StdName[i].compareTo(StdName[j]) > 0)

                                    {
               // swapping
               temp = StdName[i];
               StdName[i] = StdName[j];
               StdName[j] = temp;
            }
         }
      }
      for(int i=0;i<=n;i++)
                  {
         for(int j=i+1;j<=n;j++)
                           {
            //to set the age in descnding order
            int temp1;
            if(age[i]>age[j])
                                    {
               temp1=age[i];
               age[i]=age[j];
               age[j]=temp1;
```

```
            }
          }
        }
        System.out.println("Names & Age in descnding order.");
        System.out.println("Names\t\t\tAge");
        System.out.println("==================== \t====================");
        for (int i = n; i >=0; i--)
                    {
          System.out.println(StdName[i]+"\t\t\t"+age[i]);
        }

    }
}
```

```
V:\kush\sem4\JAVA>javac StudentDetail.java

V:\kush\sem4\JAVA>java StudentDetail
Names & Age in descnding order.
Names                   Age
====================    ====================
Yash                    19
Vivek                   19
Shivraj                 19
Kaushik                 19
Kamlesh                 18
Divyang                 18
Chetan                  18
Brijesh                 18
Ajay                    18
Abhay                   18

V:\kush\sem4\JAVA>
```

10) All String function

```
import java.util.*;
public class MyString {
   private String str;

   public MyString(String str) {
      this.str = str;
   }

   public String reverse() {
      return new StringBuilder(str).reverse().toString();
   }

   public String toTitleCase() {
      StringBuilder result = new StringBuilder(str.length());
      String[] words = str.split("\\s");

      for (String word : words) {
         if (!word.isEmpty()) {
            result.append(Character.toUpperCase(word.charAt(0)));
            result.append(word.substring(1).toLowerCase());
         }

         result.append(" ");
      }

      return result.toString().trim();
   }

   public String extractNFromRight(int n) {
      if (n >= str.length()) {
         return str;
      }

      return str.substring(str.length() - n);
   }

   public static void main(String[] args) {
```

```
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a string: ");
        String str = scanner.nextLine();
        MyString myString = new MyString(str);
        char ch;
        do {
           System.out.println();
           System.out.println("Menu:");
           System.out.println("1. Reverse string");
           System.out.println("2. String in Titlecase");
           System.out.println("3. Extract N-characters from right-end of the string");
           System.out.println("4. Exit");
           System.out.print("Enter your choice: ");

           int choice = scanner.nextInt();
           scanner.nextLine();

           switch (choice) {
              case 1:
                 System.out.println("Reversed string: " + myString.reverse());
                 break;
              case 2:
                 System.out.println("Titlecased string: " + myString.toTitleCase());
                 break;
              case 3:
                 System.out.print("Enter N: ");
                 int n = scanner.nextInt();
                 scanner.nextLine();
                 System.out.println("Extracted " + n + " characters from right: " +
myString.extractNFromRight(n));
                 break;
              case 4:
                 System.out.println("Exiting...");
                 System.exit(0);
                 break;
              default:
                 System.out.println("Invalid choice. Try again.");
           }
           System.out.println("Do you want to continue?(press=y)");
           ch=scanner.next().charAt(0);
```

```
        }while(ch=='y');
    }
}
```

```
V:\kush\sem4\JAVA>javac MyString.java

V:\kush\sem4\JAVA>java MyString
Enter a string: kush

Menu:
1. Reverse string
2. String in Titlecase
3. Extract N-characters from right-end of the string
4. Exit
Enter your choice: 1
Reversed string: hsuk
Do you want to continue?(press=y)
y

Menu:
1. Reverse string
2. String in Titlecase
3. Extract N-characters from right-end of the string
4. Exit
Enter your choice: 2
Titlecased string: Kush
Do you want to continue?(press=y)
```