JAVA JOURNAL

Journal:2

1)Bank Account Details

```java
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);
```

```java
      } 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
   }
}
```

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```
D:\21BCA53\JAVA>javac BankAccount.java

D:\21BCA53\JAVA>java BankAccount
Enter the amount That You want to Deposit:
20000
Deposit successful. New balance is 20000.0
Enter the amount That You want to Withdrawr:
12000
Withdrawal successful. New balance is 8000.0
```

2)Print Floyd's triangle

```java
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();
        }
    }
}
```

```
D:\21BCA53\JAVA>javac Program2.java

D:\21BCA53\JAVA>java Program2
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

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3)Find Batsman's and bowler's Average

```java
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 java
{
    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");
```

```java
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);
    }
}
```

```
D:\21BCA53\JAVA>javac main.java

D:\21BCA53\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
```

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);
   }
}
```

```
D:\21BCA53\JAVA>javac OverloadMethod.java

D:\21BCA53\JAVA>java OverloadMethod
The Concated String is:VidyabhartiCollage
The Addition of 13 and 11 is:24
```

5)Check string palindrome or not

```java
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.");
  }
}
```

```
D:\21BCA53\JAVA>javac Palindrome.java

D:\21BCA53\JAVA>java Palindrome
Enter a string to check if it is a palindrome
saras
Entered is a palindrome.
```

6)String Sorting in alphabetic format

```java
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));
  }
}
```

```
D:\21BCA53\JAVA>javac SortingString.java

D:\21BCA53\JAVA>java SortingString
Enter a string value:
nishit
hiinst
```

7)Find Area

```java
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();
        }
}
```

```
D:\21BCA53\JAVA>javac CalculateArea.java

D:\21BCA53\JAVA>java CalculateArea
The Area of Rectangle is:800.0
The Area of Triangle is:400.0
The Area of Square is:1600.0
```

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);;
        }

    }
}
```

```
D:\21BCA53\JAVA>javac ExceptionHandaling.java

D:\21BCA53\JAVA>java ExceptionHandaling
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 0
        at ExceptionHandaling.main(ExceptionHandaling.java:8)
```

9)Student Name and age in descending order.

```java
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]);
        }

    }
}
```

```
D:\21BCA53\JAVA>javac StudentDetail.java

D:\21BCA53\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
```

10)All String function

```java
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);
  }
```

```java
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');
  }
}
Output:
```

```
D:\21BCA53\JAVA>javac MyString.java

D:\21BCA53\JAVA>java MyString
Enter a string: NISHIT

Menu:
1. Reverse string
2. String in Titlecase
3. Extract N-characters from right-end of the string
4. Exit
```