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Class : MCA 2

Subject : JAVA Programming

Practical Assignment 1 - Basic

1) Write a program to print the following pattern :

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Code :

class Pattern{  
 public static void main(String args[]){  
 for(int i=4;i>0;i--){  
 for (int j = 0;j<i;j++){  
 System.out.print("\*");  
 }  
 System.out.println("\n");  
 }  
 }  
 }

Output :

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2) Write a program that reads a distance in kilometers from the keyboard and output the distance

as miles.

Code :}

import java.util.\*;  
class Miles{  
 public static void main(String args[]){  
 Scanner scan = new Scanner(System.in);  
 double km,miles;  
 System.out.print("Enter distance in Kilometers : ");  
 km = scan.nextDouble();  
 miles = km\*0.6;  
 System.out.println(km + " KM is "+miles+" miles");  
 }  
}

Output :

Enter distance in Kilometers : 25

25.0 KM is 15.0 miles

3) Write an application that generates the first 15 numbers in the Fibonacci series and first 15

prime numbers.

Code :

class Fiboandprime{  
 static void fibonacci(){  
 int n1 = 0;  
 int n2 = 1;  
 int temp;  
 System.out.println("First 15 Fibonacci numbers are : ");  
 System.out.print(n1+" "+n2+" ");  
 for (int i = 0;i<13;i++){  
 temp = n1;  
 n1 = n2;  
 n2 = n1 + temp;  
 System.out.print(n2+" ");  
 }  
 }  
 static void prime(){  
 int ct=0,n=0,i=1,j=1;  
 System.out.println("First 15 Prime numbers are : ");  
 while(n<15){   
 j=1;   
 ct=0;   
 while(j<=i){   
 if(i%j==0)   
 ct++;   
 j++;   
 }   
 if(ct==2){   
 System.out.print(i+" ");   
 n++;   
 }   
 i++;   
 }  
 }  
 public static void main(String args[]){  
 fibonacci();  
 System.out.println("\n");  
 prime();  
 }  
}

Output :

First 15 Fibonacci numbers are :

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377

First 15 Prime numbers are :

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47

4) Write and run a Java program to calculate factorial and the cube of the given integer number.

Also find the sum and multiplication of its digits. Also check whether the no entered is

palindrome or not.

Code :

class Cubeandfact{  
 static int factorial(int n){  
 if(n==0)  
 return 1;  
 else  
 return n\*factorial(n-1);  
 }  
  
 static int cube(int n){  
 if(n==0){  
 return 1;  
 }  
 else{  
 return (n\*n\*n);  
 }  
 }  
 static int sumofdigits(int n){  
 int sum=0;  
 while(n>0){  
 sum+=n%10;  
 n/=10;  
 }  
 return sum;  
 }  
 static int multiplyofdigits(int n){  
 int mul=1;  
 while(n>0){  
 mul\*=n%10;  
 n/=10;  
 }  
 return mul;  
 }  
 static boolean palindrome(int n){  
 int temp=n;  
 int rev=0;  
 while(temp>0){  
 rev=rev\*10+temp%10;  
 temp/=10;  
 }  
 if(rev==n)  
 return true;  
 else  
 return false;  
 }  
 public static void main(String args[]){  
 int num = Integer.parseInt(args[0]); // I passed number 15 in command line arguments  
 System.out.println("Factorial of "+num + " is : "+factorial(num));  
 System.out.println("Cube of "+num+" is : "+cube(num));  
 System.out.println("Sum of digits is : "+sumofdigits(num));  
 System.out.println("Multiplication of digits is "+multiplyofdigits(num));  
 if (palindrome(num) == true){  
 System.out.println(num + " is a palindrome number");  
 }  
 else{  
 System.out.println(num + " is not a palindrome number");  
 }  
 }  
}

Output :

C:\Users\aditya\Desktop\MCA\SEM 2\JAVA\Practical Assignments>java cubeandfact 15

Factorial of 15 is : 2004310016

Cube of 15 is : 3375

Sum of digits is : 6

Multiplication of digits is 5

15 is not a palindrome number

5) write a Java program to calculate the minimum of three integer numbers:

class Min{  
 public static void main(String[] args){  
 int num1 = Integer.parseInt(args[0]);  
 int num2 = Integer.parseInt(args[1]);  
 int num3 = Integer.parseInt(args[2]);  
  
 int min = num1;  
 if(num2 < min){  
 min = num2;  
 }  
 if(num3 < min){  
 min = num3;  
 }  
 System.out.println("Minimum of three numbers is " +min);  
 }  
}

Output :

C:\Users\aditya\Desktop\MCA\SEM 2\JAVA\Practical Assignments>java min 10 20 9

Minimum of three numbers is 9

6) WAP in JAVA that calculates the VAT on an amount of sale. The program takes amount of

sales and VAT rate as input and outputs the total amount

inclusive of VAT.

Code :

import java.util.\*;  
class Sales{  
 public static void main(String[] args){  
 float sales, vat, total;  
 Scanner sc = new Scanner(System.in);  
 System.out.print("Enter sales: ");  
 sales = sc.nextFloat();  
 System.out.print("Enter vat: ");  
 vat = sc.nextFloat();  
 total = sales + (sales \* vat / 100);  
 System.out.println("Total: " + total);  
 }  
}

Output :

Enter sales: 150

Enter vat: 7

Total: 160.5

7) Use While loop to generate random numbers and maintain a running sum of these values.

Terminate when the sum exceeds 20. (Note: use Math. random() method to obtain numbers.)

Code :

class Random{  
 public static void main(String[] args){  
 int sum = 0;  
 int i = 0;  
 System.out.print("Random numbers are : ");  
 while(sum < 20){  
 i = (int)(Math.random()\*10);  
 System.out.print(i+", ");  
 sum += i;  
 }  
 System.out.println();  
 System.out.println("Their sum is : "+sum);   
 }  
}

Output :

Random numbers are : 3, 0, 9, 3, 7,

Their sum is : 22

8) Write an application that counts the total number of characters in all of its command-line

arguments.

Code :

class Numberofcharacters{  
 public static void main(String[] args){  
 int count = 0;  
 for(int i = 0; i < args.length; i++){  
 count += args[i].length();  
 }  
 System.out.println("Number of characters is "+count);  
 }  
}

Output :

C:\Users\aditya\Desktop\MCA\SEM 2\JAVA\Practical Assignments>java numberofcharacters hello world

Number of characters is 10

9) Write a java program to calculate Simple Interest using Command Line Arguments. (Hint use

Wrapper classes)

Code

class Simpleinterest{  
 public static void main(String[] args){  
 if(args.length == 3){  
 double principal = Double.parseDouble(args[0]);  
 double rate = Double.parseDouble(args[1]);  
 int years = Integer.parseInt(args[2]);  
 double si = principal \* rate \* years / 100;  
 double total\_amount = principal + si;  
 System.out.println("Principal is " + principal);  
 System.out.println("Rate of Interest is " + rate);  
 System.out.println("Number of Years is " + years +"\n");  
 System.out.println("Simple Interest is " + si);  
 System.out.println("Total amount is " + total\_amount);  
 }  
 }  
}

Output :

C:\Users\aditya\Desktop\MCA\SEM 2\JAVA\Practical Assignments>java simpleinterest 15000 5 2

Principal is 15000.0

Rate of Interest is 5.0

Number of Years is 2

Simple Interest is 1500.0

Total amount is 16500.0

JAVA Arrays and Strings

1. Write application that creates an array of double, to provide following functionality.

* display the length of the array and its elements.
* Display an array. (Use for each version of loop for display).
* compute the sume of the squares of these numbers.
* Determine Mean and Median of an array.
* Sort an array – Ascending and Descending. Use any two sorting algorithm. User can also
* select the sorting method.
* Search an element from the array, i.e. returns the location of the element of an array
* that matches an indicated value.
* Copy of an array.
* Reverse of an array.

Code :

class ArrayDouble{

    static void arraylength(double[] arr){

        System.out.println("Length of array is "+arr.length);

    }

    static void display(double[] arr){

        System.out.print("Elements of array are : ");

        for(double i:arr){

            System.out.print(i+"  ");

        }

        System.out.println();

    }

    static void sumofsquare(double[] arr){

        double sum=0;

        for(double i:arr){

            sum+=i\*i;

        }

        System.out.println("Sum of square of elements is "+sum);

    }

    static void meanandmedian(double[] arr){

        double sum=0;

        for(double i:arr){

            sum+=i;

        }

        double mean=sum/arr.length;

        System.out.println("Mean is "+mean);

        double median=0;

        if(arr.length%2==0){

            median=(arr[arr.length/2]+arr[arr.length/2-1])/2;

        }

        else{

            median=arr[arr.length/2];

        }

        System.out.println("Median is "+median);

    }

    static void sort(double[] arr){

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

            for(int j=i+1;j<arr.length;j++){

                if(arr[i]>arr[j]){

                    double temp=arr[i];

                    arr[i]=arr[j];

                    arr[j]=temp;

                }

            }

        }

        System.out.print("Sorted array is in ascending order is : ");

        for(double i:arr){

            System.out.print(i+"  ");

        }

        System.out.println();

    }

    static void sortdescending(double[] arr){

        for(int i=1;i<arr.length;i++){

            double temp=arr[i];

            int j=i-1;

            while(j>=0 && arr[j]<temp){

                arr[j+1]=arr[j];

                j--;

            }

            arr[j+1]=temp;

        }

        System.out.print("Sorted array in descending order is : ");

        for(double i:arr){

            System.out.print(i+"  ");

        }

        System.out.println();

    }

    static void searchelement(double[] arr,double element){

        int flag=0;

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

            if(arr[i]==element){

                System.out.println("Element "+element+" found at index "+i);

                flag=1;

                break;

            }

        }

        if(flag==0){

            System.out.println("Element "+element+" not found");

        }

    }

    static void copyarray(double[] arr){

        double[] arr1=new double[arr.length];

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

            arr1[i]=arr[i];

        }

        System.out.print("Copied array is : ");

        for(double i:arr1){

            System.out.print(i+"  ");

        }

        System.out.println();

    }

    static void reversearray(double[] arr){

        double[] arr1=new double[arr.length];

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

            arr1[i]=arr[arr.length-i-1];

        }

        System.out.print("Reversed array is : ");

        for(double i:arr1){

            System.out.print(i+"  ");

        }

        System.out.println();

    }

    public static void main(String[] args){

        double[] arr = {15,54,26,35,59,22,62,24,68,84};

        arraylength(arr);

        display(arr);

        sumofsquare(arr);

        meanandmedian(arr);

        sort(arr);

        sortdescending(arr);

        searchelement(arr, 26);

        copyarray(arr);

        reversearray(arr);

    }

}

Output :

Length of array is 10

Elements of array are : 15.0 54.0 26.0 35.0 59.0 22.0 62.0 24.0 68.0 84.0

Sum of square of elements is 25107.0

Mean is 44.9

Median is 40.5

Sorted array is in ascending order is : 15.0 22.0 24.0 26.0 35.0 54.0 59.0 62.0 68.0 84.0

Sorted array in descending order is : 84.0 68.0 62.0 59.0 54.0 35.0 26.0 24.0 22.0 15.0

Element 26.0 found at index 6

Copied array is : 84.0 68.0 62.0 59.0 54.0 35.0 26.0 24.0 22.0 15.0

Reversed array is : 15.0 22.0 24.0 26.0 35.0 54.0 59.0 62.0 68.0 84.0

1. Write a program in Java to create variable size array. Data can be numeric.

* Flush an array
* add a number at a specified location in an array.
* display the array

Code :

import java.util.Scanner;

public class VariableArray {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("How many elements you want to enter : ");

        int size = sc.nextInt();

        int arr[] = new int[25];

        System.out.println("Enter array elements : ");

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

            arr[i] = sc.nextInt();

        }

        // print array elements

        System.out.println("Array elements are : ");

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

            System.out.print(arr[i] + " ");

        }

        // insert element at given index

        System.out.print("\nEnter index to insert element : ");

        int index = sc.nextInt();

        System.out.print("Enter element to insert : ");

        int element = sc.nextInt();

        arr[index] = element;

        // print array elements

        System.out.println("\nArray elements after insertion are : ");

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

            System.out.print(arr[i] + " ");

        }

        System.out.println();

        // flush all array elements

        System.out.println("\nArray elements after flushing are : ");

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

            arr[i] = 0;

            System.out.print(arr[i] + " ");

        }

    }

}

Output :

How many elements you want to enter : 5

Enter array elements :

2

4

5

6

8

Array elements are :

2 4 5 6 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Enter index to insert element : 10

Enter element to insert : 15

Array elements after insertion are :

2 4 5 6 8 0 0 0 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Array elements after flushing are :

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1. Program in Java to find A+B, A-B, A\*B and transpose of A, where A is a matrix of 3\*3 and B is a matrix of 3\*4.Take the values in matrixes A and B from the user.

Code :

public class Matrix {

    //matrix addition

    static void addmatrix(int[][] arr1,int[][] arr2){

        int[][] arr3=new int[arr1.length][arr1[0].length];

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr1[0].length;j++){

                arr3[i][j]=arr1[i][j]+arr2[i][j];

            }

        }

        System.out.println("Sum of two matrices is : ");

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr1[0].length;j++){

                System.out.print(arr3[i][j]+"  ");

            }

            System.out.println();

        }

    }

    //matrix subtraction

    static void subtractmatrix(int[][] arr1,int[][] arr2){

        int[][] arr3=new int[arr1.length][arr1[0].length];

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr1[0].length;j++){

                arr3[i][j]=arr1[i][j]-arr2[i][j];

            }

        }

        System.out.println("Difference of two matrices is : ");

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr1[0].length;j++){

                System.out.print(arr3[i][j]+"  ");

            }

            System.out.println();

        }

    }

    //matrix multiplication

    static void multiplymatrix(int[][] arr1,int[][] arr2){

        int[][] arr3=new int[arr1.length][arr2[0].length];

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr2[0].length;j++){

                for(int k=0;k<arr1[0].length;k++){

                    arr3[i][j]+=arr1[i][k]\*arr2[k][j];

                }

            }

        }

        System.out.println("Multiplication of two matrices is : ");

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr2[0].length;j++){

                System.out.print(arr3[i][j]+"  ");

            }

            System.out.println();

        }

    }

    //matrix transpose

    static void transposeofmatrix(int[][] arr){

        int[][] arr1=new int[arr[0].length][arr.length];

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

            for(int j=0;j<arr[0].length;j++){

                arr1[j][i]=arr[i][j];

            }

        }

        for(int i=0;i<arr1.length;i++){

            for(int j=0;j<arr1[0].length;j++){

                System.out.print(arr1[i][j]+"  ");

            }

            System.out.println();

        }

    }

    public static void main(String args[]){

        int[][] A = new int[3][3];

        int[][] B = new int[3][4];

        System.out.println("Enter data for matrix A");

        for(int i=0;i<3;i++){

            for(int j=0;j<3;j++){

                System.out.print("Enter element ["+(i+1)+"]["+(j+1)+"]: ");

                A[i][j]=Integer.parseInt(System.console().readLine());

            }

        }

        System.out.println("Enter data for matrix B");

        for(int i=0;i<3;i++){

            for(int j=0;j<4;j++){

                System.out.print("Enter element ["+(i+1)+"]["+(j+1)+"]: ");

                B[i][j]=Integer.parseInt(System.console().readLine());

            }

        }

        // print matrix A and matrix B

        System.out.println("Matrix A is : ");

        for(int i=0;i<3;i++){

            for(int j=0;j<3;j++){

                System.out.print(A[i][j]+"  ");

            }

            System.out.println();

        }

        System.out.println("Matrix B is : ");

        for(int i=0;i<3;i++){

            for(int j=0;j<4;j++){

                System.out.print(B[i][j]+"  ");

            }

            System.out.println();

        }

        if(A.length==B.length && A[0].length==B[0].length){

            addmatrix(A,B);

            subtractmatrix(A,B);

        }

        else{

            System.out.println("Matrices cannot be added or subtracted");

        }

        if(A[0].length==B.length){

            multiplymatrix(A,B);

        }

        else{

            System.out.println("Matrices cannot be multiplied");

        }

        System.out.println("Transpose of Matrix A is : ");

        transposeofmatrix(A);

        System.out.println("Transpose of Matrix B is : ");

        transposeofmatrix(B);

    }

}

Output :

Enter data for matrix A

Enter element [1][1]: 2

Enter element [1][2]: 6

Enter element [1][3]: 3

Enter element [2][1]: 5

Enter element [2][2]: 1

Enter element [2][3]: 7

Enter element [3][1]: 5

Enter element [3][2]: 6

Enter element [3][3]: 2

Enter data for matrix B

Enter element [1][1]: 3

Enter element [1][2]: 8

Enter element [1][3]: 6

Enter element [1][4]: 1

Enter element [2][1]: 5

Enter element [2][2]: 6

Enter element [2][3]: 2

Enter element [2][4]: 9

Enter element [3][1]: 8

Enter element [3][2]: 5

Enter element [3][3]: 4

Enter element [3][4]: 5

Matrix A is :

2 6 3

5 1 7

5 6 2

Matrix B is :

3 8 6 1

5 6 2 9

8 5 4 5

Matrices cannot be added or subtracted

Multiplication of two matrices is :

60 67 36 71

76 81 60 49

61 86 50 69

Transpose of Matrix A is :

2 5 5

6 1 6

3 7 2

Transpose of Matrix B is :

3 5 8

8 6 5

6 2 4

1 9 5

1. Write and run a JAVA program that reads a string from the user and perform the following.

* counts number of occurance of a given character (for example, " a") in a string.
* searches the last occurance of a character in a string.
* removes the unneccessary spaces from a string : leading and trailing spaces.
* displays the substring formed by the last ten characters of a string

Code :

class StringOperations{

    public static void main(String args[]) {

        System.out.print("Enter a string : ");

        String str = System.console().readLine();

        // removing all unnecessary spaces

        str = str.trim();

        System.out.println("Trimmed string is : "+str);

        // count number of occurrences of a character in a string

        System.out.print("Enter a character to count all occurences : ");

        char ch = System.console().readLine().charAt(0);

        int count = 0;

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

            if(str.charAt(i)==ch){

                count++;

            }

        }

        System.out.println("Number of occurrences of "+ch+" in "+str+" is "+count);

        // search the last occurrence of a character in a string

        System.out.print("Enter a character to find it's last occurence : ");

        ch = System.console().readLine().charAt(0);

        int index = -1;

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

            if(str.charAt(i)==ch){

                index=i;

            }

        }

        System.out.println("Last occurrence of "+ch+" in "+str+" is at index "+index);

        // make substring of last 10 characters

        System.out.println("Last 10 characters are : "+str.substring(str.length()-10));

    }

}

Output :

Enter a string : welcome to java programming

Trimmed string is : welcome to java programming

Enter a character to count all occurences : m

Number of occurrences of m in welcome to java programming is 3

Enter a character to find it's last occurence : r

Last occurrence of r in welcome to java programming is at index 20

Last 10 characters are : rogramming

1. WAP that inputs a line of text, tokenizes the line with StringTokenizer and outputs the tokens in reverse order.

Code

import java.util.StringTokenizer;

public class StringToken {

    public static void main(String args[]){

        System.out.print("Enter a string : ");

        String str = System.console().readLine();

        StringTokenizer st = new StringTokenizer(str);

        String[] str\_token = new String[st.countTokens()];

        int i = 0;

        while (st.hasMoreTokens()) {

            str\_token[i] = st.nextToken();

            i++;

        }

        for(int j=str\_token.length-1;j>=0;j--){

            System.out.println(str\_token[j]);

        }

    }

}

Output :

Enter a string : welcome to java programming

programming

java

to

welcome

1. Create a StringBuffer and illustrate how to append character. Display capacity, length of the StringBuffer.

Code :

public class SrtingBufferDemo {

    public static void main(String args[]){

        StringBuffer sb = new StringBuffer();

        sb.append("Hello");

        sb.append(" ");

        sb.append("World");

        System.out.println("Content of StringBuffer is "+sb);

        int len = sb.length();

        System.out.println("Length of StringBuffer is "+len);

        int cap = sb.capacity();

        System.out.println("Capacity of StringBuffer is "+cap);

    }

}

Output:

Content of StringBuffer is Hello World

Length of StringBuffer is 11

Capacity of StringBuffer is 16

1. Write an application that reads and processes strings from the console. Perform the following functions based on the menu choice selected by the user..

* Reverse the sequence of strings and then display it.
* Reverse the sequence of characters in each string and then display it.
* rearrange the strings according to the length of the string.
* Sorting
* Concatenation
* Change them to uppercase, lowercase depending on user’s choice.

Code :

import java.util.StringTokenizer;

class StringOperationUsingMenu {

    public static void main(String args[]){

        System.out.print("Enter a String : ");

        String str = System.console().readLine();

        StringTokenizer st = new StringTokenizer(str);

        String[] str\_token = new String[st.countTokens()];

        int i = 0;

        while (st.hasMoreTokens()) {

            str\_token[i] = st.nextToken();

            i++;

        }

        int choice = 0;

        do{

            System.out.println("1. Reverse the sequence of string");

            System.out.println("2. Reverse the sequence of characters in string");

            System.out.println("3. Reaarange the string according to the length of string");

            System.out.println("4. Sort the string ");

            System.out.println("5. Change the case of string");

            System.out.println("6. Exit");

            choice = Integer.parseInt(System.console().readLine());

            switch(choice){

                case 1:

                    if(str.isEmpty()){

                        System.out.println("Enter a string first");

                    }

                    else{

                        System.out.println("Reverse squence of string is : ");

                        for(int j=str\_token.length-1;j>=0;j--){

                            System.out.print(str\_token[j]+" ");

                        }

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

                    }

                    break;

                case 2:

                    if(str.isEmpty()){

                        System.out.println("Enter a string first");

                    }

                    else{

                        System.out.println("Reverse squence of characters in string is : ");

                        for(int j=0;j<str\_token.length;j++){

                            for(int k=str\_token[j].length()-1;k>=0;k--){

                                System.out.print(str\_token[j].charAt(k));

                            }

                            System.out.print(" ");

                        }

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

                    }

                    break;

                case 3:

                    if(str.isEmpty())

                        System.out.println("Enter a string first");

                    else{

                        System.out.println("Rearranged string according to length is : ");

                        for(int j=1;j<str\_token.length;j++){

                            String temp = str\_token[j];

                            int k = j-1;

                            while(k>=0 && str\_token[k].length()>temp.length()){

                                str\_token[k+1] = str\_token[k];

                                k--;

                            }

                            str\_token[k+1] = temp;

                        }

                        for(String s:str\_token){

                            System.out.print(s+" ");

                        }

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

                    }

                    break;

                case 4:

                    if(str.isEmpty())

                        System.out.println("Enter a string first");

                    else{

                        System.out.println("Sorted string is : ");

                        for(int j=0;j<str\_token.length;j++){

                            for(int k=j+1;k<str\_token.length;k++){

                                if(str\_token[j].compareTo(str\_token[k])>0){

                                    String temp = str\_token[j];

                                    str\_token[j] = str\_token[k];

                                    str\_token[k] = temp;

                                }

                            }

                        }

                        for(int j=0;j<str\_token.length;j++){

                            System.out.print(str\_token[j]+" ");

                        }

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

                    }

                    break;

                case 5:

                    if(str.isEmpty())

                        System.out.println("Enter a string first");

                    else{

                        System.out.println("Type 1 for upper case"+"\n"+"Type 2 for lower case");

                        int choice\_case = Integer.parseInt(System.console().readLine());

                        do{

                            if(choice\_case==1)

                                System.out.println("Upper case of string is : "+str.toUpperCase());

                            else if(choice\_case==2)

                                System.out.println("Lower case of string is : "+str.toLowerCase());

                            else

                                System.out.println("Invalid choice");

                                break;

                        }while(choice\_case!=1 && choice\_case!=2);

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

                    }

                    break;

                case 6:

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

                    break;

                default:

                    System.out.println("Invalid choice");

            }

        }while(choice!=6);

    }

}

Output :

Enter a String : welcome to java programming

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

1

Reverse squence of string is :

programming java to welcome

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

2

Reverse squence of characters in string is :

emoclew ot avaj gnimmargorp

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

3

Rearranged string according to length is :

to java welcome programming

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

4

Sorted string is :

java programming to welcome

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

5

Type 1 for upper case

Type 2 for lower case

1

Upper case of string is : WELCOME TO JAVA PROGRAMMING

1. Reverse the sequence of string

2. Reverse the sequence of characters in string

3. Reaarange the string according to the length of string

4. Sort the string

5. Change the case of string

6. Exit

6

Exiting...