1. Create a new array, whose size and component type are not known until runtime, and then modify the array’s components
2. Write a program to sort an integer array without using API methods
3. Write a program in Java to reverse any String without using StringBuffer
4. A square matrix, that is, one having the same number of rows and columns, is called a diagonal matrix if its only non-zero elements are on the diagonal from upper left to lower right. It is called upper triangular, if all elements below the diagonal are zeros, and lower triangular, if all elements above the diagonal are zeros. Write a program that reads a matrix and determines if it is one of these three special matrices.
5. Write a program to sort a set of names stored in an array in alphabetic order.
6. Write a program to delete all vowels from a sentence. Assume that the sentence is not more than 80 characters.
7. Write a menu driven program in C, which consists following option?
8. To find the second biggest using array
9. To smallest of N numbers using array
10. Write a program, which reads two numbers and find the sum of product of digits of the number. If numbers are 224 and 37 then answer is 2\*3 + 2\*7 + 2\*3 + 2\*7 + 4\*3 +4\*7=80.
11. Write a program to sort a number of strings using bubble sort. Input is a number of strings and the output is the sorted list based on the length of strings.

For example, if input is jyoti, sareeka, anisha, sangita, savita, suja

The output is suja, jyoti, anisha, savita, sareeka, sangita

1. Print 3\*3 Metrics addition
2. Print 3\*3 metrics multiplication

15 15

1 2 3

15 4 5 6 15

7 8 9

15 15

1

import java.util.\*;

class Test{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter the number of elements to put into array: ");

int num=sc.nextInt();

int arr[] =new int[num];

System.out.println("Array of "+num+" Elements is created");

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

System.out.println("Array index "+i);

}

}

2

import java.util.Scanner;

public class Arraysort

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int n;

System.out.println("Enter size of array element");

n=sc.nextInt();

int arr[]=new int[n];

System.out.println("Enter Array Element");

for(int i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

System.out.println("Sorted Array are");

for(int i=0;i<n;i++)

{

for(int j=i+1;j<n;j++)

{

if(arr[i]>arr[j])

{

int temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

System.out.println(arr[i]);

}

}

}

3

import java.util.Scanner;

public class ReverseString11

{

public static void main(String rgs[])

{

String s;

Scanner sc=new Scanner(System.in);

System.out.println("Enter a String");

s=sc.nextLine();

System.out.println("After Reverse String is ");

for(int i=s.length();i>0;i--)

{

System.out.print(s.charAt(i-1));

}

}

}

4

import java.util.Scanner;

class Test{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

System.out.println("Enter number of rows and columns: ");

int rows=sc.nextInt();

int cols=sc.nextInt();

int mat[][]=new int[rows][cols];

if(rows==cols){

System.out.println("Enter the elements of matrix: ");

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

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

mat[i][j]=sc.nextInt();

}

}

System.out.println("");

System.out.println("Elements of matrix are: ");

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

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

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

}

System.out.println("");

}

if(mat[0][1] == 0 && mat[0][2] == 0 && mat[1][2] == 0){

System.out.println("It is lower triangular matrix");

}

else if(mat[1][0] == 0 && mat[2][0] == 0 && mat[2][1]==0){

System.out.println("It is upper triangular matrix");

}

else if(mat[0][0] == 0 && mat[1][1] == 0 && mat[2][2]==0){

System.out.println("It is hallow matrix");

}

else{

System.out.println("It is normal matrix");

}

}

else{

System.out.println("The Given matrix is not square Matrix");

}

}

}

5

// Java Program to Sort Names in an Alphabetical Order

import java.io.\*;

class Test {

public static void main(String[] args)

{

// storing input in variable

int n = 4;

// create string array called names

String names[]

= { "Rahul", "Ajay", "Gourav", "Riya" };

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 (names[i].compareTo(names[j]) > 0) {

// swapping

temp = names[i];

names[i] = names[j];

names[j] = temp;

}

}

}

// print output array

System.out.println(

"The names in alphabetical order are: ");

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

System.out.println(names[i]);

}

}

}

6

import java.util.Scanner;

public class StringOperator

{

   public static void main(String args[])

   {

       String str1, str2;

       Scanner scan = new Scanner(System.in);

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

       str1 = scan.nextLine();

       str2 = str1.replaceAll("[aeiouAEIOU]", "");

       System.out.print("All Vowels Removed Successfully..!!\nNew String is : ");

       System.out.print(str2);

   }

}

7

import java.util.Scanner;

public class SortingOfArray

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int n;

System.out.println("Enter the size of array");

n=sc.nextInt();

int arr[]=new int[n];

System.out.println("Enter the array");

for(int i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

for(int i=0;i<n;i++)

{

for(int j=1+i;j<n;j++)

{

if(arr[i]<arr[j])

{

int temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

System.out.println("Second largest element " +arr[1]);

System.out.println("smallest element " +arr[n-1]);

}

}

8

import java.util.\*;

public class Sumdigit1

{

public static void main(String args[])

{ Scanner sc =new Scanner(System.in);

System.out.println("Enter Two Number");

int a=sc.nextInt();

int b=sc.nextInt();

int num1=(a%10)\*(b%10);

int num2=(a%10)\*(b/10);

int num3=(a/10);

int num4=(num3%10)\*(b%10);

int num5=(num3/10)\*(b/10);

int num6=(num3/10);

int num7=(num6%10)\*(b%10);

int num8=(num6%10)\*(b/10);

int sum=num1+num2+num4+num5+num7+num8;

System.out.println("Sum is : "+sum);

}

}

9

import java.util.\*;

public class Stringsortlength {

public static void main(String args[])

{

List<String> listOfString=new ArrayList<String>();

listOfString.add("jyoti");

listOfString.add("sareeka");

listOfString.add("anisha");

listOfString.add("sangita");

listOfString.add("savita");

listOfString.add("suja");

String[] s=new String[listOfString.size()];

for(int i=0;i<listOfString.size();i++)

{

s[i]=listOfString.get(i);

}

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

{

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

{

String tempi=s[i];

String tempj=s[j];

if(tempj.length()<tempi.length())

{

s[i]=s[j];

s[j]=tempi;

}

}

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

{

System.out.println(s[i]);

}

}

}

10

import java.util.\*;

class TwoDimAdd1

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int A[][];

A=new int[3][3];

int c[][]=new int[3][3];

System.out.println("Enter 9 elements of array A");

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

{

for(int j=0;j<3;j++)

{

A[i][j]=sc.nextInt();

}

}

System.out.println(" elements of array A");

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

{

for(int j=0;j<3;j++)

{

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

}

System.out.println();

}

int B[][];

B=new int[3][3];

System.out.println("Enter 9 elements of Array B");

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

{

for(int j=0;j<3;j++)

{

B[i][j]=sc.nextInt();

}

}

System.out.println("elements of array B");

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

{

for(int j=0;j<3;j++)

{

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

}

System.out.println();

}

System.out.print( "Addition of array is");

System.out.println();

for(int i=0;i<3;i++)

{

for(int j=0;j<3;j++)

{

c[i][j]=A[i][j]+B[i][j];

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

}

System.out.println();

}

}

}

11

import java.util.\*;

class TwoDimMul

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int A[][];

A=new int[3][3];

int c[][]=new int[3][3];

System.out.println("Enter 9 elements of array A");

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

{

for(int j=0;j<3;j++)

{

A[i][j]=sc.nextInt();

}

}

System.out.println(" elements of array A");

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

{

for(int j=0;j<3;j++)

{

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

}

System.out.println();

}

int B[][];

B=new int[3][3];

System.out.println("Enter 9 elements of Array B");

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

{

for(int j=0;j<3;j++)

{

B[i][j]=sc.nextInt();

}

}

System.out.println("elements of array B");

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

{

for(int j=0;j<3;j++)

{

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

}

System.out.println();

}

System.out.print( "Addition of array is");

System.out.println();

for(int i=0;i<3;i++)

{

for(int j=0;j<3;j++)

{

c[i][j]=A[i][j]\*B[i][j];

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

}

System.out.println();

}

}

}

12

import java.util.\*;

class ArrayDiagonal33

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int arr[][];

arr=new int[3][3];

int sum=0;

int sum1=0;

int sum2=0;

int sum3=0;

int j,i;

System.out.println("Enter 9 Elements");

for( i=0;i<3;i++)

{

for( j=0;j<3;j++)

{

arr[i][j]=sc.nextInt();

}

}

System.out.println("Your Elements");

for( i=0;i<3;i++)

{

for( j=0;j<3;j++)

{

sum=arr[0][0]+arr[1][1]+arr[2][2];

sum1=arr[1][0]+arr[1][1]+arr[1][2];

sum2=arr[2][0]+arr[1][1]+arr[0][2];

}

System.out.println("");

}

System.out.println(sum+" "+"\t"+" "+sum);

System.out.println(" "+" "+" "+arr[0][0]+" "+arr[0][1]+" "+arr[0][2]+" ");

System.out.println(sum1+" "+arr[1][0]+" "+arr[1][1]+" "+arr[1][2]+" "+sum1);

System.out.println(" "+" "+" "+arr[2][0]+" "+arr[2][1]+" "+arr[2][2]+" ");

System.out.println(sum2+" "+"\t"+" "+sum);

}

}