WEEK-3

|  |  |
| --- | --- |
| 1# | Write a java program to add the two numbers. |

public class Q1 {

public static void main(String[] args){

int a=5;

int b=9;

int sum=a+b;

System.out.println("The sum of the two number is " + sum);

}

}

|  |  |
| --- | --- |
| 2# | Write a java program to multiply two floating numbers. |

package Week\_3;

public class Q2 {

public static void main(String[] args){

float a=5.5f;

float b=6.9f;

float c=a\*b;

System.out.println("Multiplication of the numbers is "+ c);

}

}

|  |  |
| --- | --- |
| 3# | Write a java program to display a cube of a number. |

public class Q3 {

public static void main(String[] args){

int a=5;

System.out.println("Cube of the number is " + a\*a\*a);

} }

|  |  |
| --- | --- |
| 4# | Write a Java program that takes three numbers as input to calculate and print the average of the numbers. |

import java.util.Scanner;

public class Q4 {

public static void main(String[] args){

Scanner ab = new Scanner(System.in);

System.out.println("Enter the first number");

int a= ab.nextInt();

System.out.println("Enter the second number");

int b=ab.nextInt();

System.out.println("Enter the third number");

int c=ab.nextInt();

float d=(a+b+c)/3.0f;

System.out.println("Average of the three given number is " + d);

}

}

|  |  |
| --- | --- |
| 5# | Write a Java program to compute the distance between two points. |

import java.util.Scanner;

public class Q5 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter the First co-ordinate points");

float x1=sc.nextFloat();

float y1=sc.nextFloat();

System.out.println("Enter the Second co-ordinate points");

float x2=sc.nextFloat();

float y2=sc.nextFloat();

float result= (float) Math.sqrt(Math.pow(x2-x1,2)+ Math.pow(y2-y1,2));

System.out.println(result); }

}

|  |  |
| --- | --- |
| 6# | Write a Java program to swap two numbers using a temporary variable. |

public class Q6 {

public static void main(String[] args){

int a=5;

int b=7;

System.out.println("Before Swapping");

System.out.println("a =" + a);

System.out.println("b =" + b);

int temp=a;

a=b;

b=temp;

System.out.println("After Swapping");

System.out.println("a =" + a);

System.out.println("b =" + b);

}

}

|  |  |
| --- | --- |
| 7# | Write a Java program to calculate the area of a rectangle given its length and breadth. |

public class Q7 {

public static void main(String[] args){

float length=4f;

float breadth=12f;

float area=(float)length\*breadth;

System.out.println("Area of the rectangle is " + area);

}

}

|  |  |
| --- | --- |
| 8# | Write a Java program to convert temperature from Celsius to Fahrenheit. |

public class Q8 {

public static void main(String[] args){

float celsius=67;

float f=(float)(1.8\*celsius)+32;

System.out.println(celsius+" Degree Celsius = " + f +" Degree Fahrenheit");

}

}

|  |  |
| --- | --- |
| 9# | Write a Java program that takes two integer inputs and computes their remainder and quotient. |

import java.util.Scanner;

public class Q9 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter Dividend number");

int a=sc.nextInt();

System.out.println("Enter Divisor number");

int b=sc.nextInt();

System.out.println("Quotient ->> "+ a/b);

System.out.println("Remainder ->> " + a%b);

}

}

|  |  |
| --- | --- |
| 10# | Write a Java program to find the circumference of a circle given its radius. |

public class Q10 {

public static void main(String[] args){

int r=6;

System.out.println("Circumference of the circle of radius "+ r+" is "+6.28\*r);

}

}

WEEK-4

|  |  |
| --- | --- |
| 1# | Write a java program to check whether the given number is odd or even. |

import java.util.Scanner;

public class Q1 {

public static void main(String[] args){

Scanner arman=new Scanner(System.in);

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

int a=arman.nextInt();

if(a%2==0){

System.out.println(a+" a is Even number");

}

else{

System.out.println(a+" a is Odd number");

}}

}

|  |  |
| --- | --- |
| 2# | Write a java program to find the largest number among the three numbers. |

public class Q2 {

public static void main(String[] args){

int a=118;

int b=97;

int c=23;

int max=a;

if(a>b && a>c){

max=a;

}

else if(b>a && b>c){

max=b;

}

else{

max=c;

}

System.out.println("Largest number is "+ max);

}

}

|  |  |
| --- | --- |
| 3# | Write a Java program that takes a number as input and prints its multiplication table upto 10. |

import java.util.Scanner;

public class Q3 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

for(int i=1;i<=10;i++){

System.out.println(n+"\*"+i+" --> "+ i\*n);

}

}

}

|  |  |
| --- | --- |
| 4# | Write a Java program to calculate the sum of following series: 1 + 2 + 3 + 4 + .......... + N |

import java.util.Scanner;

public class Q4 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter the Last number");

int n=sc.nextInt();

int z=(n\*(n+1))/2;

System.out.println("Sum of the series is "+ z);}

}

|  |  |
| --- | --- |
| 5# | Write a Java program to take a number, divide it by 2 and print the result until the number becomes less than 10. |

import java.util.Scanner;

public class Q5 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

float n=sc.nextFloat();

for(float i=n;i>10;i/=2){

System.out.println(i);

}

}

}

|  |  |
| --- | --- |
| 6# | Write a Java program to check whether a given character is a vowel or consonant. |

import java.util.Scanner;

public class Q6 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

char a= sc.next().charAt(0);

if((a>='a' || a<='z')||(a>='A' || a<='Z') ){

if(a=='a'||a=='e'||a=='i'||a=='o'||a=='u'||a=='A'||a=='E'||a=='I'||a=='O'||a=='U'){

System.out.println(a+" is vowel");

}

else{

System.out.println(a+" is consonant");

}

}

else{

System.out.println("Please enter a Alphabet") }

} }

|  |  |
| --- | --- |
| 7# | Write a Java program to find the smallest number among four given numbers. |

import java.util.Scanner;

public class Q7 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter the first number");

int a=sc.nextInt();

System.out.println("Enter the second number");

int b=sc.nextInt();

System.out.println("Enter the third number");

int c=sc.nextInt();

System.out.println("Enter the fourth number");

int d=sc.nextInt();

int min;

if(a<b && a<c && a<d){

min=a;

}

else if(b<a && b<c && b<d){

min=b;

}

else if(c<a && c<b &&c<d){

min=c;

}

else{

min=d;

}

System.out.println(min+" is smallest among the all four numbers");

}

}

|  |  |
| --- | --- |
| 8# | Write a Java program to calculate the sum of all even numbers from 1 up to a given number N. |

import java.util.Scanner;

public class Q8 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int a=sc.nextInt();

int sum=0;

for(int i=2;i<=a;i+=2){

sum+=i;

}

System.out.println("Sum of all the Even numbers in the given range is "+ sum);

}

}

|  |  |
| --- | --- |
| 9# | Write a Java program to check whether a given year is a leap year or not. |

import java.util.Scanner;

public class Q9 {

public static void main(String[] args){

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

Scanner sc=new Scanner(System.in);

int y=sc.nextInt();

if((y%400==0) ||( y%4==0 && y%100!=0)){

System.out.println(y+" is a leap year");

}

else{

System.out.println(y+" is not a leap year ");

}

}  
}

|  |  |
| --- | --- |
| 10# | Write a Java program that takes a number as input and prints all its factors. |

import java.util.Scanner;

public class Q10 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int a=sc.nextInt();

System.out.println("All factors of "+a+" are :-");

for(int i=1;i<=a;i++){

if(a%i==0){

System.out.println(i);

}

}

}

}

WEEK-5

|  |  |
| --- | --- |
| 1# | Write a Java program to insert 10, 20, 30 ....in an array and display them. |

import java.util.Scanner;

public class Q1 {

public static void main(String[] args){

Scanner sc =new Scanner(System.in);

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

int a=sc.nextInt();

int [] arr=new int[a];

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

System.out.println("Enter a["+i+"] element");

arr[i]=sc.nextInt();

}

System.out.println("The elements of the array are:-");

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

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

}

}

}

|  |  |
| --- | --- |
| 2# | Write a Java program to calculate the sum of all the array elements. |

import java.util.Scanner;

public class Q2 {

public static void main(String[] args){

Scanner sc =new Scanner(System.in);

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

int a=sc.nextInt();

int sum=0;

int [] arr=new int[a];

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

System.out.println("Enter a["+i+"] element");

arr[i]=sc.nextInt();

sum+=arr[i];

}

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

}

}

|  |  |
| --- | --- |
| 3# | Write a java program to print the following pattern:  1  12  123  1234  12345 |

public class Q3 {

public static void main(String[] args){

for(int i=1;i<6;i++){

for(int j=1;j<5-i;j++){

System.out.print(" ");

}

for(int k=1;k<=i;k++){

System.out.print(k);

}

System.out.println();

}

}

}

|  |  |
| --- | --- |
| 4# | Write a java program to find the sum of following series where n is input by the user:  1 + 1/2 + 1/3 + 1/4 + ............... + 1/n |

import java.util.Scanner;

public class Q4 {

public static void main(String[] args){

Scanner sc=new Scanner (System.in);

System.out.println("Enter the value of n");

int n= sc.nextInt();

float sum=0;

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

sum+=(float)1/i;

}

System.out.println("Sum of the series is "+ sum);

} }

|  |  |
| --- | --- |
| 5# | Write a Java program and compute the sum of the digits of an integer. |

import java.util.Scanner;

public class Q5 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

int sum=0;

while(n>0){

int r=n%10;

sum+=r;

n=n/10;

}

System.out.println("Sum of the digits of the integer is "+ sum);

}

}

|  |  |
| --- | --- |
| 6# | Write a Java program to calculate the factorial of a number. |

import java.util.Scanner;

public class Q6 {

public static void main (String[] args){

Scanner sc=new Scanner(System.in);

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

int f= sc.nextInt();

int fact=1;

for(int i=f;i>1;i--){

fact\*=i;

}

System.out.println("Factorial of "+ f +" is "+ fact);

}

}

|  |  |
| --- | --- |
| 7# | Write a Java program to find the largest element in a given integer array. |

import java.util.Scanner;

public class Q7 {

public static void main(String[] args){

Scanner sc =new Scanner(System .in);

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

int a=sc.nextInt();

int[]arr=new int[a];

int max=0;

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

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

arr[i]=sc.nextInt();

if(arr[i]>max){

max=arr[i];

}

}

System.out.println("Largest element in the array is "+ max);

}

}

|  |  |
| --- | --- |
| 8# | Write a Java program to reverse the digits of a given integer. |

import java.util.Scanner;

public class Q8 {

public static void main(String[] args){

Scanner sc =new Scanner(System .in);

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

int num=sc.nextInt();

int rev=0;

while(num>0){

int r=num%10;

rev=rev\*10+r;

num/=10;

}

System.out.println("Reverse of the integer is "+rev);

}

}

|  |  |
| --- | --- |
| 9# | Write a Java program to check if a given number is a palindrome or not. |

import java.util.Scanner;

public class Q9 {

public static void main(String[] args){

Scanner sc =new Scanner(System .in);

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

int a=sc.nextInt();

int p=a;

int rev=0;

while(a>0){

int r=a%10;

rev=rev\*10+r;

a/=10;

}

if(rev==p){

System.out.println("Palindrome ");

}

else {

System.out.println("Not Palindrome");

}

}

}

|  |  |
| --- | --- |
| 10# | Write a Java program to convert a decimal number into Hexadecimal number and vice-versa. |

import java.util.Scanner;

public class Q10 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter your choice(1 or 2)");

System.out.println("1>> Decimal to hexadecimal");

System.out.println("2>> Hexadecimal to decimal");

int c=sc.nextInt();

sc.nextLine();

switch(c){

case 1:

System.out.println("Enter the decimal number");

int dec=sc.nextInt();

String hex=Integer.toHexString(dec).toUpperCase();

System.out.println(hex);

break;

case 2:

System.out.println("Enter the hexadecimal number");

String hex2=sc.nextLine();

int dec2=Integer.parseInt(hex2,16);

System.out.println(dec2);

break;

default:

System.out.println("Enter a valid number");

}

}

}

|  |  |
| --- | --- |
| 11# | Write a Java program to print the following pattern:  **\***  **\*\***  **\*\*\***  **\*\***  **\*** |

import java.util.Scanner;

public class Q11 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

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

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

System.out.print(" ");

}

for(int k=1;k<=i;k++){

System.out.print("\*");

}

System.out.println();

}

for(int i=n-1;i>=1;i--){

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

System.out.print(" ");

}

for(int k=1;k<=i;k++){

System.out.print("\*");

}

System.out.println();

}

}

}

WEEK-6

|  |  |
| --- | --- |
| 1# | Write a Java program to print the odd numbers from 1 to 99. |

public class Q1 {

public static void main(String[] args){

System.out.println("Odd numbers from 1 to 99 are:-");

for(int i=1;i<100;i++){

if(i%2!=0){

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

}

}

}

}

|  |  |
| --- | --- |
| 2# | Write a Java program to check whether a number is prime or not. |

import java.util.Scanner;

public class Q2 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int a=sc.nextInt();

int count=0;

for(int i=2;i<a;i++){

if(a%i==0){

count++;

}

}

if(count==0){

System.out.println(a+" is a prime number");

}

else{

System.out.println(a+" is not a prime number");

}

}

}

|  |  |
| --- | --- |
| 3# | Write a Java program to swap the first and last elements of an array. |

import java.util.Scanner;

public class Q3 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int l=sc.nextInt();

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

int a[]=new int[l];

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

a[i]=sc.nextInt();

}

int temp=a[0];

a[0]=a[l-1];

a[l-1]=temp;

System.out.println("Element after swapping are:-");

for(int j:a){

System.out.println(j+" ");

}

}

}

|  |  |
| --- | --- |
| 4# | Write a Java program to find the maximum and minimum among array elements. |

public class Q4 {

public static void main(String[] args){

int a[]={2,3,4,6,8,12,9,3,7};

int maz=a[0];

int min=a[0];

for (int i=0;i<a.length-1;i++){

if(a[i]>maz){

maz=a[i];

}

else if(a[i]<min){

min=a[i];

}

}

System.out.println("MAX:"+maz+" Min:"+min);

}

}

|  |  |
| --- | --- |
| 5# | Write a Java program to print all prime numbers between 0 to 100. |

public class Q5 {

public static void main(String[] args){

int count=0;

System.out.println("All prime numbers from 0 to 100 are:");

for(int i=2;i<100;i++){

for(int j=2;j<i/2;j++){

if(i%j==0){

count++;

}

}

if(count==0){

System.out.println(i);

}

count=0;

}

}

}

|  |  |
| --- | --- |
| 6# | Write a Java program to implement linear search. |

import java.util.Scanner;

public class Q6 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

int a[]={2,4,8,9,12,55,87,20};

int found=0;

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

if(a[i]==n){

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

found++;

break;

}

}

if(found==0){

System.out.println(n+" does not exist");

}

}

}

|  |  |
| --- | --- |
| 8# | Write a Java program to find the second largest element in an array. |

public class Q8 {

public static void main(String[] args){

int a[]={1,2,99,3,4,8,10,17,44,100,113};

int l1=0;

int l2=0;

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

if(a[i]>l1){

l2=l1;

l1=a[i];

}

else if(a[i]>l2 && a[i]<l1){

l2=a[i];

}

}

System.out.println(l2);

}

}

|  |  |
| --- | --- |
| 9# | Write a program to implement Fibonacci series up to N terms (0,1,1,2,3,5....). |

import java.util.Scanner;

public class Q9 {

public static void main(String[] args){

int a=0,b=1;

Scanner sc=new Scanner(System.in);

System.out.println("Enter the number of terms");

int n=sc.nextInt();

int temp=0;

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

System.out.print(a+",");

temp=a+b;

a=b;

b=temp;

}

}

}

|  |  |
| --- | --- |
| 10# | Write a Java program to reverse all elements of an array. |

import java.util.Scanner;

public class Q10 {

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

int temp,i=0;

int arr[]=new int[n];

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

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

arr[i]=sc.nextInt();

}

for(i=0;i<n/2;i++){

temp=arr[i];

arr[i]=arr[n-i-1];

arr[n-i-1]=temp;

}

System.out.println("Reverse of the array :-");

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

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

}

}

}

|  |  |
| --- | --- |
| 11# | Write a Java program to find the frequency of each character in a given string. |

import java.util.Scanner;

public class Q11{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

int[] freq = new int[256];

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

char ch = s.charAt(i);

freq[ch]++;

System.out.println("\nCharacter frequencies:");

for(int j=0;j<256;j++){

if (freq[j] > 0) {

System.out.println("'" + (char) j + "' : " + freq[j]);

}

}

}

}

}