1. Write a java program to display current Date and Time.

import java.time.LocalDate;

import java.time.LocalTime;

public class dateTime {

  public static void main(String[] args) {

    LocalDate date=LocalDate.now();

    LocalTime time=LocalTime.now();

    System.out.println("Date : "+date);

    System.out.println("Time : "+time);

  }

}

 2. Write a java program to calculate the volume of the cylinder.

import java.util.\*;

public class volume {

public static void main(String args[])

{

  int r, h;

     Scanner in = new Scanner(System.in);

     System.out.print("Enter your radius: ");

     r = in.nextInt();

     System.out.print("Enter your height: ");

     h = in.nextInt();

     double V= (3.14)\*(r\*r\*h);

     System.out.print("Volume is "+V);

}

}

> Task :volume.main()

Enter your radius: 5

Enter your height: 4

Volume is 314.0

 3. A pen costs 50$ and it is been sold at a discount of 12%, Write a program to display discount amount and selling price of the pen?

public class discountAmt {

public static void main(String[] args) {

double discount=0.12\*50;

    double price = 50-discount;

    System.out.println("The discount amount : "+discount);

    System.out.println("The Selling Price : "+price);

}

}

 4. Write a java program to find the ASCII value of the character.

import java.util.\*;

public class volume {

public static void main(String args[])

{

     Scanner sc = new Scanner(System.in);

     System.out.print("Enter your character: ");

     char c = sc.next().charAt(0);

     int a = c;

     System.out.println("The ASCII value of " + c + " is: " + a);

}

}

Enter your character: a

The ASCII value of a is: 97

5. Write a java program to check if given number is a perfect square.

import java.util.\*;

public class perfectSquare {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

double n=sc.nextDouble();

double s= Math.sqrt(n);

sc.close();

if((s-Math.floor(s))==0)

{

System.out.println("Perfect Square");

}

else

{

System.out.println("Not a Perfect Square");

}

}

}

 6. Write a java program to check if input year is leap year or not.

import java.util.\*;

public class volume {

public static void main(String args[])

{

     Scanner sc = new Scanner(System.in);

     System.out.print("Enter your year: ");

     int y = sc.nextInt();

     if(y%4==0)

     {

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

     }

     else

     {

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

     }

}

}

> Task :volume.main()

Enter your year: 2001

2001 is not a leap year

7. Write a java program to calculate the average value of the array elements.

import java.util.\*;

public class average {

public static void main(String[] args) {

System.out.print("Enter the number of elements : ");

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int i;

double sum=0;

    int[] a=new int[n];

    System.out.print("Enter the array elements : ");

     for(i=0;i<n;i++)

     {

     a[i]=sc.nextInt();

     }

     for(i=0;i<n;i++)

     {

     sum=a[i]+sum;

     }

     double avg=sum/n;

     System.out.println("The average : "+avg);

}

}

8. Write a java program to create a file in java.

import java.io.File;

import java.io.IOException;

public class CreateFile {

public static void main(String[] args) {

     try {

         File myObj = new File("filename.txt");

         if (myObj.createNewFile()) {

             System.out.println("File created: " + myObj.getName());

         } else {

             System.out.println("File already exists.");

         }

     } catch (IOException e) {

         System.out.println("An error occurred.");

         e.printStackTrace();

     }

}

}

Task :CreateFile.main()

File already exists.

9. Write a java program to write a data to the file using FileOutputStream.

import java.io.FileOutputStream;

public class fileoutputStream {

public static void main(String[] args) {

try {

FileOutputStream ft=new FileOutputStream("C:\\Users\\USER\\Desktop\\text.txt");

ft.write(76);

ft.close();

} catch ( Exception e) {

e.printStackTrace();

}

}

}

10. Write a java program to copy data from one file to another file.

import java.io.\*;

import java.util.\*;

class CreateFile {

public static void main(String arg[]) throws Exception {

     Scanner sc = new Scanner(System.in);

     System.out.print("Provide source file name :");

     String sfile = sc.next();

     System.out.print("Provide destination file name :");

     String dfile = sc.next();

     FileReader fin = new FileReader(sfile);

     FileWriter fout = new FileWriter(dfile, true);

     int c;

     while ((c = fin.read()) != -1) {

         fout.write(c);

     }

     System.out.println("Copy finish...");

     fin.close();

     fout.close();

}

}

Task :compileJava

> Task :processResources NO-SOURCE

> Task :classes

> Task :CreateFile.main()

Provide source file name :

 11. Write a java program to convert the string totally to uppercase.

import java.util.\*;

public class uppercase {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

String upper=s.toUpperCase();

System.out.print("String in Uppercase :");

System.out.println(upper);

  }

}

12. Write a java program to concatenate two strings.

import java.util.\*;

class Strcon

{

public static void main(String args[])

{

     String str1,str2;

     Scanner sc = new Scanner(System.in);

     System.out.println("Enter the 1st string");

     str1=sc.nextLine();

     System.out.println("Enter the 2nd string");

     str2=sc.nextLine();

     System.out.println("Concatenated String is ");

     System.out.println(str1.concat(str2));

}

}

Task :Strcon.main()

Enter the 1st string

Chris

Enter the 2nd string

Rock

Concatenated String is

ChrisRock

13. Write a java program to count the number words in a string.

import java.util.\*;

public class countWords {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

String[] words=s.split(" ");

System.out.println("The number of words is : "+words.length);

}

}

14. Write a java program to read two string user input and check if first contains the second.

import java.util.\*;

public class javachalng {

     public static boolean is\_str\_contains(String str1, String str2) {

         if (str1 == null || str2 == null) {

             throw new IllegalArgumentException("You can't pass null strings as input.");

         }

         boolean ans = false;

         for (int i = 0; i < str1.length() - 1; i++) {

             if (str1.charAt(i) == str2.charAt(0)) {

                 for (int j = 0; j < str2.length(); j++) {

                     if ((i + j) < str1.length() && str2.charAt(j) == str1.charAt(i + j) && j == str2.length() - 1) {

                         ans = true;

                         break;

                     }

                 }

             }

         }

         return ans;

     }

     public static void main(String[] args) {

         Scanner scanner = new Scanner(System.in);

         System.out.print("Input first string: ");

         String str1 = scanner.nextLine();

         System.out.print("Input second string: ");

         String str2 = scanner.nextLine();

         System.out.println("If the first string contains the second one? "+is\_str\_contains(str1, str2));

     }

}

Input first string: I am here

Input second string: am

If the first string contains the second one? True

I love India

 15. Write a java program to print all the permutations of String “GOD”.

public class permutationString {

public static void main(String[] args) {

permutation(" ","GOD");

}

private static void permutation(String string, String string2) {

if(string2.isEmpty())

{

System.out.println(string+string2);

}

else

{

for(int i=0;i<string2.length();i++)

{

permutation(string+string2.charAt(i),string2.substring(0, i)+string2.substring(i+1, string2.length()));

}

}

}

}

 16. Write a java program to print the duplicate characters of the string.

import java.util.\*;

public class javachalng

{

public static void main(String[] args) {

     Scanner sc = new Scanner(System.in);

     String string1=sc.nextLine();

     int count;

      char string[] = string1.toCharArray();

     System.out.println("Duplicate characters in a given string: ");

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

         count = 1;

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

             if(string[i] == string[j] && string[i] != ' ') {

                 count++;

                 string[j] = '0';

            }

         }

         if(count > 1 && string[i] != '0')

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

     }

}

}

> Task :javachalng.main()

Duplicate characters in a given string:

I

 17. Write a java program to print all the leaf nodes of the binary tree

18. Write a java program to calculate the largest number from the given three numbers using ternary operator.

import java.util.Scanner;

public class javachalng

{

public static void main(String[] args)

{

     int a, b, c, d;

     Scanner s = new Scanner(System.in);

     System.out.println("Enter all three numbers:");

     a = s.nextInt();

     b = s.nextInt();

     c = s.nextInt();

     d = c > (a > b ? a : b) ? c : ((a > b) ? a : b);

     System.out.println("Largest Number:"+d);

}

}

Enter all three numbers:

2

9

3

Largest Number:9

19. Write a java program to check whether given number is an ugly number. Note: In number system, ugly numbers are positive numbers whose only prime factors are 2,3,5.

import java.util.\*;

public class uglyNumber {

public static void main(String[] args) {

    System.out.print("Enter the number: ");

    Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int t=0;

while(n!=1)

{

if(n%5==0)

{

n=n/5;

}

else if(n%3==0)

{

n=n/3;

}

else if(n%2==0)

{

n=n/2;

}

else

{

System.out.println("Not an Ugly Number.");

t=1;

break;

}

}

if(t==0)

{

System.out.println("Ugly Number.");

}

}

}

 20. Write a java program to replace ‘a’ with ‘$’ in the following String “I am always ready to learn although I do not always like being taught.”

public class javachalng{

public static void main(String args[]){

     String s1="I am always ready to learn although I do not always like being taught.";

     String replaceString=s1.replace('a','$');

     System.out.println(replaceString);

}}

Task :javachalng.main()

I $m $lw$ys re$dy to le$rn $lthough I do not $lw$ys like being t$ught.

Question 11

import java.util.\*;

public class Sequence {

public static void main(String arg[]){

Scanner sc = new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit=sc.nextInt();

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

if(i==2)

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

else

System.out.print(","+i\*i);

}

}

}

Output

Enter the limit:

8

4,16,36,64

Question 12

import java.util.\*;

public class Sequence12 {

public static void main(String arg[]){

Scanner sc = new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit=sc.nextInt();

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

if(i%2!=0) {

if (i == 1)

System.out.print(i \* -1);

else

System.out.print("," + i \* -1);

}

else

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

}

}

}

Output

Enter the limit:

8

-1,2,-3,4,-5,6,-7,8

Question 13

import java.util.\*;

public class Sequence13 {

public static void main(String arg[]){

int product;

Scanner sc = new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit=sc.nextInt();

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

product=1;

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

product=product\*i;

}

if(i==1)

System.out.print(product);

else

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

}

}

}

Output

Enter the limit:

8

1,4,27,256,3125,46656,823543,16777216

Question 14

import java.util.\*;

public class Sequence14 {

public static void main(String arg[]){

int first,second,third,next;

Scanner sc=new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit= sc.nextInt();

first=1;

second=4;

third=7;

for(int i=4;i<=limit;i++){

if(i==4)

System.out.print(first+","+second+","+third);

next=first+second+third;

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

first=second;

second=third;

third=next;

}

}

}

Output

Enter the limit:

8

1,4,7,12,23,42,77,142

Question 15

import java.util.\*;

public class Sequence15 {

public static void main(String arg[]){

Scanner sc=new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit=sc.nextInt();

for(int i=1;i<=limit;i++)

{

if(i==4)

continue;

else{

if(i==1)

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

else

System.out.print(","+i\*i);

}

}

}

}

Output

Enter the limit:

8

1,4,9,25,36,49,64

Question 16

import java.util.\*;

public class Sequence16 {

public static void main(String arg[]){

int factor=0,j=4;

Scanner sc=new Scanner(System.in);

System.out.println("Enter the limit: ");

int limit= sc.nextInt();

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

if(i%2!=0) {

if (i == 1) {

System.out.print(i);

factor = i;

}

else{

factor=factor+j;

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

j=j+8;

}

}

else{

factor=factor+j;

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

j=j+4;

}

}

}

}

Output

Enter the limit:

8

1,5,13,29,49,77,109,149

Question 17

import java.util.\*;

public class PrimeCount {

public static void main(String arg[]){

int i,j,count=0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter lower limit: ");

int n=sc.nextInt();

System.out.print("Enter upper limit: ");

int m=sc.nextInt();

System.out.print("Prime number between "+n+" and "+m+": ");

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

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

if (i % j == 0)

break;

}

if (j > i / 2)

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

}

}

}

Output

Enter lower limit: 12

Enter upper limit: 15

Prime number between 12 and 15: 13

Question 18

import java.util.\*;

public class Factorial {

public static void main(String arg[]){

int fact=1;

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

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

fact=fact\*i;

}

System.out.print("Factorial of "+n+" : "+fact);

}

}

Output

Enter a number: 6

Factorial of 6 : 720

Question 19

import java.util.\*;

public class DecToBin {

public static void main(String arg[]){

int index=0;

Scanner sc=new Scanner(System.in);

System.out.print("Enter a decimal number: ");

int decimalNum=sc.nextInt();

int[] binaryNum=new int[20];

while(decimalNum>0){

binaryNum[index]=decimalNum%2;

index++;

decimalNum=decimalNum/2;

}

System.out.print("Binary Number: ");

for(int i=index-1;i>=0;i--){

System.out.print(binaryNum[i]);

}

}

}

Output

Enter a decimal number: 100

Binary Number: 1100100

Question 20

import java.util.\*;

import java.lang.Math;

public class BinToDec {

public static void main(String arg[]){

double decimalNum=0;

Scanner sc=new Scanner(System.in);

System.out.print("Enter a binary number: ");

int binaryNum=sc.nextInt();

int i=0;

while(binaryNum>0){

int temp=binaryNum%10;

decimalNum=decimalNum+(temp\*Math.pow(2,i));

i++;

binaryNum=binaryNum/10;

}

System.out.print("Decimal number: "+decimalNum);

}

}

Output

Enter a binary number: 1100100

Decimal number: 100.0

**/\*Q21: Write the program to print below mentioned series.**

**1, -2, 6, -15, 31, -56 .............. N\*/**

import java.util.Scanner;

public class series1{

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter N: ");

        int n = sc.nextInt();

        int val=1;

        for(int i=1;i<n;i++){

            val+=(i-1)\*(i-1);

            if(i%2==0)

                System.out.print("-"+val+" ");

            else

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

        }

    }

}

**Here we add the squares of numbers to the previous one**

**1, -(1 + 1\*1)+ (2+ 2\*2)+ -(6+ 3\*3)**

**1, -2, 6, -15**

**/\*Q22: Write the program to print below mentioned series. (Fibonacci)**

**1, 1, 2, 3, 5, 8, 13 ........... N \*/**

import java.util.\*;

public class Fibonacci {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

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

        int n = sc.nextInt();

        int a = 1, b = 1, c, i = 2;

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

        while (i < n) {

            c = a + b;

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

            a = b;

            b = c;

            i++;

        }

    }

}

Enter a number:

10

1 1 2 3 5 8 13 21 34 55

**/\*Q23: Write the program to print below mentioned series.**

**1, -2, 4, -6, 7, -10, 10, -14 ..............N\*/**

import java.util.Scanner;

public class series2 {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter N: ");

        int n = sc.nextInt();

        int Arr[] = new int[n];

        Arr[0] = 1;

        Arr[1] = -2;

        for (int i = 2; i < n; i++) {

            if (i % 2 == 0)

                Arr[i] = Arr[i - 2] + 3;

            else

                Arr[i] = Arr[i - 2] - 4;

        }

        for (int i = 0; i < n; i++)

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

    }

}

Odd number differ by 3

Even numbers differ by -4

**/\*Q24: Write the program to find the X to the power of n. (Without using inbuilt function)**

**Input: X = 2, n = 5**

import java.util.\*;

public class Power {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter X:");

        int x = sc.nextInt();

        System.out.print("Enter n:");

        int n = sc.nextInt();

        //int r = ;

        System.out.println(pow(x, n));

    }

    public static int pow(int x, int n) {

        int result = 1;

        while(n!=0) {

            result \*= x;

            n--;

        }

        return result;

    }

}

Enter X:3

Enter n:4

81

/\***Q25: Write a program to reverse the String.**

**Input: Target**

**Output: tegraT\*/**

import java.util.\*;

public class reverseString {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

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

        String str = sc.next();

        String rstr = "";

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

            char ch = str.charAt(i);        //extracts character

            rstr = ch + rstr;

        }

        System.out.println(rstr);

    }

}

Enter a string: Cement

tnemeC

/\***Q26: Write a program to check if the given String is palindrome or not.\*/**

import java.util.Scanner;

public class Pallindrome {

    public static String reverseString(String str){

        String rstr = "";

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

            char ch = str.charAt(i);

            rstr = ch + rstr;

        }

       return rstr;

    }

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

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

        String str = sc.next();

        String rstr=reverseString(str);

        if(str.equalsIgnoreCase(rstr))

            System.out.println("Pallindrome");

        else

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

    }

}

// i/p: madam    o/p: Pallindrome

// i/p: Madam    o/p: Pallindrome

//i/p: pizza        o/p: NotPallindrome

**/\*Q27: Write a program to check Armstrong Number for 3 digit number.\*/**

import java.util.\*;

public class Armstrong {

 public static void main(String args[]){

    Scanner sc=new Scanner(System.in);

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

    int n=sc.nextInt();

    int sum=0,ns=n;

    while(ns>0){

        int d=ns%10;

        sum+=d\*d\*d;

        ns/=10;

    }

    if(n==sum)

        System.out.println("Armstrong Number");

    else

        System.out.println("Not Armstrong Number");

 }

}

Enter number:125

Not Armstrong Number

Enter number:153

Armstrong Number

**/\*Q28: Write the Program to check if the value is present in the array(Linear Search).\*/**

import java.util.Scanner;

public class linearSearch {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter Array Size: ");

        int n = sc.nextInt();

        int Arr[]=new int[n];

        System.out.print("Enter Array Elements: ");

        for (int i = 0; i < n; i++)

            Arr[i] = sc.nextInt();

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

        int e = sc.nextInt();

        boolean flag = false;

        for (int i = 0; i < n; i++) {

            if (Arr[i] == e)

            {flag = true;

                 break;

            }

        }

        if (flag==true)

            System.out.print("Element found");

        else

            System.out.print("Element not found");

    }

}

Enter Array Size: 5

Enter Array Elements: 25 89 65 74 35

Enter element to be searched: 35

Element found

**/\*Q29: Write a program to check if the value is present in the sorted array (Binary Search).\*/**

import java.util.Scanner;

public class binarySearch {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter Array Size: ");

        int n = sc.nextInt();

        int Arr[] = new int[n];

        System.out.print("Enter Array Elements: ");

        for (int i = 0; i < n; i++)

            Arr[i] = sc.nextInt();

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

        int e = sc.nextInt();

        boolean flag = false;

        int low=0, high=n-1, mid=n/2;

        while(low<high) {

            int d=Arr[mid];

            if (e > d)

                low = mid + 1;

            else if (e < d)

                high = mid- 1;

            else if (e == d) {

                flag = true;

                break;

             }

            mid=(high+low)/2;

        }

        if (flag == true)

            System.out.print("Element found");

        else

            System.out.print("Element not found");

    }

}

Enter Array Size: 5

Enter Array Elements: 12 34 36 48 95

Enter element to be searched: 48

Element found

Enter Array Size: 5

Enter Array Elements: 14 78 95 123 564

Enter element to be searched: 854

Element not found