ASSIGNMENT 1

1. Write a java program to find the area of rectangle

PROGRAM:

import java.util.Scanner;

public class arearec

{

public static void main(String[] args) {

double l,b,a;

Scanner s=new Scanner(System.in);

l=s.nextInt();

b=s.nextInt();

System.out.println("LENGTH OF RECTANGLE: "+l);

System.out.println("BREADTH OF RECTANGLE: "+b);

a=l\*b;

System.out.println("AREA OF RECTANGLE: "+a);

}

}

INPUT:

5

4

OUTPUT:

LENGTH OF RECTANGLE: 5.0

BREADTH OF RECTANGLE: 4.0

AREA OF RECTANGLE: 20.0

1. Write a java program to check the given no is Armstrong or not(153 is Armstrong no 1\*1\*1+5\*5\*5+3\*3\*3=153)

PROGRAM :

import java.util.Scanner;

public class arm

{

public static void main(String[] args) {

int n,k,rem,sum=0;

Scanner s=new Scanner(System.in);

n=s.nextInt();

k=n;

while(n>0)

{

rem=n%10;

sum+=(rem\*rem\*rem);

n=n/10;

}

if(k==sum)

System.out.println(k+" is an ARMSTRONG NUMBER");

else

System.out.println(k+" is not an ARMSTRONG NUMBER");

}

}

INPUT :

153

OUTPUT :

153 is an ARMSTRONG NUMBER

1. Write a java program to check the given no is palindrome or not.

PROGRAM :

import java.util.Scanner;

public class pal

{

public static void main(String[] args) {

int n,k,rem,sum=0;

Scanner s=new Scanner(System.in);

n=s.nextInt();

k=n;

while(n>0)

{

rem=n%10;

sum=(sum\*10)+rem;

n=n/10;

}

if(k==sum)

System.out.println(k+" is an PALINDROME NUMBER");

else

System.out.println(k+" is not an PALINDROME NUMBER");

}

}

INPUT :

1221

OUTPUT :

1221 is an PALINDROME NUMBER

1. Write a java program to generate first N prime numbers.

PROGRAM :

import java.util.Scanner;

public class prime

{

public static void main(String[] args) {

int n,temp=0,k=2,f,i;

Scanner s=new Scanner(System.in);

n=s.nextInt();

System.out.println("FIRST "+n+" PRIME NUMBERS ARE : \n");

while(n!=temp)

{

f=0;

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

{

if(k%i==0)

f++;

}

if(f==2)

{

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

temp++;

}

k++;

}

}

}

INPUT :

10

OUTPUT :

FIRST 10 PRIME NUMBERS ARE :

2 3 5 7 11 13 17 19 23 29

1. Write a java program to print even numbers in between given two numbers.

PROGRAM :

import java.util.Scanner;

public class even

{

public static void main(String[] args) {

int start,end,i;

Scanner s=new Scanner(System.in);

start=s.nextInt();

end=s.nextInt();

System.out.println("EVEN NUMBERS BETWEEN "+start+" AND "+end+" ARE :\n");

for(i=start;i<end;i++)

{

if(i%2==0)

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

}

}

}

INPUT :

4

20

OUTPUT :

EVEN NUMBERS BETWEEN 4 AND 20 ARE :

4 6 8 10 12 14 16 18

1. What is Abstraction?

ABSTRACTION : A class which is declared with the abstract keyword is known as an abstract class in Java. Abstraction has only declaration and the implementation is hide and only functionality to the use. An abstract class must be declared with an abstract keyword.

1. What is Encapsulation?

ENCAPSULATION : The process of grouping and combining the data members and corresponding methods into a single unit which is nothing but a encapsulation. If any component follows the data hiding and abstraction at component set to be a encapsulation component

(Encapsulation=Data hiding + Abstraction).

1. What is JDK?

Java development kit(JDK) : JDK is java development kit. JDK is a superset of the Java-runtime Environment and contains everything that is in JRE and plus tools such as compilers

and debuggers ,a documentation generator (Javadoc) and other tools needed in Java development.

1. What is JVM?

JAVA VIRTUAL-MACHINE : Java program you run using JRE or JDK goes into JVM and JVM is responsible for executing the java program line by line hence it is also known as interpreter.

JVM does not understand Java source code that is why you compile your JAVA files to obtain .CLASS files that contains the bytecode understand by the JVM.

1. Define Inheritance.

INHERITANCE : Inheritance is also known as the IS-A relationship. Inheritance in java is a mechanism in which one object acquires all the properties and behaviour of the

parent object.

1. How java achieved platform independence

Platform Independence : The meaning of platform-independent is that the java compiled code(byte code) can run on all operating systems. whenever, a program is written in JAVA, the javac compiles it.

The result of the JAVA compiler is the .class file or the bytecode and not the machine native code (unlike C compiler).The bytecode generated is a non-executable code and needs an interpreter to execute

on a machine. This interpreter is the JVM and thus the Bytecode is executed by the JVM and finally program runs to give the desired output.

1. Write the syntax of main function.

Syntax of main function : public static void main(String args[])

1. What is conditional operator?

Conditional Operator : The conditional operator is also known as the ternary operator.

This operator consists of three operands and is used to evaluate Boolean expressions.

The goal of the operator is to decide; which value should be assigned to the variable.

The operator is written as : variable x = (expression)? value if true: value if false.

1. How many data types in java?

Data types: They are eight data types in java they are:

1.byte 1 byte

2.short 2 bytes

3.int 4 bytes

4.long 8 bytes

5.float 4 bytes

6.double 8 bytes

7.boolean 1 bit

8.char 2 bytes

1. What is constant? How it is declared?

Constant : Constant means the value is never be changed and the value is final. Constant is declared in java with final key word

ex: final c=5;