**Write a java program to find the area of rectangle?**

***import java.util.\*;***

***class AreaOfRectangle***

***{***

***public static void main(String args[])***

***{***

***Scanner s= new Scanner(System.in);***

***System.out.println("Enter the length:");***

***double l= s.nextDouble();***

***System.out.println("Enter the breadth:");***

***double b= s.nextDouble();***

***double  area=l\*b;***

***System.out.println("Area of Rectangle is: " + area);***

***}***

***}***

***OUTPUT:-***

***Enter the length:***

***5***

***Enter the breadth:***

***10***

***Area of Rectangle is:50***

**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)**

***class Armstrong {***

***public static void main(String[] args) {***

***int number = 153, originalNumber, remainder, result = 0;***

***originalNumber = number;***

***while (originalNumber != 0)***

***{***

***remainder = originalNumber % 10;***

***result += Math.pow(remainder, 3);***

***originalNumber /= 10;***

***}***

***if(result == number)***

***System.out.println(number + " is an Armstrong number.");***

***else***

***System.out.println(number + " is not an Armstrong number.");***

***}***

***}***

***OUTPUT:-***

***153 is an Armstrong number.***

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

***class PalindromeExample{***

***public static void main(String args[]){***

***int r,sum=0,temp;***

***int n=454;//It is the number variable to be checked for palindrome***

***temp=n;***

***while(n>0){***

***r=n%10; //getting remainder***

***sum=(sum\*10)+r;***

***n=n/10;***

***}***

***if(temp==sum)***

***System.out.println("palindrome number ");***

***else***

***System.out.println("not palindrome");***

***}***

***}***

***OUTPUT:-***

***palindrome number***

**Write a java program to generate first N prime numbers**

***class PrimeNumberDemo***

***{***

***public static void main(String args[])***

***{***

***int n;***

***int status = 1;***

***int num = 3;***

***//For capturing the value of n***

***Scanner scanner = new Scanner(System.in);***

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

***//The entered value is stored in the var n***

***n = scanner.nextInt();***

***if (n >= 1)***

***{***

***System.out.println("First "+n+" prime numbers are:");***

***//2 is a known prime number***

***System.out.println(2);***

***}***

***for ( int i = 2 ; i <=n ; )***

***{***

***for ( int j = 2 ; j <= Math.sqrt(num) ; j++ )***

***{***

***if ( num%j == 0 )***

***{***

***status = 0;***

***break;***

***}***

***}***

***if ( status != 0 )***

***{***

***System.out.print(num+” “);***

***i++;***

***}***

***status = 1;***

***num++;***

***}***

***}***

***}***

***OUTPUT:-***

***Enter the value of n:***

***10***

***First 10 prime numbers are:***

***2,3,5***

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

***class JavaExample {***

***public static void main(String args[]) {***

***int n = 10;***

***System.out.print("Even Numbers from 1 to "+n+" are: ");***

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

***//if number%2 == 0 it means its an even number***

***if (i % 2 == 0) {***

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

***}***

***}***

***}***

***}***

***OUTPUT:-***

***Even Numbers from 1 to 10 are:2 4 6 8 10***

**1.What is Abstraction?**

***A class which is declared with the abstract keyword is known as an abstract class in Java. It can have abstract and non-abstract methods (method with the body).***

***Abstraction in Java:***

***Abstraction is a process of hiding the implementation details and showing only functionality to the user.***

***Another way, it shows only essential things to the user and hides the internal details, for example, sending SMS where you type the text and send the message. You don't know the internal processing about the message delivery.***

***Abstraction lets you focus on what the object does instead of how it does it.***

***Ways to achieve Abstraction:***

***There are two ways to achieve abstraction in java***

***1.Abstract class (0 to 100%)***

***2.Interface (100%)***

***Abstract class in Java***

***A class which is declared as abstract is known as an abstract class. It can have abstract and non-abstract methods. It needs to be extended and its method implemented. It cannot be instantiated.***

***Points to Remember***

* ***An abstract class must be declared with an abstract keyword.***
* ***It can have abstract and non-abstract methods.***
* ***It cannot be instantiated.***
* ***It can have constructors and static methods also.***
* ***It can have final methods which will force the subclass not to change the body of the method.***

***Abstract Method in Java***

***A method which is declared as abstract and does not have implementation is known as an abstract method.***

**2.** **What is Encapsulation ?**

***Encapsulation in Java is a process of wrapping code and data together into a single unit, for example, a capsule which is mixed of several medicines.***

***encapsulation in java***

***We can create a fully encapsulated class in Java by making all the data members of the class private. Now we can use setter and getter methods to set and get the data in it.***

***The Java Bean class is the example of a fully encapsulated class.***

***Advantage of Encapsulation in Java***

* ***By providing only a setter or getter method, you can make the class read-only or write-only. In other words, you can skip the getter or setter methods.***
* ***It provides you the control over the data. Suppose you want to set the value of id which should be greater than 100 only, you can write the logic inside the setter method. You can write the logic not to store the negative numbers in the setter methods.***
* ***It is a way to achieve data hiding in Java because other class will not be able to access the data through the private data members.***
* ***The encapsulate class is easy to test. So, it is better for unit testing.***
* ***The standard IDE's are providing the facility to generate the getters and setters. So, it is easy and fast to create an encapsulated class in Java.***

**3.What is JDK?**

***JDK is an acronym for Java Development Kit. The Java Development Kit (JDK) is a software development environment which is used to develop java applications and applets. It physically exists. It contains JRE + development tools.***

***JDK is an implementation of any one of the below given Java Platforms released by Oracle corporation:***

* ***Standard Edition Java Platform***
* ***Enterprise Edition Java Platform***
* ***Micro Edition Java Platform***

***The JDK contains a private Java Virtual Machine (JVM) and a few other resources such as an interpreter/loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) etc. to complete the development of a Java Application.***

**4.What is JVM?**

* ***A specification where working of Java Virtual Machine is specified. But implementation provider is independent to choose the algorithm. Its implementation has been provided by Oracle and other companies.***
* ***An implementation Its implementation is known as JRE (Java Runtime Environment).***
* ***Runtime Instance Whenever you write java command on the command prompt to run the java class, an instance of JVM is created.***

**5.Define Inheritance?**

* ***Inheritance can be defined as the process where one class acquires the properties (methods and fields) of another. With the use of inheritance the information is made manageable in a hierarchical order.***
* ***The class which inherits the properties of other is known as subclass (derived class, child class) and the class whose properties are inherited is known as superclass (base class, parent class).***

**6.How java achieved platform independence?**

***When you compile Java programs using javac compiler it generates bytecode. We need to execute this bytecode using JVM (Java Virtual machine) Then, JVM translates the Java bytecode to machine understandable code.***

***You can download JVM's (comes along with JDK or JRE) suitable to your operating system and, once you write a Java program you can run it on any system using JVM.***

**7.Write the syntax of main function?**

***public class Test {***

***static void main(String[] args){***

***System.out.println("Hello World"); //code is executing inside the main***

***}***

***}***

**8. What is conditional operator?**

***Here, expression is a boolean expression which evaluates to either true or false. If it evaluates to true, expressionTrue is evaluated and assigned to variable number. If it evaluates to False, expressionFalse is evaluated and assigned to variable number.***

***Example:***

***class Operator {***

***public static void main(String[] args) {***

***Double number = -5.5;***

***String result;***

***result = (number > 0.0) ? "positive" : "not positive";***

***System.out.println(number + " is " + result);***

***}***

***}***

**9. How many data types in java?**

***There are two fundamental data types in Java:***

***primitive types and reference types. Primitive types are:***

* ***boolean***
* ***char***
* ***byte***
* ***short***
* ***int***
* ***long***
* ***float***
* ***double***

***There is a specific keyword for each of these types in Java. Primitive types are not objects in Java. Primitive data types cannot be stored in Java collections which work only with objects. They can be placed into arrays instead.***

***The reference types are:***

* ***class types***
* ***interface types***
* ***array types***

**10. What is constant? How it is declared?**

***A constant is a variable whose value cannot change once it has been assigned. Java doesn't have built-in support for constants.***

***A constant can make our program more easily read and understood by others.***

***To define a variable as a constant, we just need to add the keyword “final” in front of the variable declaration.***

***Syntax***

* ***final float pi = 3.14f;***