**Assignment 1**

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

class RArea{

public static void main(String args[]){

int l=Integer.parseInt(args[0]);

int b=Integer.parseInt(args[1]);

System.out.println("The area of rectangle is "+(l\*b));

}

}

javac RArea.java

java RArea 5 8

Output: The area of rectangle is 40

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).

public class Armstrong {

public static void main(String args[]) {

int n = Integer.parseInt(args[0]);

int s = 0;

int i = n;

while(i>0){

int r=i%10;

s=s+r\*r\*r;

i=i/10;

}

if(s==n){

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

}

else{

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

}

}

}

javac Armstrong.java

java Armstrong 370

Output: 370 is a Armstrong number

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

public class Palindrome {

public static void main(String args[]) {

int n = Integer.parseInt(args[0]);

int s = 0;

int i = n;

while (i > 0) {

int r = i % 10;

s=s\*10+r;

i/=10;

}

if(s==n){

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

}

else{

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

}

}

}

javac Palindrome.java

java Palindrome 252

Output: 252 is Palindrome number

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

public class NPrimes {

boolean check(int a) {

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

if(a%i==0){

return false;

}

}

return true;

}

public static void main(String args[]) {

NPrimes np=new NPrimes();

int n=Integer.parseInt(args[0]);

System.out.print("The primes upto "+n+" are ");

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

if(np.check(i)){

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

}

}

}

}

javac NPrimes.java

java NPrimes 10

Output: The primes upto 10 are 2 3 5 7

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

public class NEven {

public static void main(String args[]) {

int a=Integer.parseInt(args[0]);

int b=Integer.parseInt(args[1]);

System.out.print("The even numbers between "+a+" and "+b+" are ");

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

if(i%2==0){

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

}

}

}

}

javac NEven.java

java NEven 10 20

The even numbers between 10 and 20 are 10 12 14 16 18

1. What is Abstraction?

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

1. What is Encapsulation?

Encapsulation is defined as the wrapping up of data under a single unit. It is the mechanism that binds together code and the data it manipulates

1. What is JDK?

The Java Development Kit(JDK) is a key platform component for building Java applications. At its heart is the Java compiler. The JDK allows developers to create Java programs that can be executed and run by the JVM and JRE.

1. What is JVM?

JVM (Java Virtual Machine) is an abstract machine. It is a specification that provides runtime environment in which java bytecode can be executed. The JVM is the Java platform component that executes programs.

1. Define Inheritance

The process by which one class acquires the properties(data members) and functionalities(methods) of another class is called **inheritance**. The aim of inheritance is to provide the reusability of code so that a class has to write only the unique features and rest of the common properties and functionalities can be extended from the another class.

1. How java achieved platform independence?

When a java program is compiled a byte code is formed which is understandable by JVM irrespective of the platform it is installed. Any operating system which has JVM installed in it can understand this byte code and can run it. Thus java is platform independent.

1. Write the syntax of main function.

class Assignment1{

public static void main(String args[]){

//code

System.out.println(“Completed”);

}

}

1. What is conditional operator?

Conditional operator is used when we have to choose among two statements based on our requirements for a specific problem. Conditional operator is also known as Ternary operator.

Syntax: expression1?statement1:statement2

1. How many data types in java?

There are two data types in java. They are:

* Primitive data types

A primitive data type is pre-defined by the programming language. The size and type of variable values are specified, and it has no additional methods. They are:

* Boolean
* Byte
* Char
* Short
* Int
* Long
* Float
* Double
* Non Primitive data types

Non Primitive data types are user-defined and they reference a memory location which stores the data. They are:

* Strings
* Arrays
* Class
* Interface

1. 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 so we use a keyword called final to make a variable constant.

Syntax: final variabletype variablename = variablevalue;