# Right Stroke Consulting

# Java coding Assignment

## 1.Area of Triangle

## Program:

```
import java.util.Scanner;
class Rectangle
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
int height=sc.nextInt(),width=sc.nextInt();
int area=height*width;
System.out.println("Area of rectangle is "+area);
}
}
```

## Output:

```
E:\fullstackjava>javac Rectangle.java
E:\fullstackjava>java Rectangle
4
5
Area of rectangle is 20
```

## 2.Armstrong

## Program:

```
class Armstrong
{
public static void main(String a[])
{
int s=0,rem;
int num=Integer.parseInt(a[0]);
int x=num;
while(num>0)
{
rem=num%10;
s=s+rem*rem*rem;
num=num/10;
}
if(x==s)
  System.out.println(x+" is a  Armstrong number");
else
  System.out.println(x+" is not a Armstrong number");
}
}
```

## Output:

```
E:\fullstackjava>javac Armstrong.java

E:\fullstackjava>java Armstrong 153

153 is a Armstrong number

E:\fullstackjava>java Armstrong 221

221is not a Armstrong number
```

# 3.Palindrome Check

## Program:

```
class Palindrome

{

public static void main(String a[])

{

int s=0,rem;

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

int x=num;

while(num>0)

{

rem=num%10;

s=s*10+rem;

num=num/10;
```

```
}
if(x==s)
  System.out.println(x+" is a Palindrome number");
else
  System.out.println(x+" is not a Palindrome number");
}
}
```

## Output:

```
E:\fullstackjava>javac Palindrome.java
E:\fullstackjava>java Palindrome 121
121 is a Palindrome number
E:\fullstackjava>java Palindrome 221
221is not a Palindrome number
```

# 4.Prime Number Series

## Program:

```
class PrimeSeries
{
public static void main(String a[])
{
```

```
int num=Integer.parseInt(a[0]);
if(num>1)
{
System.out.println("Prime numbers are:");
System.out.println(2); //2 is known prime number
}
for(int i=3;i<num;i++)
{
int c=0;
for(int j=i;j>=1;j--)
{
if(i%j==0)
{
  c++;
}
if(c==2)
  System.out.println(i);
}
}
}
```

## Output:

```
E:\fullstackjava>javac PrimeSeries.java

E:\fullstackjava>java PrimeSeries 50

2

3

5

7

11

13

17

19

23

29

31

37

41

43

47
```

# 5.Even numbers between range

## Program:

```
import java.util.Scanner;
class EvenRange
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
System.out.print("enter first number: ");
int a1=sc.nextInt();
System.out.println();
System.out.print("enter second number: ");
int b2=sc.nextInt();
System.out.println();
System.out.println("Result: ");
for(int i=a1;i<=b2;i++)
{
if(i%2==0)
  System.out.println(i);
}
}
}
```

Output:

```
E:\fullstackjava>javac EvenRange.java

E:\fullstackjava>java EvenRange

enter first number: 10

enter second number: 30

Result:

10

12

14

16

18

20

22

24

26

28

30
```

## 1.What is Abstraction?

Ans: Abstraction is one of the most important concepts of OOPs. Abstraction deals with ideas rather than

implementation. For example, while we do a phone call we can only see the contact number,name of a person but we can't see how the call was happening.

Abstraction is the process of hiding the irrelevant/implementation details from the user. It provides only the functionality to the user.

## 2. What is Encapsulation?

Ans: Encapsulation is the process of wrapping up the object fields and methods acting on the data together into a single unit. Simply it binds the object fields ,behaviour together and hides the implementation details to the user.

For example,if a student has details of his name,pin no,address,father name,mother name,date of birth etc.But we want only his name or pin no. So all remaining details will be hided to others.

## 3.What is JDK?

ANS: Java Development Kit(JDK) is simply full featured s/w development kit.

| JDK= JRE+Development/Prgramming tools |
|---|

The development tools help to create java applications.It provides debuger,compiler,JavaDoc for testing the code.

It compiles the code,document & package the java programs.It contains a compiler,java application

launcher,appletviewer etc which was used to run a java application.

## 4. What is JVM?

Ans: Java Virtual Machine(JVM) is an abstract machine.It a specification that provides a Runtime Environment in which byte code can be executed.

It provides 3 notations.They are specification, implementation and runtime instance.

The tasks provided by JVM are loads,verifies,executes and provides RE(Runtime Environment) of the code.JVM is a part of a JRE.we need to install JRE for installing JVM.

## 5. Define Inheritance

Ans:Inheritance is part of Object Oriented Programming.

It is defined as the process of acquiring properties from one class to another class.so that we can manage the data in hierarchical. The use of inheritance is we can create new class that are built based up on existing class.

In inheritance we have two classes. The class which provides properties to another class is called parent/base class and the class which access/acquires the properties from another class is called child/derived class.

## 6. How java achieved platform independence?

Ans: Platform Independence is one of best feature of java.Platform independent language means once your code is executed you can run it on any Operation System(OS).

Java is platform independent because java has javac which converts source code to byte code,which is intermediate language.Byte code can

be executed on any platform using JVM.Because of that java achieves platform independence.

## 7. Write the syntax of main function.

Ans: Java main method is the entry point to any program.

It's syntax is:

public static void main(String args[])

public-access specifier,which is always defiend as public so that JVM can identify execution point of the program.

Static- keyword,we should call the main method without creating an object.static method is used to invoke a method without object creation.

Void-defines that the method doesn't return a value.

Main()-it is default which is defined by JVM ,to execute the program.

String args[]-it is used to accept some data from the user

It will accept in string array format only .It is used to hold the command arguments in string fromat.

We can change the name of args by a,stringarray etc.

## 8. What is conditional operator?

Ans:Conditional operator is ternary operator which allows us to give conditional operations in java.It consists of three operands and is used to evaluate Boolean expressions.The operator has to decide which value has to give variable either true or false.

Syntax:

variable x = (expression)? value if true: value if false

## 9. How many data types in java?

Ans: Data type defines the value that a variable can take.It defines the type of a variable.

Basically there are three type of data types:

1. Primitive data types
2. Derived data types
3. User defined data types

Primitive data type: are the general and fundamental data types that we have in Java and those are byte, short, int, long, float, double, char, boolean.

Derived data type: are those that are made by using any other data type for example, arrays.

User defined data type: are those that user / programmer himself defines. For example, classes, interfaces.

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

Ans: Constant means once it defined it can't be changed further.The default value on constant is zero.

It is declared by using final keyword before variable.

Syntax: final datatype var_name=value;

Ex:final int a=50;

Here a is declared as final so the value of a is can't be changed.