

Assignment-1

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

```
import java.util.Scanner;

public class rectangle {

    public static void main(String args[])

    {

        Scanner sc=new Scanner(System.in);

        int l=sc.nextInt();

        int b=sc.nextInt();

        int area=l*b;

        System.out.println("Area of rectangle="+area);

    }

}
```

Output:

2 5

Area of rectangle=10

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

```
import java.util.*;

public class Armstrong {

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

```

Scanner sc=new Scanner(System.in);

int t, r, sum = 0;

String s=sc.next();

int k=s.length();

int n=Integer.parseInt(s);

t = n;

while (n != 0)

{

    r = n % 10;

    sum += Math.pow(r, k);

    n /= 10;

}

if(t==sum)

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

else

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

}

}

```

Output:

153

153 is an armstrong number.

3. Write a program to check palindrome number

```

class PalindromeExample{

    public static void main(String args[]){

```

```

int r,sum=0,temp;

int n=454;


temp=n;
while(n>0){
    r=n%10; /
    sum=(sum*10)+r;
    n=n/10;
}
if(temp==sum)

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

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

```

Output:

Palindrome number

4.write a program to find first n prime numbers?

```

class PalindromeExample{

    static boolean prime(int n){

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

            if(n%i==0)

                return false;

        }

    }
}

```

```
        return true;
    }

    public static void main(String args[]){
        int n=15,j=2,c=0;
        while(c!=n){
            if(prime(j)==true){
                System.out.println(j);
                c++;
            }
            j++;
        }
    }
}
```

Output:

2
3
5
7
11
13
17
19
23
29

31

37

41

43

47

5. Write a program to print even numbers between two numbers?

```
import java.util.*;
```

```
Class even{
```

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

```
    int n=15,j=2;
```

```
    for(int i=j;i<=n;i++){
```

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

```
            System.out.println(i);
```

```
        }
```

```
    }
```

```
}
```

Output:

2

4

6

8

10

12

14

6.What is abstraction?

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

It shows only essential things to the use and hides the internal details.

7.What is encapsulation?

The process of wrapping code and data together into a single unit.

The variables or data of a class is hidden from any other class and can be accessed only through any member function of own class in which they are declared.

8.what is inheritance?

Inheritance can be defined as the process where one class acquires the properties (methods and fields) of another.

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).

9.what is jdk?

It is a kit which provides the environment to develop and execute the java program.

It contains development tools and jre.

10.what is jvm?

It is a very important part of both jdk and jre because it is contained or inbuilt in both.whatever java program you run using jre or jdk goes into jvm and it is responsible for executing the java program line by line hence it is also called as interpreter.

11.how java achieved platform independence?

Java code is compiled by compiler and converted into bytecode. This bytecode can be run on multiple platform.

12. write syntax of main function?

```
public static void main(String args[]){  
}
```

13. what is conditional operator?

The conditional operator is also known as the *ternary operator*, the term ternary is used because this operator consists of three operands which are used to evaluate Boolean expressions. The ultimate aim of the operator is to decide which value is to be assigned to the variable.

Syntax:

```
booleanExpression? expression1: expression2;
```

The first expression must be a Boolean expression whereas expression1 and expression2 can be any expression that holds some value. Now, if the first operand evaluates to *true* then the conditional operator will return expression1 as the output, else expression2 will be returned.

14. how many types of datatypes in java?

Datatypes in java are mainly of two types.

1. primitive datatypes:

- boolean data type
- byte data type
- char data type
- short data type
- int data type

- long data type
- float data type
- double data type

2.Non-primitive datatypes:String,array etc..

15.what is constant?How is it declared?

A constant is a variable whose value cannot change once it has been assigned. the variable modifiers *static* and *final* can be used to declare constant.