⟹ OUTPUT

$x = 5, y = 10$

4. Q Discuss the Structure of Java Program.

Ans A Java Program may contain classes of which only one class defines a main method. Classes contain data members and methods. Methods of a class operate on the data members of the class. Methods may contain data type declarations and executable statements. To write a Java program, we first define classes and then put them together.

A Java program may contain one or more sections shown in the following figure.

Documentation Section	⟵ Suggested
Package Statement	⟵ optional
Import statement	⟵ optional
Interface Statements	⟵ optional
Class Definitions	⟵ Essential
Main method class {	
Main method Definition	⟵ Essential
}	

1) Documentation Section

The documentation section comprises a set of comment lines giving the name of the program, the author and other details,

which the programmer would like to refer to at a later stage. Comments must explain why and what of classes and how of algorithm. This would greatly help in maintaining the program. In addition to the two styles of comments discuss earlier, Java also uses a third style of comment /** ... */ known as documentation comment. This form of comment is used for generating documentation automatically.

2) Package Statement.

The first statement allowed in a Java file is a Package statement. This statement declares a package name and informs the Compiler that the classes defined here belong to this Package.

→ Example

Package Student;

The Package Statement is optional. That is, our classes do not have to be part of Package

3) Import Statements

The next thing after a Package statement may be a number of import statements. This is similar to #include statement in C.

→ Example

import Student.test;

This statement instruct the interpreter to load the test class contained in the Package

Student. using import statements, we can have access to classes that are part of other named Packages.

4) Interface Statements

An interface is like class but includes a group of methods declarations. This is also an optional section. and is used only when we wish to implement the multiple inheritance feature in the program.

5) Class Definitions

A Java program may contain multiple class Definitions. classes are the primary and essential elements of a Java program. These classes are used to map the objects of real-world problems. The number of classes used depends on the complexity of the program.

6) Main Method Class

Since every Java stand-alone program requires a main method and it's starting point, this class is the essential part of a Java program. A simple Java program may contain only this part. The main methods creates objects of various classes and establishes communications between them.

Java is picky about the file names. Each source file can contain one public class. The source file name has to be the name of that class. By convention, the source file used uses a .java filename

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extention - Thus your file Containing the class Hat is Called Hat·Java and your file Containing the class Player must have the file name Player-Java

=> <u>PROGRAM</u>

```
/*      This is a Simple Java Program
        Save this file as welcome-Java
*/

class welcome
{
        // A Java program will Start from here
        public static void main(String args[])
        {
                System·out·println ("Welcome to the world
                                         of Java"),
        }
}
```

⇒ <u>OUTPUT</u>

Welcome to the world of Java.