* *Practical 1.1* *

Question : Introduction to Object Oriented Concepts, comparison of Java with other

object Oriented programming languages. Introduction to JDK, JRE, JVM,

Javadoc , command line argument.

Answer :

➔ **Object Oriented Programming** :

Object-Oriented Programming is a methodology or paradigm to design a program using classes and objects. It simplifies the software development and maintenance by providing some concepts:

- Object
- Class
- Inheritance
- Polymorphism
- Abstraction
- Encapsulation

→ **JDK** :

JDK is an acronym for Java Development Kit. It physically exists. It contains JRE + development tools.

→ **JRE** :

JRE is an acronym for Java Runtime Environment. It is used to provide runtime environment. It is the implementation of JVM. It physically exists. It contains set of libraries + other files that JVM uses at runtime.

Implementations of JVMs are also actively released by other companies besides Sun Micro Systems.

→ <u>JVM :</u>

JVM (Java Virtual Machine) is an abstract machine. It is a specification that provides runtime

environment in which java bytecode can be executed.

JVMs are available for many hardware and software platforms. JVM, JRE and JDK are platform

dependent because configuration of each OS differs. But, Java is platform independent. The JVM

performs following main tasks:

- Loads code

- Verifies code

- Executes code

- Provides runtime environment

→<u>JAVADOC :</u>

Javadoc is a documentation generator tool. We need to use Javadoc comments in our source code to create descriptive and easy-to-understand documentation. Javadoc provides us inbuilt tags which we can use to specify certain properties about our code.

→ <u>command line argument :</u>

In the command line, the arguments passed from the console can be received in the java program and they can be used as input. The users can pass the arguments during the execution bypassing the command-line arguments inside the main() method.