* Fundamentals of Java *
Assignment Solution.

Q.1 What is programming language?

Ans 1. A programming language is a Computer language that is used by programmers (developers) to communicate with Computer. It is set of Instructions written in any specific language (Java) to perform a specific task.

Q.2 Why do we need a programming language?

Ans 2. programming Language is Important in our daily life to enhance and increase the power of Computers, Mobile Solution, and the Internet. there are numberous Examples you May come to know when you are going to learn a programming language.

* Not Just for academics, but for the real world as well, all programming is done.

* Due to programmers developed by Computer programming, you can Conduct

online banking and purchase your ticket while travelling by train or aeroplane. It's true that your washing Machine has a few different kinds of computer programmes. programming makes it possible for all of these things and Many More.

Q.3 What are the features of Java?

Ans 3 object-Oriented: The features of object oriented programming are supported by Java. Its object Model is straightforword and flexible.

platform Independent: Because of Java and c++ are platform Independent application programms. Created in one operating System can run on any other operating System. C and c++, however, are platform dependent languages, Making it possible for application program created in one operating system to run in any other operating System.

Simple: Because Java incorporates Many c/c++ capabilities, It is simple to understand.

Secure: Java offers a variety of defences against Malware and viruses

Viruses. It guarantees that neither damage nor Security will be Compromised.

portable:- we have to idea of portability in Java. Java allows the same Software to run on various platforms.

Robust: It assists us identifying potential errors as soon as feasible during program development.

Multi-threaded: Java's Multithreading program-ming capability enables you to creat a program that executes Multible tasks Concurrently.

Distributed Java Maintains the TCP/IP protocal and is therefore Suitable for distributed internet Environments.

Q: What is an object?

Ans An object is an entity with state and behaviour, Such as a chain, bike, Manken, pen, table or Car. It Could be Intellectual or physical (Tangible and intangible). The banking System is illustration of an intangible entity.

An object has three characteristics

State: Represents an object's data (value).

Behaviour: Represent how an object behaves (or how it functions), such as when you deposit or withdraw money.

Identity: Usually, a distinct ID is used to implement an object's identification. the external user cannot see the value of ID. However, the JVM uses it internally to uniquely Identify each object.

pen, for instance, is an object. Reynolds is its Name; its state is noted as being white. Writing is its behaviour because it is utilized for writing.

A Class's instances are objects. A Class serves as a Model or blueprint from which new object can be Made. therefore, a Class's instance (or result) is an object

Q What is class?

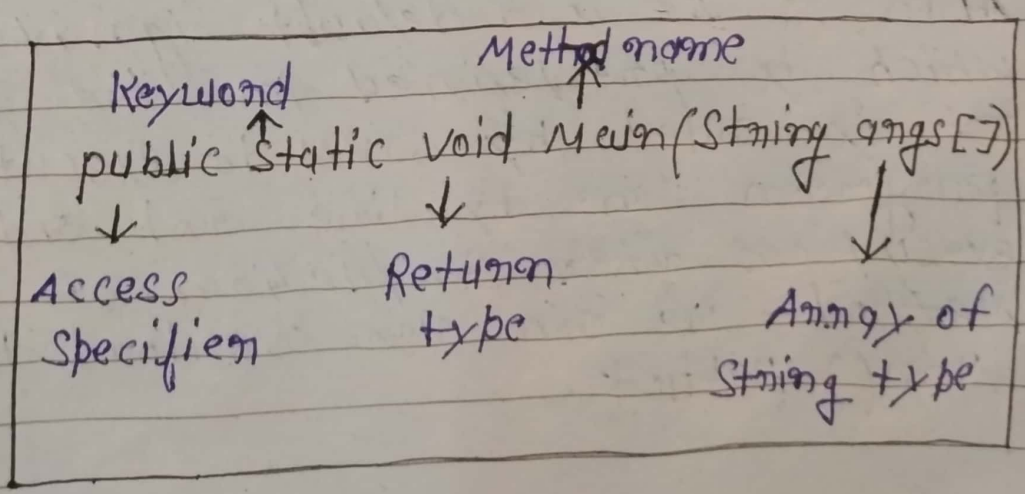
Ans A Class is a collection of items with similar characteristics. It serves a Model or blueprint from which things can be Made. It makes sense as a whole. It cannot be bodily.

In Java, a class could include:

- Fields
- Methods
- Constructors
- Blocks
- Nested class and Interface

Q.6 Explain about the Main() Method in Java?

Ans6 the Main() is the starting point for JVM to start execution of Java program. without the Main() Method, JVM will not execute the program. the Syntax of the Main() Method is: public: It is an access specifiers. we should use a public keyword before the Main() Method so that JVM can Identify the execution point of the program.



public: An access specifier, that is Before calling the Main() Method, we need to use the public keyword to let the JVM know where the programme is actually being executed. the Main() Method; if Before we use private, protected, and default, the JVM won't be able to see it.

Static: you can make a Method static by using the keyword static. we should call the Main() Method without creating an object. Static Methods are the Method which is invoked without creating the object, So we do not need any object to call the Main() Method.

Void: In Java, Every Method has the return type. Void keyword acknowledges the Compiler that the Main() Method does not return any value.

Main(): It is a default Signature which is predefined in the JVM. It is called by JVM to execute a program line by line and end the execution after Completion of this Method. we can also overload the Main() Method.

String args[]: the main() Method also accepts some data from the user. It accepts a group of Strings, which is called a String array. It is used to hold the Command line arguments in the form of string values.

main(String args[])

Here, args[] is the array name, and it is of String type. It means that It can store a group of Strings. Remember, this array can also store a group of numbers but in the form of String only. values passed to the main() Method are called arguments. these arguments are stored into an args[] array, So the Name args[] is generally used for it.