Fundamental of Java

1. What is Programming language?

⇒ Programming is a practice that strengthens our capacity for logical thought and problem-solving. It teaches us how to carry out of a task with the aid of software or a computer program. So, to put is simply Programming is the process of using computer language to bring a solution to a problem into practice.

2. why do need a programming language?

⇒ Programming language. It is vocabulary and a collection of rules that command a computer, devices application to work according to the written code. The Programming language enables us to write efficient programs and develop online solution such as - mobile application, and games, etc. Programming is used to automate, maintain assemble, measure and interpret the processing of the data and information. It helps in accelerating the input and output of the devices or applications.

3. Features of Java
→ object-oriented -The features of object-oriented Programming are supported by Java. It's object model is straightforward and flexible.

→ Platform independent -Because Java and c/c++ are Platform independent application program created in one operating system can run on any other operating system. C and c++ however, are Platform dependent languages. making it impossible for application programs created in one operating system to any run in any other operating system.

→ Simple - Because Java incorporates many cl c++ capabilities, it is simple to understand.

→ Secure - Java offers a variety of defences against malware and viruses. It guarantees that neither damage nor security will be compromised.

→ Portable - we have the idea of Portability in Java. Java allows the same software to run on various Platform.

→ Robust - It assist us in identifying Potential error as soon as feasible during Program development.

→ Multi-threaded - Java's multithreading Programming capability enables you to create a program that executes multiple tasks concurrently

→ Distrubuted - Java maintain the TcP IP Protocol and is therefore suitable for distrubuted Internet environment.
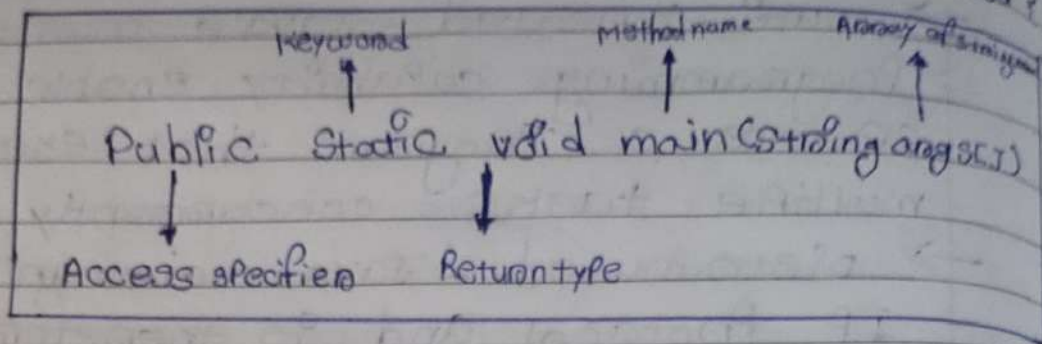
4. what is an object?
⇒ An object is an entity with state and behaviour, such as a chair, bike, marker, Pen, table, or car. It could be intellectual or Physical. The banking system is an illustration of an intagible entity.

5. what is a class?
⇒ A class is a collection of items with similar characteristics. It serves as a model or blueprint from which things can be made. It makes sense as a whole. It cannot be bodily.

6. Explain about the Java main () method?

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┌─────────────────────────────────────────────────┐
│        Keyword          Method name    Array of strings │
│           ↑                  ↑              ↑    │
│      Public Static void main (string args[])    │
│           ↓                  ↓                   │
│      Access specifier    Return type            │
└─────────────────────────────────────────────────┘
```

⇒ The main() is the starting point for JVM to start execution of a Java program. without the main() method JVM will not execute the program. The syntax of the main() method is Public. It is an access specifier. 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 Before the main() method, it we use Private, Protected, and default the JVM won't be able to see it,

Static : you can make method static by using the keyword static. we should call the main() method without creating an object. Static method are the method which is invoked without creating the objects, 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 default signature which is predefined in the JVM. It is called by JVM to execute program line by line and end the extention 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 string, which is called a string array. It is used to hold the command line arguments in the from of string value main (string args [J).