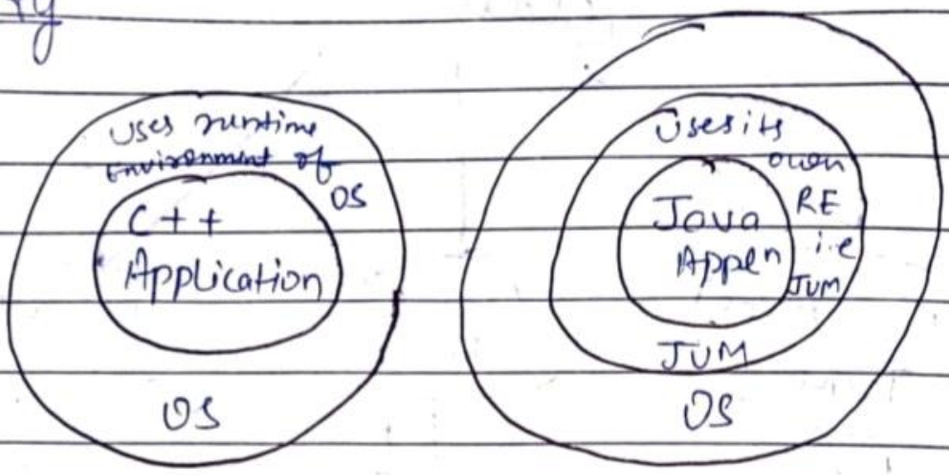
Security



Class Loader

* Class Loader adds security by seperating the package for the classes of the local file system from those, that are imported from network sources.

High Performance

* Java is faster than traditional interpretation due to the concept of Bytecode.

Distributed

Java helps in creating distributed application with the help of RMI (Remote Method invocation) & EJB (Enterprise Java Beans)

Multithreaded

→ A thread is like a seperate program executing concurrently

→ The main advantage of M.T is that it shares the same memory space. Threads are imp. for multimedia, web apps etc.

Function Overloading or Polymorphism

→ Polymorphism means having many forms. In OOP, the message or data can be processed in more than one form with the help of function polymorphism or Func. Overloading. Here the programmer, can give the same name to more than one func. having unique parameter list.

→ ⊕

→ The programmer can concentrate more on the logic of the program instead of remembering diff. func. names which can save time and effort.

Inheritance

→ It is a mechanism of deriving a new class from the old one

→ The existing class is called as Base class or superclass and the new class called as Derived or Subclass.

→ It is also called A-kind-of or IS-A relationship

→ Reusability is an Imp. concept of OOPS. Reuse of a class that has been already tested, debugged and used many times can save us the effort of developing and distinct running them again.

Q1 Differentiate b/w objects and Derived classes.

Objects have exact characteristics of their class. Derived class inherits some characteristics from their base class but add new ones of their own

```
class Example1
{ public static void main (String arg[])
  {
    System.out.println ("This is first Java prog.");
  }
}
```

Comments

(1) /* ---- */ Multiple line Comment
(2) // Single line Comment
(3) Documentation comment /** */
Documentation Comment is used to produce an HTML file

(a) Name of the source file should be the same i.e, as that of the class.
(b) source file is called as compilation unit
(c) In Java, all code must reside inside class.
(d) Java is case sensitive.
(e) class is a keyword and Example is a identifier which represents name of the class.
(f) Javac Example.java → This is for compiling
Name of Compiler — Name of Source file
(g) Java Example → This is for output.
Name of It is also called as Java application launcher or interpreter

(i) Public keyword is an access specifier which states that a member can be accessed by code outside its class.

+ → concatenate string.

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(ii) keyword static means main() can be called without creating any instance of the class.

(iii) void means main() does not return a value.

⇒ String is a class,
Here, the parameter is argument which is an array instance of class string.

* System is a predefined class that provides access to the system.
* Out is the output stream i.e connected to the console.
* All statements in the java end with semicolon.

Q

```
class Example2
{ public static void main (String args[])
    { int num;
      num=100;
      System.out.println("this is num:"+num);
      num=num*2;
      System.out.print("The value of num*2 is");
      System.out.println(num);
    }
}
```

output

This is num 100
The value of num*2 is 200

Note :

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(1) println outputs a newline whereas print does not output a newline.

(2) num is first converted from an Integer into its String equivalent and then concatenate with the String preceding it.

(multiline comment) →

```
/*
  This is a simple Java program.
  Call this file "Example.java".
*/
class Example {
  // Your program begins with a call to main().
  public static void main(String args[]) {
    System.out.println("This is a simple Java program.");
  }
}
```

// single line comment →