

# Java Assignment - 1

DATE: .....

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~~Ans 1. Emulator is a software~~

Ques 1 What are your views on ' apart from being an interpreter JVM is an emulator?'

A Emulator is a software that allow to execute programs which were not originally dedicated for that platform. ~~which were not or~~ It is a program, that copies the behaviour of other systems or old gaming consoles and allow to run program and games, which has been made for those other platform. They are portable and widely adjustable.

# Some interpreters run source code written in high level language others run bycodes. This type of interpreters running bycodes are sometimes called an emulator because it emulates hardware but in fact it's a software. JVM only exists in the memory of computer. Forcing Java compiler into creating bycodes for a non-existent machine is 1/2 of ingenious process that makes the Java architecture neutral.

Ques 2. Explain the use of Wrapper Class?

A Java is an OOP language, so we need to deal with objects many times like in collection, serialization, synchronization, etc. let us see the different scenarios where we need to use a wrapper class.

# Change the value in method: Java support only call by value. So if we pass a primitive value, it will not change the original value. ~~So~~ But if we convert the primitive value in an object it will change the original value.



Serialization: We need to convert the objects into stream to perform the serialization. If we have a primitive class, we can convert it into object through wrapper class.

Synchronization: Java synchronization works with objects in multithreading.

Java Util package: It provides the util classes to deal with objects.

Collection framework: Java collection framework works with objects only. All collection frameworks (arrays, lists, linked lists, vectors, HashSet, TreeSet, priority Queue) deals with objects only.

Ques 3. Why string object are considered to be immutable?

Ans 3. String Objects are considered as immutable because their internal variables are treated with their reference and one can pass them around, between methods and across threads without worrying about whether the actual string objects its pointing to will change. String features that immutability provides such as caching, security, easy use / reuse without replications etc.

Q4. Why the main () method is declared as 'Static'?

Ans 4.

The main () method is declared as static because it helps to ensure JVM can invoke the entry point (main method) without creating instance of the class.



Q5

what is the difference b/w private, default, protected & public access specifiers?

Ans.

Default: when no access modifiers is specified for a class, method or data member. It is used said to be having the default access modifier by default.

Private: The private access modifier is specified using the keyword private.

- The methods or data members declared as private are accessible only within the class in which they are declared.
- Any other class of the same package will not be able to access these members.

Protected: The protected access modifier is specified using the keyword protected.

The methods or data members declared as protected are accessible within the same package or subclass in different package.

Public: The public access modifier is specified using the keyword public.

- The public access modifier has the widest scope.
- among all other access modifiers.

Q6.

Why 'new' keyword is not used while defining the primitive data type?

Ans.

Java primitive types are not implemented as objects rather they are implemented as normal variables.



Q7

Determine the output:

Ans 7. a) Hello World

b)  $1 < 2 < 3$  is :: 1 $1 > 2 > 3$  is :: 0

c) Inside init of C

C.mem = 1