Java Class

Why java called a programing language

Ans = **Java** is a [high-level](https://en.wikipedia.org/wiki/High-level_programming_language), [class-based](https://en.wikipedia.org/wiki/Class-based_programming), [object-oriented](https://en.wikipedia.org/wiki/Object-oriented_programming) [programming language](https://en.wikipedia.org/wiki/Programming_language) that is designed to have as few implementation [dependencies](https://en.wikipedia.org/wiki/Dependency_(computer_science)) as possible. It is a [general-purpose](https://en.wikipedia.org/wiki/General-purpose_language) programming language intended to let [programmers](https://en.wikipedia.org/wiki/Programmer) *write once, run anywhere* ([WORA](https://en.wikipedia.org/wiki/Write_once,_run_anywhere)),[[16]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-16) meaning that [compiled](https://en.wikipedia.org/wiki/Compiler) Java code can run on all platforms that support Java without the need to recompile.[[17]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-design_goals-17) Java applications are typically compiled to [bytecode](https://en.wikipedia.org/wiki/Java_bytecode) that can run on any [Java virtual machine](https://en.wikipedia.org/wiki/Java_virtual_machine) (JVM) regardless of the underlying [computer architecture](https://en.wikipedia.org/wiki/Computer_architecture). Although its [syntax](https://en.wikipedia.org/wiki/Syntax_(programming_languages)) is similar to that of [C](https://en.wikipedia.org/wiki/C_(programming_language)) and [C++](https://en.wikipedia.org/wiki/C%2B%2B), the Java language has fewer [low-level](https://en.wikipedia.org/wiki/Low-level_programming_language) facilities than either of them.

Features of java

Ans =

* Java is simple language
* It is platform independent
* It is robust language
* It is also multi-treaded

It use concourently . means it can run small small task of one big tasks

* It is secure

Cause it not use pointers explicitly

* It not uses pointers

What is data type

Ans =

Data type is nothing but the which type of data is store in the memory that we define before the creating the container there are key word to define witch type of data will store in the variable

Like = int, float, char, double, Boolean etc.

Also Data type is diffrestiate in three ways

1. Primimitive
2. Non-primitive
3. User defined

What is object oriented

Ans =

* object is an entity of class
* object oriented programming include combination of both class and object
* Object having different type of element
* In OOPS we use object oriented concepts like inheritance, abstraction, Encapsulation, polymorphism.
* Class : Class is a blueprint from which object is created
* Object: Object is an instance of class
* Inheritance : It allow one class to inhetit properties and behaviors of another class
* Abstraction : It is a process of hiding the implementation details and showing only functionality to the user
* Ex-while driving you don’t need to know how gear shifts r other component work
* Encapsulation : It is a process of wrappring code and data together into a single unit or It is the process of hiding data

Ex-Capsule

* Polymorphism means the avility of different objects to respond to the same message or method call in different ways.

Ex- mobile

Static cannot call non-static variable so we use static keyword to make any variable static

Local variable/reference variable are stored stack memory instance are stored in heap memory

Date 24/6/24

Local – variable declare inside any method

Global(instance) – inside class and outside method

Static – declare with static keyword it is use in

New keyword is use for dynamic memory allocation it is use to give the unlimited space unlike arrays.

Date 27/6/24

Operators

What is operator

Operator is symbols that perform specific operation.

Operand means variable names.

Types of operaators

Arithmetic= -+ \*% /

Relational /conditional = <> <= >=

Logical= && || we can use logical operator within condition.

Bitwise= & |^

Unary = priincrement ,postincrement,predecriment, postdecriment

Bitwise and is work on binary value of variablw its isjust like logical operator

* How to fine binary value of variable

Just divide that value by 2 before its qoutiont Is = 0 and print the remenders in last to first format

HOME WORK FIND THE 1 TO 10 BINARY VALUEE.

Bitwise or is use like logical or

Date 30/7/2024

Static Keyword

Static variable

Date 14/8/2024

Jdk full information:

Inside jdk there are JRE, JVM Libraries, class libraries

HOME WORK= give sub classes of this libraries, anatomy of it.

Types of datatype

Primitive this data type is non changeable

Numeric= byte,short,int,float,long,double

Non-numeric= char,boolean

Non-primitive this data type is customizable

Class, array, string

Interveiw Question

How many way to creating Strings is available in Java?

Ans:

What are primitive and non primitive?

Ans: un-customizable and customizable

Notes:

Array: Homogenious is called as similar datatypes

Array are homogenious it is fixed in sized you should know the size in advance

There are three steps to create the array

1. Int arr[]; // creating the array
2. Arr=new int[2]; declaring the array
3. Initializing the array

Arr[0]=2;

Arr[1]=3;

**Object** is a instace of class (repesentor of class). It is also called as physical entity.

Features of java

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**Native method**: means when we create any method In other language and then we call in java that is call as native method.

Oopse concepts of java

Inheritance

Single level

Multilevel

Hierarchical

But multilevel(also kwon as dimand problem)

**2.polymorphism**

**Home work**

Consturtors

Super, static , this ,final ,and so on all keywords theory and usage

* Abstraction use loose looping

Concreate method is nothing but simple method without using abstract keyword it is a interview question for jumbling

Interface is also a is a method means the it can share the its properties and method