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 is secure
* 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

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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

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Static Keyword

Static variable