

JAVA (DSA)

Ex :- $\left. \begin{array}{l} a=10 \\ b=30 \\ c=b \end{array} \right\}$ if we able to do it with fn then these are called first class fn.

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Types OF LANGUAGES :-

① PROCEDURAL :- contains systematic order of statements, functions and commands to complete a task.

Ex :- Java, C++, Python, etc

② FUNCTIONAL :- only in pure functions, i.e. never modify variables, but only create new ones as an output.

* lot of operations on same set data like ML.

first class functions? Python.

③ OBJECT ORIENTED :- code + data = object.

* developed to make it easier to develop, debug, reuse and maintain software.

STATIC VS DYNAMIC LANGUAGES

→ Perform type checking and error showing at compile time

→ declare datatype before use

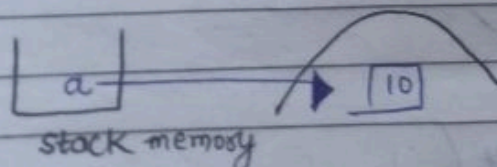
→ more control

→ run time

→ no need to declare

→ saves time in code writing but might give errors at runtime.

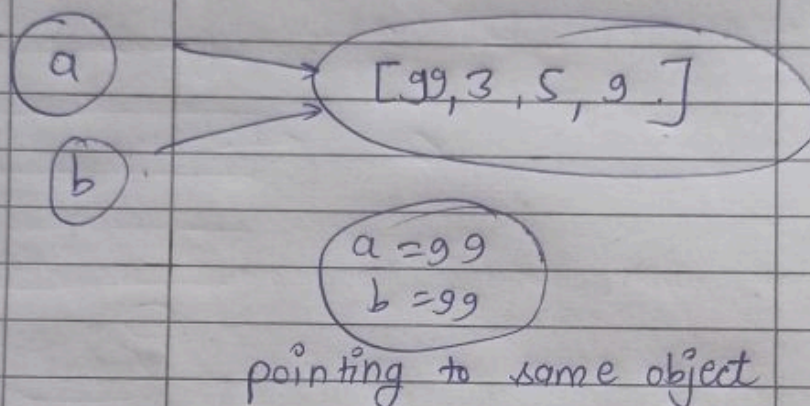
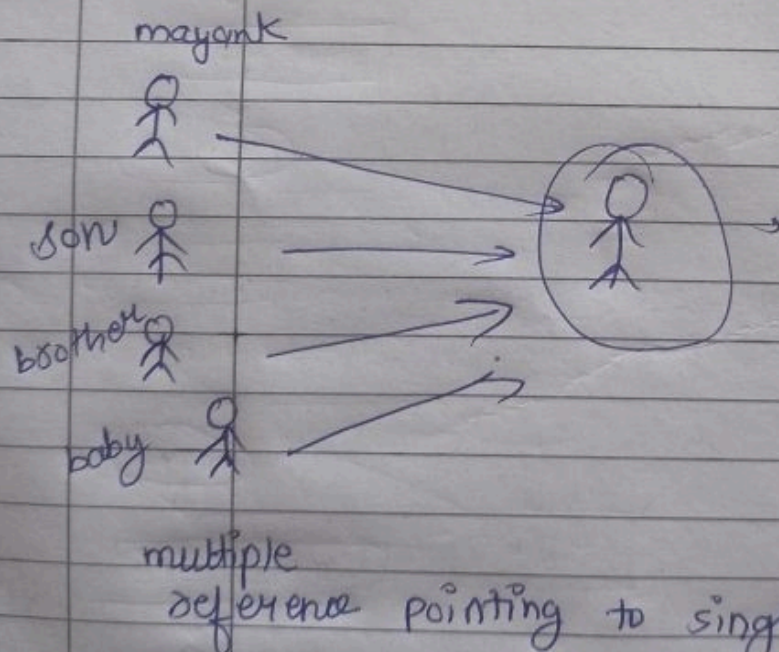
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Heap memory

$a = 10$

class - named group of properties and function
 ↳ and instance of this is called object.

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		$a = [1, 3, 5, 9]$ $b = a$ $a[0] = 99$		
				
				
		garbage collection:- it means that object with no reference variable pointing to it, then it will be deleted from memory		