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Scala

Scala is a static typed (compile time check) language, supports OOPS & functional programming.

In intellig ance we create a project, we will have the option to create a new scala class (or) obj, obj creates a singleton object 'O' as an instance of an anonymous class, class defines a class just like Java, C++.

Basics

Values

val x : Int = 7

— vals are immutable

↓
This is optional

val y = 'hello'

— For float & long we have to suffix
with f & L , similar to Java

Variables (mutable)

optional

```
var x : Int = 4
    x = 6 // side effects
```

Side effects → anything that affects
the state outside its local
env, such as modifying variables, I/O
ops , changing mutable objs ,

→ They return units
_____

→ If in scala is not a statement,
unlike Java, Python , If is an
expression in Scala

→ Code blocks are expressions

Instructions Vs Expressions

→ Instructions are executed (Java, Python)
→ Expressions are evaluated (Scala)

Type Inference

In Scala the compiler does type Inference automatically but it will fail if there is ambiguity like IF exps with diff types, recursive functions etc.

Tail Recursion

Scala supports TCO (Tail Call optimisation) unlike Java, Python, this prevents increase in call stack size.