

6th Semester CSE — BIET

- 1 → C
- 2 → Python
- 3 → (Java) & DSA in C
- 4 → ADA → C + DBMS + SQL
- 5 → X
- 6 → Java + Swing + Servlets + JSP + JDBC

(C++ + Basics) Job + VTU

(C + C++ + Java + Python) Basics  
OOPS + Exceptions

History of Programming Languages → 1st Com Program 1838 → Ada Lovelace

1942 → Denis Ritchie & his team → UNIX  
UUC + JUP

+ A + modifications → B

30 years B + modifications → C

= 1972 → C language was introduced

1st std version → 1989 → ANSI - C

American National Standards Institute

C + SIMULA = C++ → Denmark

↓  
Bjarne Stroustrup  
Monty Python Flying Circus

1991 → Python → Guido van Rossum

C + C++ = Java → 1995 [James Gosling]

DMCE

RVCB

LISSIE TW

Sun Microsystems → Oracle

Technical

Apt + Coding + F2F + HR  
Salary

Data Types →

RUST

C++ + Java ✓

Primary

Void

Enumerated

Derived

Integer

void

enum

Arrays

Short int long

INT-MAX

Named Constants

String s

-128 to 127

2<sup>31</sup> to 2<sup>31</sup> - 1

Mon - Sun

Not built in

Floating

INT-MIN

Jan - Dec

char[ ] =

float 4

Integer Mark Value

R, B, G, Y

{ 'B', 'I', 'E', 'T', }

double 8

Integer Mark Value

int → default

Pointers

Character

← bytes 0 → stat

C++ "class"

char 1

C/C++

Java/Python

pointers

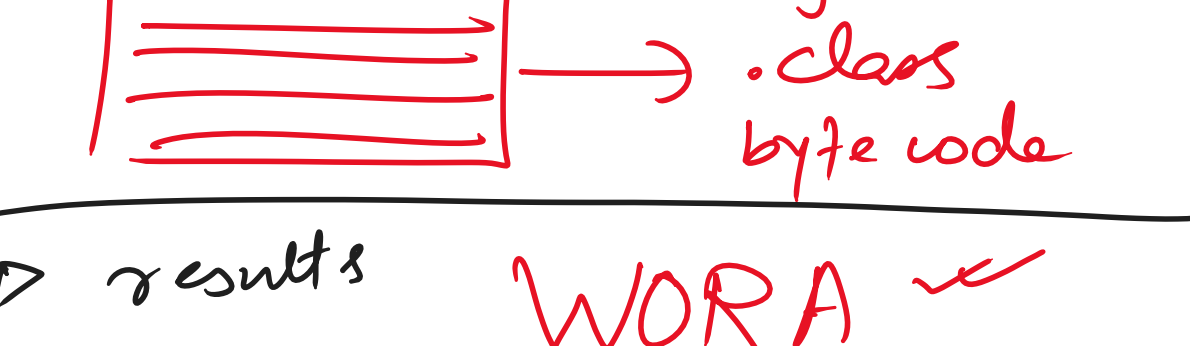
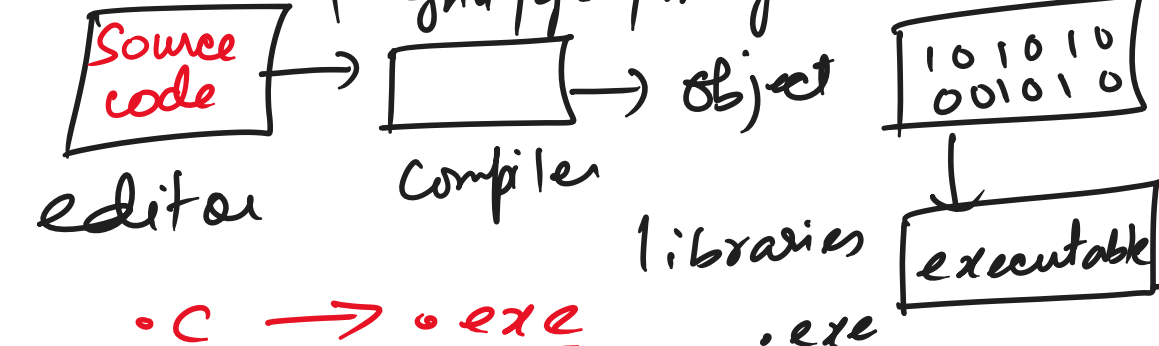
no pointers

manual ← garbage collection

auto ← garbage collection

\* Compiled

\* Compiled & Interpreted



Demo.java → javac Demo.java → Demo.class

Compilation

\* Hash Table

Symbolic Language

SHA - 256 bits

WORA

Bytecode

SHA - 512 bits

↓

JIT

JVM

Windows

Linux

byte code → native java Just In Time code

Compilation → javac compiler

Platform

JVM

java - class

Independent

Jdk + Path Vars

source code

byte code

Run in any OS

javac Runtime JRE

Interpretation → JVM

∴ C + I → Java

↳ Just in Time Compiler byte code → java code

String[] data = { "CSE", "ISE" };  
String[] args

data[0]  
data[1]

WORA

CL Args → check the main function working.

UNIT Testing

Data Types in Java (IntelliJ IDEA)

Primitive (Simple values)

Non-Primitive / Reference

byte  
short  
char  
int  
float  
long  
double  
boolean

String  
Date  
ArrayList  
↳ Complex Objects

classes

Operators

Conditionals

Looping Statements

Methods

OOPS Concepts

Exceptions & Exception Handling