

Python Vs Java and Compilers

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Python Vs Java
Python Compilers
Installation python Training in QA
Basics

Python vs Java

Aspect	Java	Python
Type	Compiled (JIT compiler)	Interpreted (bytecode + PVM)
Speed	faster due to JIT compiler	Slower due to interpreter

Execution
model

Type

JVM
bytecode → MC
int a, float b
Static Type

PVM

a = 10
a = []
b = " "

dynamic type

What is the Problem?

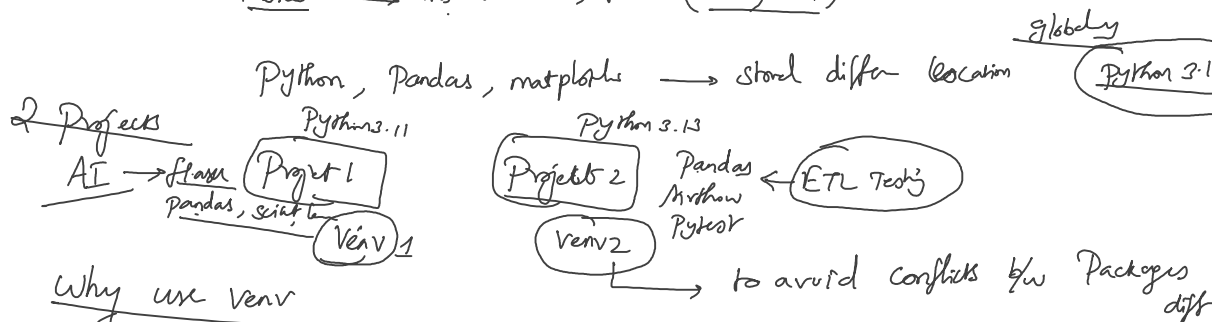
Python → interpreter (slower) → PVM → bytecode execute line by line

How is resolved? Python 3.x

Python 3.x → Pypy → compiler → JIT compiled version
→ interprets code at first (cpython)
→ Traces which code is executed,
→ compiles the hot code into machine code at Runtime (JIT)
→ Run optimized machine code much faster
Pypy can run 4x to 10x faster than for certain programs

Virtual environment in Python

↓
exe → install → folder (C:\, D:\)



- 1) Keep your Project dependencies isolated
- 2) Avoid version conflicts

- 3) makes Project more portable
- 4) ensures reproducibility

