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Java/Python Introduction

=> What is difference between Java & Python ?

1. PROGRAMMING PARADIGM:-

-> Java : Pure OOP (Object Oriented Programming) (from JavaSE 8 version Java introduced some procedural oriented programming paradigm features like Lamba Expression, functional interface, Functions, Predicates, Module System (java9) etc)

-> Python : Procedural Oriented and OOP

2. STATICALLY OR DYNAMICALLY TYPED LANGUAGE:-

-> Java : Statically Typed Programming Language (int rollno=101; String name="deepak";)

-> Python : Dynamically Typed Programming Language (rollno=101;)

3. COMPILATIVE OR INTERPRETIVE LANGUAGE:-

-> Java : It is both compilative and interpretive programming language

-> Python : It is interpretive programming language

4. TRANSLATOR:-

-> Java : It has compiler and interpreter

-> Python : It has only interpreter

5. SPEED:-

-> Java : It is fast as compared to python

-> Python : It is slower as compared to java

6. PORTABILITY:-

-> Java : As java supports more hardwares like computers, mobiles, remotes, tv etc thus java is more portable

-> Python : It is less portable as compared to java

7. INHERITANCE:-

-> Java : It supports except multiple inheritance

-> Python : It supports all inheritances

8. USE OF ";" :-

-> Java : Its mandatory to use ; in java

-> Python : Its not mandatory to use ; in python

9. USE OF {}:-

-> Java : Its mandatory to use {} in java

-> Python : {} are not used in python (python used indentation)

10. SYNTAX:-

-> Java : Hard Coded (if you miss any ; or {} then it will provide an error)

-> Python : Easy Syntax (easy to remember as it is close to humans)

11. LENGTH OF CODE:-

-> Java : Java has more number of lines of code

-> Python : Python has less number of lines of code

12. DATABASE COMPITABILITY:-

-> Java : It has more compatibility with database as compared to python (JDBC - Java Database Connectivity)

-> Python : It is less compatible with database and due to this reason python is rarely used in distributed (enterprise) applications.

13. FRAMEWORKS:-

-> Java : Java provides more frameworks for eg Spring, Hibernate, JSF, Struts etc

-> Python : Python provides less framework as compared to java for eg Django, Flask etc

14. MACHINE LEARNING LIBRARIES:-

-> Java : Weka, Mallet, Deeplearning4j, MOA etc

-> Python : Tensorflow, Pythorch etc

15. BEST FOR WHICH AREA:-

-> Java : Java is best for Desktop GUI Applications, Enterprise Applications, Mobile Applications, Embded Systems etc

-> Python : Python is best for Scientic & Numeric Computing, Machine Learning, AI etc

=> Java Features :-

1. Simple :-

-> Java is using all the simplified syntax from C & C++

-> Some C & C++ features were either removed (pointers, multiple inheritance) from java or was created automatic (memory management)

-> Java has less execution time period and less maintenance (less memory, less power)

2. PlatForm Independent:-

-> Java is a platform independent language which means java can be executed on any machine or operating system

3. Portable:-

-> Java is portable language as it can be executed on multiple hardwares

4. OOP (Object Oriented Programming):-

-> Java is OOP language thus java works around objects

-> Java supports many OOP features like classes, objects and methods, inheritance, polymorphism, abstraction, encapsulation etc.

5. Security:-

-> Java is very secured language because

1. Java does not have pointers
2. Java has byte code verifier
3. Java has a security manager that defines the access for java classes

6. Robust:-

-> Java is Robust i.e. powerful language because

1. Java provides a lot of classes and interfaces to handle the exceptions
2. Automatic Memory Management

7. Multithreaded Language:-

-> Java supports multithreading

8. High Performance:-

-> Java has high performance because :-

1. Robust
 2. Portable
 3. Multithreaded Language
- etc

9. Distributed Applications:-

-> Java can be used for distributed application (enterprise applications)

10. Java is compilative and interpretive language

Interview Questions:-

=> What do you mean by Platform Independent ?

=> How java is Platform Independent ?

=> Is JVM Platform Dependent or Platform Independent ?



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