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Python: simple though an demanding programming language

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ABSTRACT—

Python is embedded easily into any application to provide a programmable interface. python simple to add a scripting language to any program created by Guido Van Rossum and first released in 1991.python interpretive nature, dynamic typing and pragmatic approach. the python language and many supporting tools are available as open source, python is helpful for rapid prototyping and development.

Keywords—high level, Machine learning, Games, General public License (GPL), Real world programming.

Introduction

Python programming language is simple ,powerful, and perfect for quick iteration and ad hoc coding without compromising on maintainability.it is high-level, interpreted ,interactive, object-oriented and a reliable language that is very simple and uses English -like words python is an open-source project, supported by many individuals .python is a simple and a small language. Python supports object-oriented as well as procedure -oriented style of programming .python support development of a wide range of application ranging from simple text processing to WWW browsers to games. Python is an example of an open source software. Python work in interactive mode which allows interactive testing and debugging of pieces of code. Programmers can easily interact with the interpreter directly at the python prompt to write a their program..

Application

Image processing and graphic design application-

Python is used to make 2D imaging software such as Inkscape, GIMP, paint shop pro, and Scribus.it is also used to make 3D animation package like Blender,3ds Max, Cinema4D.

Games

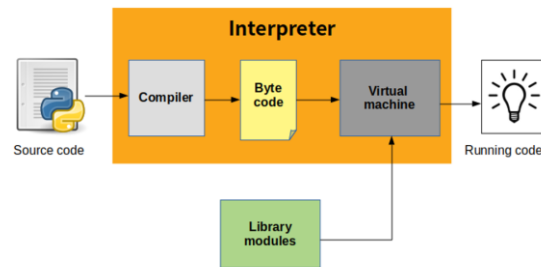
Python language is used making a new video game that can be played on laptop as well as mobile device application. Its simple to create entire video games using this one language.

Lanuage Development

Python design and modules architecture is used to develop other language. For example, Boo language uses an object model, syntax and indentation, similar to python.

Internal Working of python

It is high level , object oriented and interpreted language like java. Python convert the code into byte code.so. within python , the compiled code is not converted into machine language.



Step1

The python compiler reads a python source code or instruction and verifies its syntax. In case of error the translation of instruction is immediately halted and the error message is displayed.

Step2

In case not error is encountered the python code is compiled into an intermediate language called byte code.

Step3

The byte code then goes into the main part of the conversion is the PVM.python virtual machine is the main runtime engine .it is an interpreter that reads and executes the byte code file line by line.PVM translate the byte code into machine code which is the binary format 0 and 1.

TOP REASON BEHIND INCREASING DEMAND FOR PYTHON PROGRAMMING

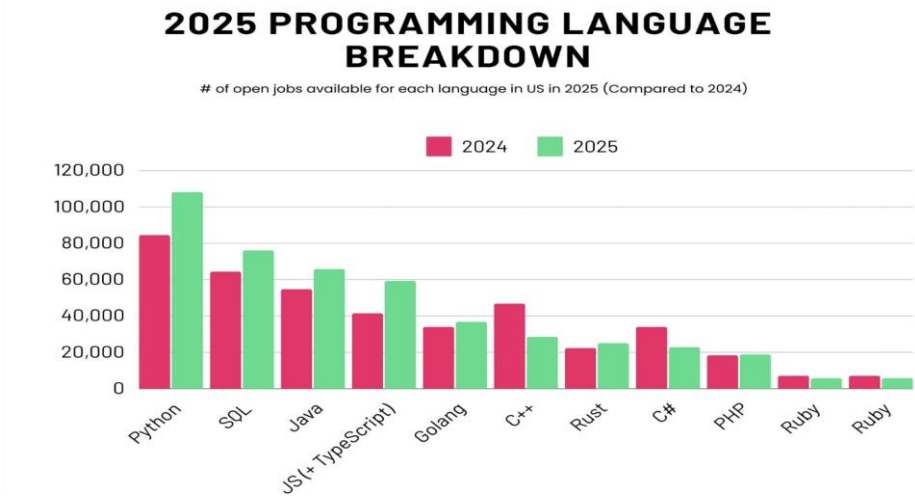
Python is in high demand. Because you can develop anything you want with this programming language. Anyone can use it for free and edit it. And, the best thing of all, you can use the same code for different platforms and devices. Python is in great demand. Its popularity is expanding by the day. It has the most promising career opportunities. It is also easier to write and code than any other programming language. Python has an extensive standard library available for anyone to use.



Table 1: Comparison of java program with Python program even and odd number

Java program	Python program
<pre>int num = 5; above is even or odd if (num % 2 == 0) { System.out.println(number + " is even."); } else { System.out.println(number + " is odd."); }</pre>	<pre>Num = 24 if Num % 2 == 0: print("Even") else: print("Odd")</pre>

Python is most used in data science and machine learning, which are among the fastest-growing fields in technology fields. Python is a cross-platform language, meaning it can run on various operating systems, including Windows, macOS, and Linux. Python is a great and popular language for prototyping and testing new ideas quickly. Python also used in big data application. Python is widely used in AI. And it has large number of built in libraries. Python is used for scientific research because it has large number of numerical and scientific libraries. Python has a large and active community of developers. Python has a wide range of libraries and tools available. Python is open source and free to use.



Carrer opportunity in python

Python Software Engineer

Python software engineer is responsible for analyze user requirement and write the test code according to requirement. Python software engineer also write operational documentation of requirement of give suggestion to the client according to their project.

Python DevOps Engineer

DevOps Engineer provide Level 2 technical support, addressing much more complex technical problem. DevOps engineer has key responsibilities related to technical support and system maintenance .it involves analyzing and resolving technical issues to ensure smooth operation, deploying updates and fix to system.

Machine Learning specialist

Machine learning specialist the role of MLS is to analyze historical data test hypotheses and serve technical support for business development and programmer management activities. They can design test algorithm, develop analytical models for data and information processing.

Game development Engineer

The key responsibilities of game development engineer is to designing and implement game mechanics and features.

Artificial Intelligence

The artificial intelligence engineer design maintains and develop AI system. That can perform operation and tasks, works that usually require human intelligence.

Software Development

Software development is an individual whose primary job is designing, developing and implementing different computer programs and applications.

VI . various top companies using python

Some of the most companies Python uses in industry include technology, finance, media, and healthcare, Instagram, Netflix, Google, Uber, Dropbox, Amazon are used in python programming language.

Conclusion

Now a days python is best for beginner because it easy to learn, straight forward layout, simple syntax and large number of standards built in library. Python is called as future-proof language because it is used in many cutting age, industries like Artificial intelligence (AI), big data machine learning, blockchain, game development, amazon, and google are the top international companies using python for into daily operation. Python is first rank (23.28%) programming in 2025.

**REFERENCES**

1. Oxford university press python programming reference book Reema Thareja.
2. Python distilled David M. Beazley author of python essential reference
3. <https://www.learnenough.com/blog/10-Companies-Using-Python>
4. <https://www.geeksforgeeks.org/reasons-why-you-should-learn-python/>
5. https://jobaxle.com/blog_detail/career-opportunity-in-python/24
6. M. Young, The Technical Writer's Handbook. Mill Valley, CA:
7. <https://images.ctfassets.net/aq131wl6616q/2OICluISLbcWnkym1d5gI5>