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# Introduction to Python

# Objectives



## Topic Covered:

- Introduction to Python
- Features of Python
- History Of Python
- Version of Python
- Python Applications

# Introduction to Python



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- Python is an interpreted, object-oriented, high-level programming language with dynamic semantics.
- Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.
- Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance.

# Introduction to Python?



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- Python supports modules and packages, which encourages program modularity and code reuse.
- The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.
- Python mainly used for Machine Learning, Artificial Intelligence, Data Science and IOT based Applications.

# Features of Python



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- Easy to Use – Programmer- Friendly Language
- Expressive Language- Code is Easily Understandable
- Interpreted Language- Makes Easy Debugging
- Cross-platform language- Run on different platform and it is portable.
- Free and Open Source
- Object Oriented Language- Concepts of class and objects comes into existence

# Features of Python



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- Extensible-C/C++ can be used to compile the code and thus it can be used further in python code
- Large Standard Library- Large and Broad Library
- GUI Programming- Used to create Graphical User Interfaces
- Integrated- Can be integrated with all level of high level languages

# History Of Python



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- Python laid its foundation in the late 1980s.
- The implementation of Python was started in the December 1989 by Guido Van Rossum at CWI in Netherland.
- ABC programming language is said to be the predecessor of Python language which was capable of Exception Handling and interfacing with Amoeba Operating System.
- Python is influenced by programming languages like:
  - ABC language and Modula-3

# Version of Python

- A list of python versions with its released date is given below.

Python Version	Released Date
Python 1.0	January 1994
Python 1.5	December 31, 1997
Python 1.6	September 5, 2000
Python 2.0	October 16, 2000
Python 2.1	April 17, 2001
Python 2.2	December 21, 2001
Python 2.3	July 29, 2003
Python 2.4	November 30, 2004
Python 2.5	September 19, 2006
Python 2.6	October 1, 2008
Python 2.7	July 3, 2010
Python 3.0	December 3, 2008
Python 3.1	June 27, 2009
Python 3.2	February 20, 2011
Python 3.3	September 29, 2012
Python 3.4	March 16, 2014
Python 3.5	September 13, 2015
Python 3.6	December 23, 2016
Python 3.6.4	December 19, 2017
Python 3.7.1	June 27, 2018



# Version of Python(Cont.)



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- Python programming language is being updated regularly with new features and support. There are a lot of updating in python versions, started from 1994 to current date.
- For Other Platforms:
- “Python” or “CPython” is written in C/C++.
- “Jython” is written in Java for the JVM.
- “IronPython” is written in C# for the .Net environment

# Python Applications



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- Python as a whole can be used in any sphere of development.
- Python is used to create:
  - ✓ Web Development
  - ✓ Game Development
  - ✓ Scientific and Numeric Applications
  - ✓ Artificial Intelligence and Machine Learning
  - ✓ Software Development
  - ✓ Enterprise-level/Business Applications
  - ✓ Education programs and training courses
  - ✓ Language Development

# Who uses Python



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- YouTube
- Google
- Dropbox
- Quora
- Instagram
- Mozilla
- Bittorrent

# Libraries of Python



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- Graphical user interfaces
- Web frameworks
- Multimedia
- Databases
- Networking
- Automation
- Documentation
- System administration
- Scientific Computing
- IOT
- Image processing

# Summary



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- Python is an interpreted, object-oriented, high-level programming language
- Python is easy to use, extensible, platform independent with large standard library. OFF
- Python can be used for creating various types of applications like console based, web based or enterprise applications.

A graphic with a solid blue background. In the center is a white speech bubble with a tail pointing towards the bottom left. Inside the speech bubble, the words "THANK YOU!" are written in a bold, blue, sans-serif font.

**THANK YOU!**