Q1) What is Python?

Ans1) Python is an interpreted, high-level, general-purpose programming language. Python is an prototyping language.

Q2) What are the features of python

Ans2) Some of the features of python are given below:

1. Easy to code:

Python is a high-level programming language. Python is very easy to learn the language as compared to other languages like C, C#, Java, etc.

It is very easy to code in python language and anybody can learn python basics in a few hours or days. It is also a developer-friendly language.

2. Free and Open Source:

Python language is freely available at the official website.

3. Object-Oriented Language:

One of the key features of python is Object-Oriented programming. Python supports object-oriented language and concepts of classes, objects encapsulation, etc.

4. GUI Programming Support:

Graphical User interfaces can be made using a module such as PyQt5, PyQt4, wxPython, or Tk in python.

PyQt5 is the most popular option for creating graphical apps with Python.

5. High-Level Language:

Python is a high-level language. When we write programs in python, we do not need to remember the system architecture, nor do we need to manage the memory.

6. Extensible feature:

Python is a Extensible language. We can write us some Python code into C or C++ language and also we can compile that code in C/C++ language.

7. Python is Portable language:

Python language is also a portable language. For example, if we have python code for windows and if we want to run this code on other platforms such as Linux, Unix, and Mac then we do not need to change it, we can run this code on any platform.

8. Python is Integrated language:

Python is also an Integrated language because we can easily integrated python with other languages like c, c++, etc.

9. Interpreted Language:

Python is an Interpreted Language because Python code is executed line by line at a time. like other languages C, C++, Java, etc. there is no need to compile python code this makes it easier to debug our code. The source code of python is converted into an immediate form called bytecode.

10. Large Standard Library

Python has a large standard library which provides a rich set of module and functions so you do not have to write your own code for every single thing. There are many libraries present in python for such as regular expressions, unit-testing, web browsers, etc.

11. Dynamically Typed Language:

Python is a dynamically-typed language. That means the type (for example- int, double, long, etc.) for a variable is decided at run time not in advance because of this feature we don't need to specify the type of variable.

Q3) Who are using python?

Ans3) Python is typically used by engineers to perform statistical analysis on their data, etc. Machine learning engineers use tensorflow framework of python. Web developers use django framework for developing the webpage. Nonetheless python is used by some of the world class companies stated below:

Industrial Light and Magic

Google

Facebook

Instagram

Spotify

Quora

Netflix

Dropbox

Reddit

etc.

Q4) Where we can use python?

Ans4) Python is used in many application domains. Some of the examples are given below. (Source: python website)

Web and Internet Development

Python offers many choices for web development:

Frameworks such as Django and Pyramid.

Micro-frameworks such as Flask and Bottle.

Advanced content management systems such as Plone and django CMS.

Python's standard library supports many Internet protocols:

HTML and XML

JSON

E-mail processing.

Support for FTP, IMAP, and other Internet protocols.

Easy-to-use socket interface.

And the Package Index has yet more libraries:

Requests, a powerful HTTP client library.

Beautiful Soup, an HTML parser that can handle all sorts of oddball HTML.

Feedparser for parsing RSS/Atom feeds.

Paramiko, implementing the SSH2 protocol.

Twisted Python, a framework for asynchronous network programming.

Scientific and Numeric

Python is widely used in scientific and numeric computing:

SciPy is a collection of packages for mathematics, science, and engineering.

Pandas is a data analysis and modeling library.

IPython is a powerful interactive shell that features easy editing and recording of a work session, and supports visualizations and parallel computing.

The Software Carpentry Course teaches basic skills for scientific computing, running bootcamps and providing open-access teaching materials.

Education

Python is a superb language for teaching programming, both at the introductory level and in more advanced courses.

Books such as How to Think Like a Computer Scientist, Python Programming: An Introduction to Computer Science, and Practical Programming.

The Education Special Interest Group is a good place to discuss teaching issues.

Desktop GUIs

The Tk GUI library is included with most binary distributions of Python.

Some toolkits that are usable on several platforms are available separately:

wxWidgets

Kivy, for writing multitouch applications.

Qt via pyqt or pyside

Platform-specific toolkits are also available:

GTK+

Microsoft Foundation Classes through the win32 extensions

Software Development

Python is often used as a support language for software developers, for build control and management, testing, and in many other ways.

SCons for build control.

Buildbot and Apache Gump for automated continuous compilation and testing.

Roundup or Trac for bug tracking and project management.

Business Applications

Python is also used to build ERP and e-commerce systems:

Odoo is an all-in-one management software that offers a range of business applications that form a complete suite of enterprise management applications.

Tryton is a three-tier high-level general purpose application platform.

Q5) One company use case by python?

Ans5) The five most common python use cases by industry are:

Insurance

Retail banking

Aerospace

Finance

Business services, etc.