Python Features, History, Advantages - Interview Questions

1. What is Python & can you explain some important Python features?
Python is a high-level, interpreted, general-purpose programming language. Key features include:

- Simple and easy to learn

- Interpreted

- Dynamically typed

- Extensive standard library

- Portable

- Supports multiple programming paradigms

2. Why is Python called a dynamically typed language?
Because you don't need to declare the data type of a variable explicitly; it is determined at runtime.

3. Why is Python a portable language?
Python code can run on different platforms (Windows, Mac, Linux) without modification.

4. Is Python an object-oriented programming language?
Yes, Python supports object-oriented programming concepts like classes and objects.

5. Is Python a functional-oriented programming language?
Yes, Python supports functional programming with features like lambda, map, filter, and reduce.

6. Is Python an interpreted programming language?
Yes, Python code is executed line-by-line by an interpreter.

7. Is Python a general-purpose programming language?
Yes, Python is used in web development, data science, automation, AI, and more.

8. Is Python a case-sensitive programming language?
Yes, `Variable` and `variable` are treated as different identifiers in Python.

9. Is Python code compiled or interpreted?
Python is interpreted but first compiles source code to bytecode, which is then interpreted.

10. What are some top companies that use Python?
Google, Facebook, Netflix, Instagram, Dropbox, Reddit, and Spotify.

11. Who invented Python and when was it released?
Guido van Rossum invented Python, and it was first released in 1991.

12. Why is it called Python?
It was named after the British comedy group "Monty Python," not the snake.

13. What type of language is Python?
Python is a high-level, interpreted, dynamically typed, object-oriented, and general-purpose language.

14. Python was inspired by which programming languages?
Python was influenced by ABC, C, Modula-3, and others.

15. Python programming language is written in which language?
The default implementation, CPython, is written in the C programming language.