

PYTHON INTERVIEW QUESTIONS COMPENDIUM

A Guide to Mastering Python Interviews with Comprehensive Questions



These are some basic questions which asked in first phased of interview!

Python Interview Questions

Page 1: Basic Python Questions

1. What is Python?

Python is a high-level, interpreted programming language with dynamic semantics. It is known for its simplicity and readability, making it suitable for both beginners and experienced programmers.

2. What are the key features of Python?

- **Easy to read and write:** Python syntax is simple and elegant.
- **Interpreted language:** It is executed line by line.
- **Dynamically typed:** No need to declare variable data types.
- **Object-oriented:** Supports classes and objects.

Page 2: Data Types and Structures

3. What are the built-in data types in Python?

- **Numeric:** int, float, complex
- **Sequence:** list, tuple, range
- **Text:** str
- **Mapping:** dict
- **Set:** set, frozenset
- **Boolean:** bool

4. What is a list in Python?

A list is an ordered collection of items that is mutable, meaning it can be changed after creation. It is defined using square brackets, e.g., `my_list = [1, 2, 3]`.

Page 3: Control Flow and Loops

5. Explain the use of 'if' statements in Python.

The 'if' statement is used for decision making. It allows the execution of code based on a condition.

6. What are loops in Python?

Loops are used to execute a block of code repeatedly. Python provides two types of loops: for and while.

Page 4: Functions and Modules

7. How do you define a function in Python?

A function is defined using the `def` keyword, followed by the function name and parentheses, e.g., `def my_function():`.

8. What is a module in Python?

A module is a file containing Python code, such as functions and variables, which can be imported into other Python scripts.

Page 5: Object-Oriented Programming

9. What is object-oriented programming (OOP)?

OOP is a programming paradigm based on the concept of "objects", which can contain data and code to manipulate that data.

10. Explain inheritance in Python.

Inheritance allows a class to inherit attributes and methods from another class, promoting code reusability.

Page 6: Exception Handling

11. What is exception handling in Python?

Exception handling is a mechanism to handle runtime errors, allowing the program to continue execution.

12. How do you handle exceptions in Python?

Exceptions are handled using try, except, finally, and else blocks.

Page 7: File Handling

13. How do you open a file in Python?

Files are opened using the open() function with modes like 'r', 'w', 'a', etc.

14. How do you read from a file in Python?

Use methods like read(), readline(), or readlines() to read data from a file.

Page 8: Advanced Topics

15. What are decorators in Python?

Decorators are functions that modify the functionality of another function, often used for logging, authentication, etc.

16. Explain list comprehensions.

List comprehensions provide a concise way to create lists. It is a syntactic construct for creating a list based on existing lists.

Page 9: Libraries and Frameworks

17. Name some popular Python libraries.

- **NumPy**: For numerical computations
- **Pandas**: For data manipulation
- **Matplotlib**: For data visualization
- **Django**: For web development

18. What is the use of the requests library?

The requests library is used to send HTTP requests, making it easy to interact with web services.

Page 10: Miscellaneous

19. What is a lambda function?

A lambda function is an anonymous function defined with the lambda keyword. It can take any number of arguments but only one expression.

20. What is PEP 8?

PEP 8 is a style guide for Python code, aiming to improve the readability and consistency of Python code.

Feel free to format and expand upon these topics as needed to create a comprehensive PDF document!

