

# Frequently Asked Python Interview Questions

## Topic: Introduction to Python

1. What are the key features of Python?
2. Is Python a compiled or interpreted language?
3. What are the differences between Python 2 and Python 3?
4. Why is Python considered dynamically typed?
5. What is PEP 8 and why is it important?

## Topic: Variables and Data Types

1. What are the standard data types in Python?
2. What is the difference between mutable and immutable types?
3. How is memory managed in Python for variables?
4. Explain the use of `type()`, `id()`, and `is` in Python.
5. What are global, local, and nonlocal variables?

## Topic: Operators

1. What is the difference between `'=='` and `'is'`?
2. How do logical operators like `'and'`, `'or'`, and `'not'` work?
3. What is operator precedence in Python?
4. Explain the use of bitwise operators.
5. What are identity and membership operators?

## Topic: Control Statements

1. What is the syntax of an if-elif-else statement?
2. How does a for loop differ from a while loop?
3. What is the purpose of break, continue, and pass statements?
4. How does else work with loops in Python?
5. What are nested control structures?

## Topic: Strings

1. How are strings defined in Python?
2. Are strings mutable in Python? Why or why not?
3. How do you perform string slicing?
4. What are some common string methods in Python?
5. How can you format strings using f-strings?

# Frequently Asked Python Interview Questions

## Topic: List

1. How do you create and access elements in a list?
2. What are common list methods such as `append()`, `pop()`, `insert()`?
3. How does list slicing work?
4. What is list comprehension and give an example?
5. What is the difference between a shallow copy and a deep copy of a list?

## Topic: Tuples

1. What is a tuple and how is it different from a list?
2. Are tuples mutable? Explain with an example.
3. Can a tuple contain mutable objects?
4. How can you convert a tuple to a list and vice versa?
5. Why are tuples used as dictionary keys but not lists?