

# DEBUG WITH SHUBHAM

TECHNICAL AND VLOGS



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# Cognizant GenC 2025

## TOP-22 Python

Interview  
Question  
With  
Answers

## **Q1. What is Python? Why is it used?**

### **Answer:**

Python is a high-level, interpreted programming language known for its simple syntax and readability.

### **Why Python?**

- Easy to learn
- Less code
- Large libraries
- Used in web, data, automation

## **Q2. Difference between Python and Java**

<b>Python</b>	<b>Java</b>
Interpreted	Compiled
Dynamic typing	Static typing
Simple syntax	Verbose syntax

### **One-liner:**

Python is faster to write, Java is faster to execute.

## **Q3. What are lists and tuples?**

### **Answer:**

- List: Mutable (can change)
- Tuple: Immutable (cannot change)

```
Ist = [1, 2, 3]  
tup = (1, 2, 3)
```

## **Q4. What is mutable and immutable?**

### **Answer:**

Mutable objects can be changed (list, dict)  
Immutable objects cannot be changed (int, string, tuple)

## **Q5. What is a dictionary?**

### **Answer:**

Dictionary stores data in key-value pairs.

```
d = {"name": "Rahul", "age": 22}
```

## **Q6. Difference between list and dictionary**

List	Dictionary
Indexed	Key-based
Ordered	Unordered
Duplicate allowed	Keys unique

## **Q7. What is a function in Python?**

### **Answer:**

A function is a block of code that performs a specific task.

```
def add(a, b):  
    return a + b
```

## **Q8. What is lambda function?**

### **Answer**

A lambda function is a small anonymous function.

```
x = lambda a: a + 10
```

Interview tip: Don't go deep, just definition + example.

## **Q9. What is list comprehension?**

### **Answer**

List comprehension provides a shorter way to create lists.

```
squares = [x*x for x in range(5)]
```

## **Q10. What is slicing in Python?**

```
s = "Python"  
print(s[1:4]) # yth
```

Used for strings & lists.

## **Q11. What is exception handling?**

**Answer:**

Used to handle runtime errors using try-except.

```
try:  
    x = 10/0  
except:  
    print("Error occurred")
```

## **Q12. What is the difference between == and is?**

**Answer:**

**==** compares values

**is** compares memory location

## **Q13. What is PEP 8?**

**Answer:**

PEP 8 is the official style guide for Python code, a set of recommendations designed to improve the readability and consistency of Python programs

## **Q14. How do you reverse a string in Python?**

```
s = "hello"  
print(s[::-1])
```

## **Q15. What are modules and packages?**

**Answer:**

**Module:** Single Python file

**Package:** Collection of modules

## **Q16. What is file handling in Python?**

```
f = open("data.txt", "r")
print(f.read())
f.close()
```

## **Q17. What is the difference between append() and extend()?**

```
a = [1,2]
a.append([3,4]) # [1,2,[3,4]]
a.extend([3,4]) # [1,2,3,4]
```

## **Q18. What is range() function?**

```
for i in range(5):
    print(i)
```

## **Q19. What is recursion?**

**Answer**

A function calling itself.

```
def fact(n):
    return 1 if n==0 else n*fact(n-1)
```

## **Q20. Why is Python preferred for freshers?**

**Answer**

Because it is easy to learn, readable, and widely used in industry.

## **Q21. Current Version ?**

**Answer:** python 3.14.2 (Dec 2025)

## **Q22. Diff b/w Python2 and Python3 ?**

**Answer:**

Feature	Python2	Python3
Print	print "hello"	print("hello")
Division	5/2=2	5/2=2.5