

Date: 26 March 2025, 10:15 AM

Interviewer: *Sai Seetu Reddy Bommareddy*

Candidate: *Pushpaja Udayagiri*

Interviewer: Please introduce yourself.

Candidate: My name is Pushpaja. I am an intern at MOTIVITY Labs.

Interviewer: Do you have knowledge of Python?

Candidate: Yes.

Interviewer: What is the difference between a list and a tuple in Python?

Candidate:

- A **list** is **mutable**, meaning we can modify its elements.
- A **tuple** is **immutable**, meaning its elements remain fixed.
- **Lists require more memory** due to dynamic allocation, whereas **tuples require less memory**.
- **Lists are used** when data needs to be changed, while **tuples are used** when data should remain constant (e.g., coordinates, configuration settings).

Interviewer: How does Python handle memory management for large datasets?

Candidate:

- Python uses **automatic garbage collection**, which removes unreferenced objects.
- It employs **reference counting, memory pools, and virtual memory paging** for efficient memory handling.

Interviewer: Can you name a few real-life applications of Python?

Candidate:

- **AI & Machine Learning**
- **Web Development**
- **Building Machine Learning Models**

- **General Application Development**

Interviewer: Thank you, Pushpaja. The interview is done. We will inform you via email.

Candidate: Thank you.