**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.