

**BS Artificial Intelligence**

**Name:** Elimelech

**Roll No:** SU92-BSAIM-F24-009

**Subject:** Artificial Intelligence (Lab)

Lab Task - To-Do List Program

# Introduction

This lab task demonstrates a basic To-Do List program written in Python. The program allows users to add tasks, view all tasks, and delete specific tasks. It is designed to help practice Python fundamentals such as lists, functions, loops, conditional statements, and user input handling.

# Steps Explanation

## Step 1: Creating the Task List

An empty list named 'tasks' is created at the start of the program. This list acts as storage for all the tasks that the user will enter.

## Step 2: Adding Tasks

The function addTask() is used to take user input for a new task. The task is then appended to the tasks list, and a message is displayed to confirm that the task was successfully added.

## Step 3: Viewing Tasks

The function listTasks() is used to show all the tasks currently in the list. If the list is empty, the program notifies the user. Otherwise, it uses the enumerate() function to display task numbers alongside the task names.

## Step 4: Deleting Tasks

The deleteTask() function allows users to remove a task by entering its number. Before deletion, the program displays the full list of tasks so the user can choose correctly. The program checks if the entered number is within the valid range before deleting.

## Step 5: Program Loop

The main section of the program contains a while loop that keeps displaying the menu until the user chooses to quit. The menu options are:  
1. Add a new task  
2. Delete a task  
3. List tasks  
4. Quit  
Based on the input, the relevant function is executed.

## Step 6: Ending the Program

When the user selects the Quit option, the loop ends, and a message is displayed indicating that the program has been closed.

# Sample Output Explanation

• Option 1 allows the user to enter a task and confirms it has been added.  
• Option 3 lists all tasks with their respective numbers.  
• Option 2 deletes the task chosen by the user.  
• Option 4 exits the program.