



BS Artificial Intelligence

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Subject: Artificial Intelligence (Lab)

Lab Task 1

To-Do-List Program

Introduction

In this lab task, I created a simple To-Do List Program in Python. The purpose of this program is to allow users to add tasks, list all tasks, and delete tasks. This helps in learning the basics of Python functions, loops, conditionals, and user interaction.

Steps Explanation

Step 1: Creating an Empty List

First, I created an empty list called **'tasks'** which stores all the tasks entered by the user.

Step 2: Adding a Task

I made a function named **addTask()** where the program asks the user to enter a task. That task is then stored inside the tasks list using the **append** method, and a confirmation message is displayed to show that the task has been added.

Step 3: Listing the Tasks

I created another function named **listTasks()** which displays all the tasks stored in the list. If the list is empty, the program shows a message that there are no tasks. Otherwise, it prints each task along with its task number using the **enumerate** function.

Step 4: Deleting a Task

When the user chooses the option to delete a task, the program first calls the function **listTasks()**. This is done so that the user can see all the tasks currently available along with their task numbers.

After showing the tasks, the program asks the user to enter the **task number** they want to delete. That number is taken as input and converted into an integer.

- The condition **taskToDelete >= 0 and taskToDelete < len(tasks)** checks whether the entered task number is valid or not.
- **>= 0** means the number should not be negative.
- **< len(tasks)** means the number should not be greater than or equal to the total number of tasks in the list.

If the condition is true, the program uses the **pop(index) method** to remove the task at that position from the list. After deletion, a confirmation message is displayed.

Step 5: Main Loop

In the main program, I used a while loop to keep showing a menu to the user. The menu has four options:

1. Add a task
2. Delete a task
3. List tasks
4. Quit the program

Based on the user's choice, the corresponding function is called. The loop continues until the user chooses Quit.

Step 6: Exit Message

When the user exits, the program shows a **goodbye** message.

Output Explanation

- When I choose option 1, the program asks me to enter a task and adds it.
- When I choose option 3, it shows all tasks with their numbers.
- When I choose option 2, it deletes the selected task.
- When I choose option 4, the program ends.

```
Welcome to the to do list

Please select one of the Following options:
-----
1. Add a new task
2. Delete a task
3. List tasks
4. Quit
Enter your choice: 1
Enter a task: Groceries
Task 'Groceries'added to the list1

Please select one of the Following options:
-----
1. Add a new task
2. Delete a task
3. List tasks
4. Quit
Enter your choice: 1
Enter a task: Lab Task
Task 'Lab Task'added to the list1
```

Fig 1: This Figure shows the addition of tasks in the list

```
-----
1. Add a new task
2. Delete a task
3. List tasks
4. Quit
Enter your choice: 3
Current Tasks:
Task 1. Groceries
Task 2. LAb Task

Please select one of the Following options:
-----
1. Add a new task
2. Delete a task
3. List tasks
4. Quit
Enter your choice: 2
Current Tasks:
Task 1. Groceries
Task 2. LAb Task
Ente the task number to delete: 1
Task number 1 has been Deleted1

Please select one of the Following options:
-----
1. Add a new task
2. Delete a task
3. List tasks
4. Quit
Enter your choice: 4
Goodbye
```

Fig 2: This Figure shows how to see and delete the tasks and also exiting the program