TO DO LIST APPLICATION

AIM:

To write Python Program for To Do List Application

ALGORITHM:

Step 1 - Initialize the To-Do List:

- Create a class `ToDoList` with an empty list (`tasks`) to store tasks.

Step 2 - Add Task: Create a method `add_task` in the `ToDoList` class that takes a task as input and appends it to the `tasks` list.

Step 3 -View Tasks: Create a method `view_tasks` in the `ToDoList` class that prints the tasks in a formatted way.If there are no tasks, print a message indicating that no tasks are found.

Step 4- MarkTask as Completed:Create a method `mark_completed` in the `ToDoList` class that takes an index as input and marks the corresponding task as completed.

Step 5- Main Loop: Create a method `run` in the `ToDoList` class that contains a loop.display a menu with options: Add Task, View Tasks, Mark Task as Completed, and Exit.Take user input for the chosen option.Implement the functionality for each option based on user input.

Step 6- Execute the Program: Create an instance of the `ToDoList` class.Call the `run` method on the instance to start the program.

PROGRAM:

```
class ToDoList:
    def __init__(self):
        self.tasks = []

    def add_task(self, task):
        self.tasks.append({"task": task, "completed": False})

    def view_tasks(self):
        if not self.tasks:
            print("No tasks found.")
        else:
            for index, task in enumerate(self.tasks, start=1):
                status = "✓" if task["completed"] else " "
                print(f"{index}. [{status}] {task['task']}")

    def mark_completed(self, index):
        if 1 <= index <= len(self.tasks):
            self.tasks[index - 1]["completed"] = True
            print(f"Task {index} marked as completed.")
        else:
            print("Invalid task index.")

    def run(self):
        while True:
            print("\n--- To-Do List ---")
            print("1. Add Task")
```

```
            print("2. View Tasks")
            print("3. Mark Task as Completed")
            print("4. Exit")

            choice = input("Enter your choice (1-4): ")

            if choice == "1":
                task = input("Enter the task: ")
                self.add_task(task)
                print("Task added successfully.")
            elif choice == "2":
                self.view_tasks()
            elif choice == "3":
                index = int(input("Enter the task index to mark as completed: "))
                self.mark_completed(index)
            elif choice == "4":
                print("Exiting the program. Goodbye!")
                break
            else:
                print("Invalid choice. Please enter a number between 1 and 4.")

if __name__ == "__main__":
    todo_list = ToDoList()
    todo_list.run()
```

OUTPUT:

```
--- To-Do List ---
1. Add Task
2. View Tasks
3. Mark Task as Completed
4. Exit
Enter your choice (1-4): 1
Enter the task: complete experiments
Task added successfully.

--- To-Do List ---
1. Add Task
2. View Tasks
3. Mark Task as Completed
4. Exit
Enter your choice (1-4): 2
1. [ ] complete experiments

--- To-Do List ---
1. Add Task
2. View Tasks
3. Mark Task as Completed
4. Exit
Enter your choice (1-4): 3
Enter the task index to mark as completed: 1
Task 1 marked as completed.

--- To-Do List ---
1. Add Task
2. View Tasks
3. Mark Task as Completed
4. Exit
Enter your choice (1-4): 4
Exiting the program. Goodbye!
```