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***Artificial Intelligence (Lab)***

***Assignment - 1***

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Software Engineering Department.

**Program:**

Artificial Intelligence.

**Section:**

BSAI-3A

**Question # 1:**

**Any on the following:**

Mini projects (lab 1 task):

1. Dynamic calculator ( solving : 1+2×3(4-5÷4)-(3÷5) )

2. To-Do list (Dynamic)

3. Tic tac toe (Dynamic)

4. Hangman (Dynamic) with printing hangman

**Explanation:**

In the following code, I have created a dynamic to-do list. It will take tasks continuously until the user exits the program. It have specific functions, add: to add a task to list, display: to display the whole list, remove: to remove a task from the list, update: to update a specific task in the list, menu: after that we have a menu with error handling for the user to select the option he wants to go with during the program.

**Code:**

**Option 2: To-Do List (Dynamic)**

class listing():

    def \_\_init\_\_(self):

        self.list1=[]

    def add(self):

        print("--- Adding to the list ---")

        task=input("Please enter the task: ").lower()

        self.list1.append(task)

        print(f"Task \"{task}\" has been added to the list.")

    def display(self):

        print("--- Displaying the list ---")

        if not self.list1:

            print("The list is empty.")

        else:

            print("The list contains the following tasks:")

            i=0

            for task in self.list1:

                i+=1

                print(f"{i}) {task}")

    def remove(self):

        print("--- Removing from the list ---")

        task=input("Please enter the task: ").lower()

        if task not in self.list1:

            print(f"Task {task} is not in the list.")

        else:

            self.list1.remove(task)

            print(f"Task \"{task}\" has been removed from the list.")

    def update(self):

        print("--- Updating the list ---")

        task=input("Please enter the task: ").lower()

        if task not in self.list1:

            print(f"Task \"{task}\" is not in the list.")

        else:

            new\_task=input("Please enter the new task: ").lower()

            self.list1.remove(task)

            self.list1.append(new\_task)

            print(f"Task \"{task}\" has been updated to \"{new\_task}\".")

def to\_do\_list():

    obj1=listing()

    while True:

        print("--- This is a dynamic To-Do-List ---")

        print("-:Menu:-")

        print("1) Add task.")

        print("2) Display task.")

        print("3) Remove task.")

        print("4) Update task.")

        print("5) End program.")

        input1=int(input(f"Please select an option: "))

        if input1==1:

            print("Add task.")

            obj1.add()

        elif input1==2:

            print("Display task.")

            obj1.display()

        elif input1==3:

            print("Remove task.")

            obj1.remove()

        elif input1==4:

            print("Update task.")

            obj1.update()

        elif input1==5:

            print("End program.")

            break

        else:

            print("Invalid input, please try again.")

to\_do\_list()

**Output:**

