PROJECT REPORT

To-Do List Application

Student name: Komalpreet Kaur **Uid:** 24MCA20195

Branch: MCA (General) **Sec/Group:** 3/B

Semester: 1st **Date Of Performance:** 2/11/24

Subject name: PYTHON PROGRAMMING LAB **Subject Code:** 24CAH-606

1. **Aim of the practical:** The main aim of the To-Do List application project is to create an intuitive and user-friendly interface that allows users to manage their tasks effectively. The application should enable users to add, remove, and mark tasks as complete, providing an organized way to keep track of daily activities.
2. **Hardware and Software Requirements:**

   Hardware Requirements: CPU(Central Processing Unit): Any simple processor would be sufficient for the execution of very basic python script and small projects.
   RAM: 8GB or more RAM enhances the ability to manage the large datasets and run numerous applications simultaneously without lag.
   Storage: 100GB SSD accelerates the work considerably, allowing greater access to files and faster processing of information, which is vital in working with large data or complex applications.
   Software Requirements: Operating System: Latest version of Windows, macOS or Linux keeping your operating system up-to-date ensures that it's compatible with the new python versions and development tools.
   We need **Python** version 3.7 or higher. Download the latest version from the official Download Python | Python.org
   Jupyter Notebook: Install via Anaconda or pip.
   Anaconda version – The latest version of Anaconda Navigator is 2.5.0, which is included in the Anaconda Distribution 2023.09 release.
   Downlods and install Anaconda from https://repo.anaconda.com/archive/Anaconda3-2022.05-Windows x86_64.exe. Open "Anaconda Prompt" by finding it in the windows (start) Menu.

3. **Code:**

```
# import all functions from the tkinter
from tkinter import *

# import messagebox class from tkinter
from tkinter import messagebox

# global list is declare for storing all the task
tasks_list = []
```

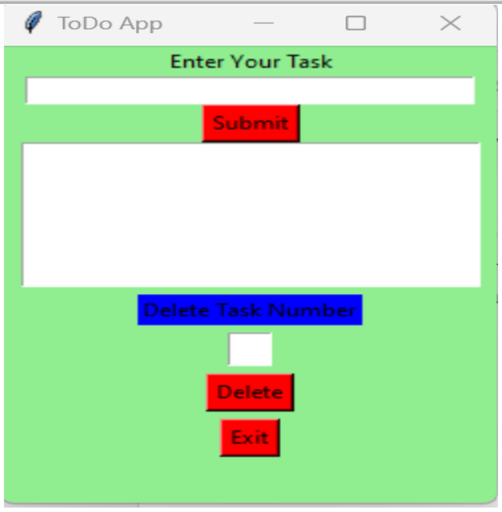
```
# global variable is declare for counting the task
counter = 1

# Function for checking input error when
# empty input is given in task field
def inputError() :

# check for enter task field is empty or not
if enterTaskField.get() == "" :

# show the error message
messagebox.showerror("Input Error")

return 0

return 1

# Function for clearing the contents
# of task number text field
def clear_taskNumberField() :

# clear the content of task number text field
taskNumberField.delete(0.0, END)

# Function for clearing the contents
# of task entry field
def clear_taskField() :

# clear the content of task field entry box
enterTaskField.delete(0, END)

# Function for inserting the contents
# from the task entry field to the text area
def insertTask():

global counter

# check for error
value = inputError()

# if error occur then return
if value == 0 :
return
```

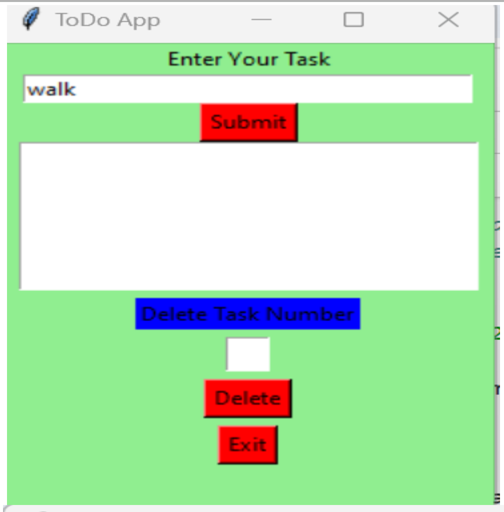
```
# get the task string concatenating
# with new line character
content = enterTaskField.get() + "\n"

# store task in the list
tasks_list.append(content)

# insert content of task entry field to the text area
# add task one by one in below one by one
TextArea.insert('end -1 chars', "[ " + str(counter) + " ] " + content)

# incremented
counter += 1

# function calling for deleting the content of task field
clear_taskField()

# function for deleting the specified task
def delete() :

global counter

# handling the empty task error
if len(tasks_list) == 0 :
messagebox.showerror("No task")
return

# get the task number, which is required to delete
number = taskNumberField.get(1.0, END)

# checking for input error when
# empty input in task number field
if number == "\n" :
messagebox.showerror("input error")
return
else :
task_no = int(number)

# function calling for deleting the
# content of task number field
clear_taskNumberField()

# deleted specified task from the list
tasks_list.pop(task_no - 1)
```

```
# decremented
counter -= 1

# whole content of text area widget is deleted
TextArea.delete(1.0, END)

# rewriting the task after deleting one task at a time
for i in range(len(tasks_list)) :
TextArea.insert('end -1 chars', "[ " + str(i + 1) + " ] " + tasks_list[i])


# Driver code
if __name__ == "__main__" :

# create a GUI window
gui = Tk()

# set the background colour of GUI window
gui.configure(background = "light green")

# set the title of GUI window
gui.title("ToDo App")

# set the configuration of GUI window
gui.geometry("250x300")

# create a label : Enter Your Task
enterTask = Label(gui, text = "Enter Your Task", bg = "light green")

# create a text entry box
# for typing the task
enterTaskField = Entry(gui)

# create a Submit Button and place into the root window
# when user press the button, the command or
# function affiliated to that button is executed
Submit = Button(gui, text = "Submit", fg = "Black", bg = "Red", command = insertTask)

# create a text area for the root
# with lunida 13 font
# text area is for writing the content
TextArea = Text(gui, height = 5, width = 25, font = "lucida 13")

# create a label : Delete Task Number
taskNumber = Label(gui, text = "Delete Task Number", bg = "blue")
```

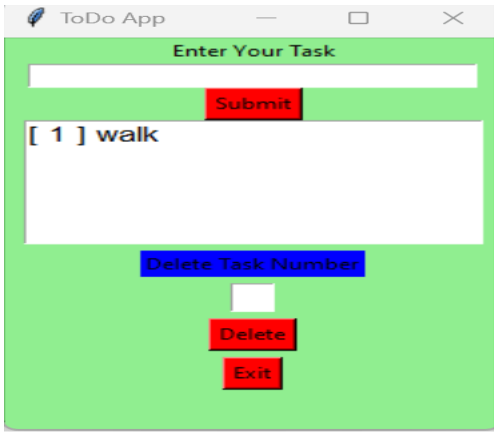
```
taskNumberField = Text(gui, height = 1, width = 2, font = "lucida 13")

# create a Delete Button and place into the root window
# when user press the button, the command or
# function affiliated to that button is executed .
delete = Button(gui, text = "Delete", fg = "Black", bg = "Red", command = delete)

# create a Exit Button and place into the root window
# when user press the button, the command or
# function affiliated to that button is executed .
Exit = Button(gui, text = "Exit", fg = "Black", bg = "Red", command = exit)

# grid method is used for placing
# the widgets at respective positions
# in table like structure.
enterTask.grid(row = 0, column = 2)

# ipadx attributed set the entry box horizontal size
enterTaskField.grid(row = 1, column = 2, ipadx = 50)

Submit.grid(row = 2, column = 2)

# padx attributed provide x-axis margin
# from the root window to the widget.
TextArea.grid(row = 3, column = 2, padx = 10, sticky = W)

taskNumber.grid(row = 4, column = 2, pady = 5)

taskNumberField.grid(row = 5, column = 2)

# pady attributed provide y-axis
# margin from the widget.
delete.grid(row = 6, column = 2, pady = 5)

Exit.grid(row = 7, column = 2)

# start the GUI
gui.mainloop()
```

4. **<u>Result:</u>**

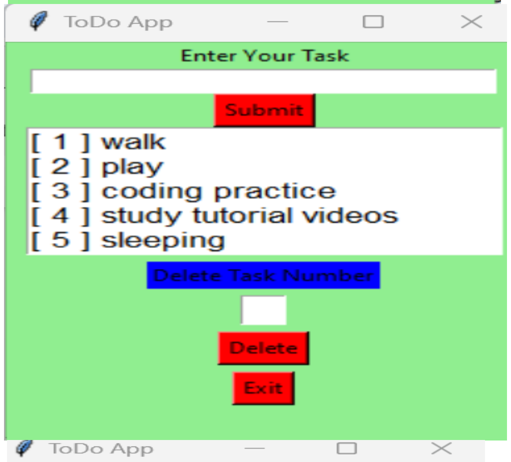




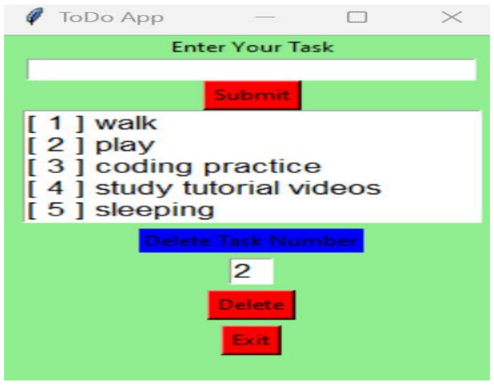
```
walk
```



```
[ 1 ] walk
```



```
[ 1 ] walk
[ 2 ] play
[ 3 ] coding practice
[ 4 ] study tutorial videos
[ 5 ] sleeping
```



```
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2
```

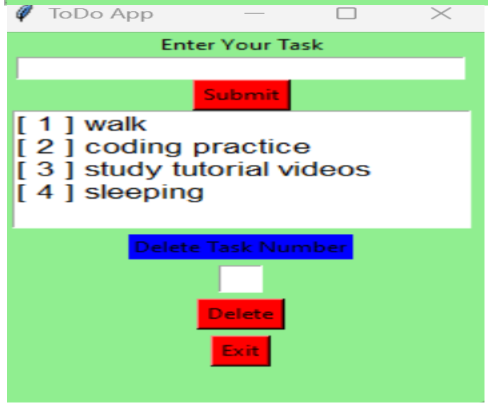

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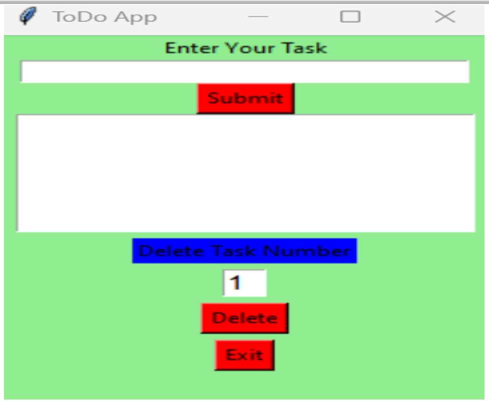

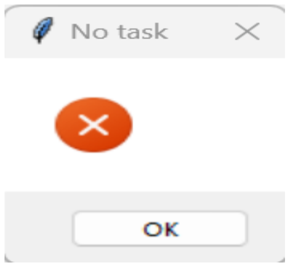

5. Learning outcomes (What I have learnt):

a) I learned about gui in this experiment.
b) I learned about how we can create an application of any project.
c) I learned about how we can design an interface.
d) I learned about buttons and grids in this worksheet.
e) I learn about structure and how we can use Tkinter in this task.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.	Worksheet		8 Marks
2.	Viva		10 Marks
3.	Simulation		12 Marks
	Total		30 Marks

Teacher Signature