```
 1
 2 import tkinter as tk
 3 from tkinter import ttk
 4 from tkinter import messagebox
 5 import sqlite3 as sql
 6
 7
 8 # add task
 9 def add_task():
10
11     t1 = task_field.get()
12
13     if len(t1) == 0:
14
15         messagebox.showinfo('Error', 'Field is Empty
   .')
16     else:
17
18         tasks.append(t1)
19         # using the execute() method to execute a SQL
    statement
20         the_cursor.execute('insert into tasks values
    (?)', (t1,))
21
22         list_update()
23
24         task_field.delete(0, 'end')
25
26     # defining the function to update the list
27
28
29 def list_update():
30
31     clear_list()
32
33     for task in tasks:
34
35         task_listbox.insert('end', task)
36
37
38
```

```
39 def delete_task():
40 
41     try:
42 
43         value = task_listbox.get(task_listbox.
   curselection())
44         # checking if the stored value is present in
   the tasks list
45         if value in tasks:
46 
47             tasks.remove(value)
48 
49             list_update()
50 
51             the_cursor.execute('delete from tasks
   where title = ?', (value,))
52     except:
53 
54         messagebox.showinfo('Error', 'No Task
   Selected. Cannot Delete.')
55 
56 
57 
58 
59 def delete_all_tasks():
60 
61     message_box = messagebox.askyesno('Delete All', '
   Are you sure?')
62 
63     if message_box == True:
64 
65         while (len(tasks) != 0):
66 
67             tasks.pop()
68 
69         the_cursor.execute('delete from tasks')
70 
71         list_update()
72 
73 
74 
```

```
 75
 76 def clear_list():
 77
 78     task_listbox.delete(0, 'end')
 79
 80
 81
 82 def close():
 83
 84     print(tasks)
 85
 86     guiWindow.destroy()
 87
 88
 89
 90 def retrieve_database():
 91
 92     while (len(tasks) != 0):
 93
 94         tasks.pop()
 95
 96     for row in the_cursor.execute('select title from
    tasks'):
 97
 98         tasks.append(row[0])
 99
100
101
102
103 if __name__ == "__main__":
104
105     guiWindow = tk.Tk()
106
107     guiWindow.title("To-Do List")
108
109     guiWindow.geometry("400x350+650+150")
110
111     guiWindow.resizable(0, 0)
112
113     guiWindow.configure(bg="#FAEBD7")
114
```

```
115
116     the_connection = sql.connect('listOfTasks.db')
117
118     the_cursor = the_connection.cursor()
119
120     the_cursor.execute('create table if not exists
    tasks (title text)')
121
122
123     tasks = []
124
125
126     header_frame = tk.Frame(guiWindow, bg="#FAEBD7")
127     functions_frame = tk.Frame(guiWindow, bg="#
    FAEBD7")
128     listbox_frame = tk.Frame(guiWindow, bg="#FAEBD7"
    )
129
130
131     header_frame.pack(fill="both")
132     functions_frame.pack(side="left", expand=True,
    fill="both")
133     listbox_frame.pack(side="right", expand=True,
    fill="both")
134
135
136     header_label = ttk.Label(
137         header_frame,
138         text="The To-Do List",
139         font=("Brush Script MT", "40"),
140         background="#FAEBD7",
141         foreground="#8B4513"
142     )
143
144     header_label.pack(padx=20, pady=20)
145
146
147     task_label = ttk.Label(
148         functions_frame,
149         text="Enter the Task:",
150         font=("Consolas", "11", "bold"),
```

```
        background="#FAEBD7",
        foreground="#000000"
    )

    task_label.place(x=30, y=40)


    task_field = ttk.Entry(
        functions_frame,
        font=("Consolas", "12"),
        width=18,
        background="#FFF8DC",
        foreground="#A52A2A"
    )

    task_field.place(x=30, y=80)


    add_button = ttk.Button(
        functions_frame,
        text="Add Task",
        width=24,
        command=add_task
    )
    del_button = ttk.Button(
        functions_frame,
        text="Delete Task",
        width=24,
        command=delete_task
    )
    del_all_button = ttk.Button(
        functions_frame,
        text="Delete All Tasks",
        width=24,
        command=delete_all_tasks
    )
    exit_button = ttk.Button(
        functions_frame,
        text="Exit",
        width=24,
        command=close
```

```
    )

    add_button.place(x=30, y=120)
    del_button.place(x=30, y=160)
    del_all_button.place(x=30, y=200)
    exit_button.place(x=30, y=240)


    task_listbox = tk.Listbox(
        listbox_frame,
        width=26,
        height=13,
        selectmode='SINGLE',
        background="#FFFFFF",
        foreground="#000000",
        selectbackground="#CD853F",
        selectforeground="#FFFFFF"
    )

    task_listbox.place(x=10, y=20)


    retrieve_database()
    list_update()

    guiWindow.mainloop()

    the_connection.commit()
    the_cursor.close()
```