**Step 1:**

create a folder and open terminal from that folder

(by opening the folder, right click and then open in terminal)

**Step 2: Sql**

* open mysql with root

sudo mysql -u root -p

* create database and table

CREATE DATABASE test\_db;

USE test\_db;

CREATE TABLE employees (

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(50),

position VARCHAR(50)

);

* Change password and flush previlliges

ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql\_native\_password BY 'ubuntu';

FLUSH PRIVILEGES;

* Exit mysql

EXIT; or \q

**Step 3: Python and Tkinter**

* python3 –version
* pip install mysql-connector-python

(if pip is not installed it will command to install pip first install pip then connector)

* sudo apt install python3-tk

(install tkinter library)

**Step 4: Create app.py file and add Code in it**

* gedit app.py

(python file backend)

* Now add the code in it with user and password as follows

user="root"

password="ubuntu"

* **Main code:**

import tkinter as tk

from tkinter import messagebox

import mysql.connector

# Connect to MySQL database

db = mysql.connector.connect(

host="localhost",

user="root", # Replace with your MySQL username

password="ubuntu", # Replace with your MySQL password

database="test\_db"

)

# Set up the cursor

cursor = db.cursor()

# Functions for CRUD operations

def add\_employee():

name = entry\_name.get()

position = entry\_position.get()

if name and position:

cursor.execute("INSERT INTO employees (name, position) VALUES (%s, %s)", (name, position))

db.commit()

messagebox.showinfo("Success", "Employee added successfully")

entry\_name.delete(0, tk.END)

entry\_position.delete(0, tk.END)

display\_employees()

else:

messagebox.showwarning("Input Error", "Please fill all fields")

def delete\_employee():

employee\_id = entry\_id.get()

if employee\_id:

cursor.execute("DELETE FROM employees WHERE id = %s", (employee\_id,))

db.commit()

messagebox.showinfo("Success", "Employee deleted successfully")

entry\_id.delete(0, tk.END)

display\_employees()

else:

messagebox.showwarning("Input Error", "Please enter an ID")

def edit\_employee():

employee\_id = entry\_id.get()

name = entry\_name.get()

position = entry\_position.get()

if employee\_id and name and position:

cursor.execute("UPDATE employees SET name = %s, position = %s WHERE id = %s", (name, position, employee\_id))

db.commit()

messagebox.showinfo("Success", "Employee updated successfully")

entry\_id.delete(0, tk.END)

entry\_name.delete(0, tk.END)

entry\_position.delete(0, tk.END)

display\_employees()

else:

messagebox.showwarning("Input Error", "Please fill all fields")

def display\_employees():

cursor.execute("SELECT \* FROM employees")

records = cursor.fetchall()

listbox.delete(0, tk.END)

for row in records:

listbox.insert(tk.END, f"ID: {row[0]}, Name: {row[1]}, Position: {row[2]}")

# Setting up the GUI window

root = tk.Tk()

root.title("Employee Database")

tk.Label(root, text="Employee ID:").grid(row=0, column=0, padx=10, pady=10)

entry\_id = tk.Entry(root)

entry\_id.grid(row=0, column=1)

tk.Label(root, text="Name:").grid(row=1, column=0, padx=10, pady=10)

entry\_name = tk.Entry(root)

entry\_name.grid(row=1, column=1)

tk.Label(root, text="Position:").grid(row=2, column=0, padx=10, pady=10)

entry\_position = tk.Entry(root)

entry\_position.grid(row=2, column=1)

tk.Button(root, text="Add", command=add\_employee).grid(row=3, column=0, padx=10, pady=10)

tk.Button(root, text="Edit", command=edit\_employee).grid(row=3, column=1, padx=10, pady=10)

tk.Button(root, text="Delete", command=delete\_employee).grid(row=3, column=2, padx=10, pady=10)

# Display listbox for records

listbox = tk.Listbox(root, width=50)

listbox.grid(row=4, column=0, columnspan=3, padx=10, pady=10)

# Display initial data

display\_employees()

# Run the application

root.mainloop()

# Close the database connection when done

db.close()

* **Run the python file:**

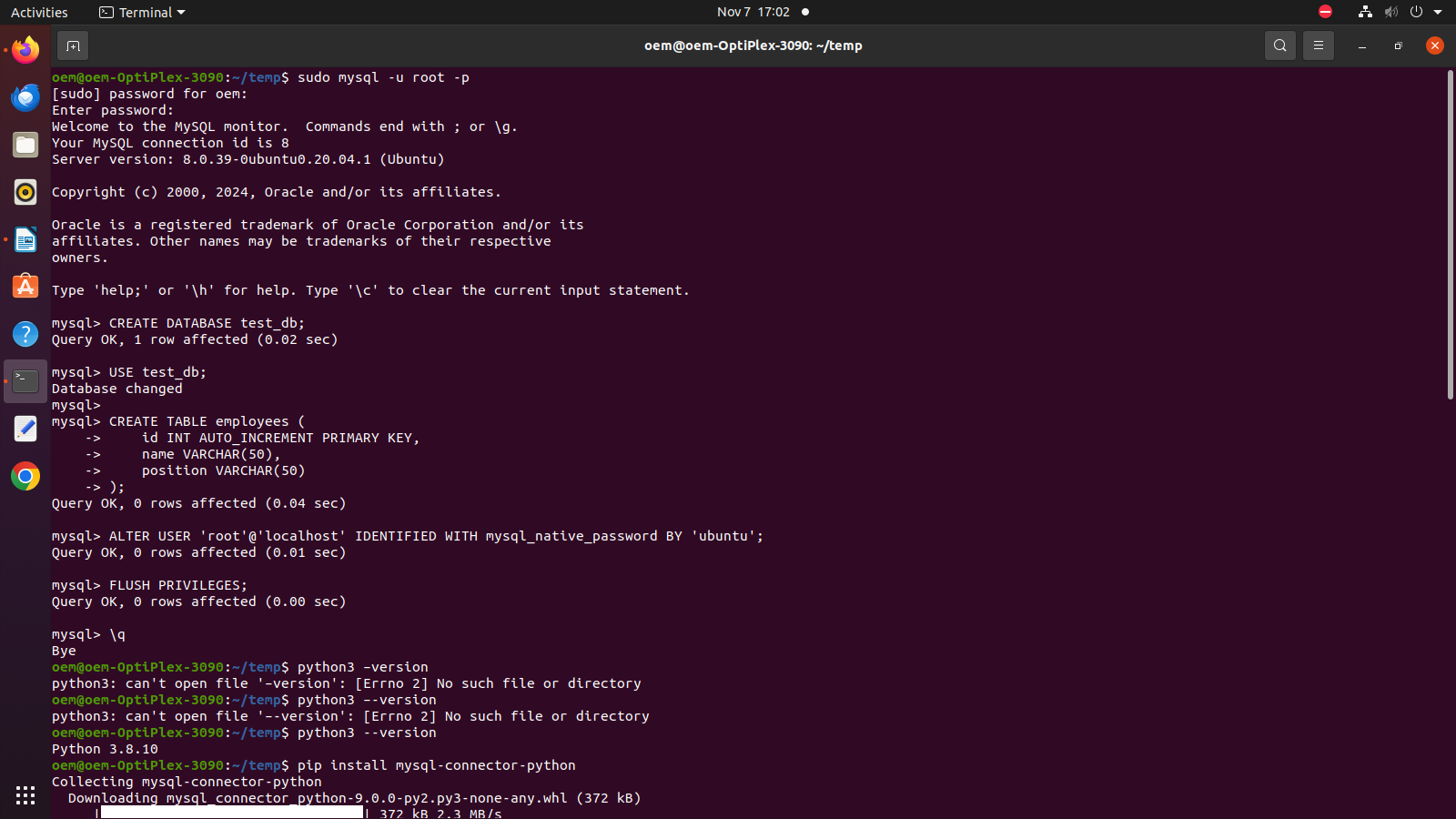
pytho3 app.py

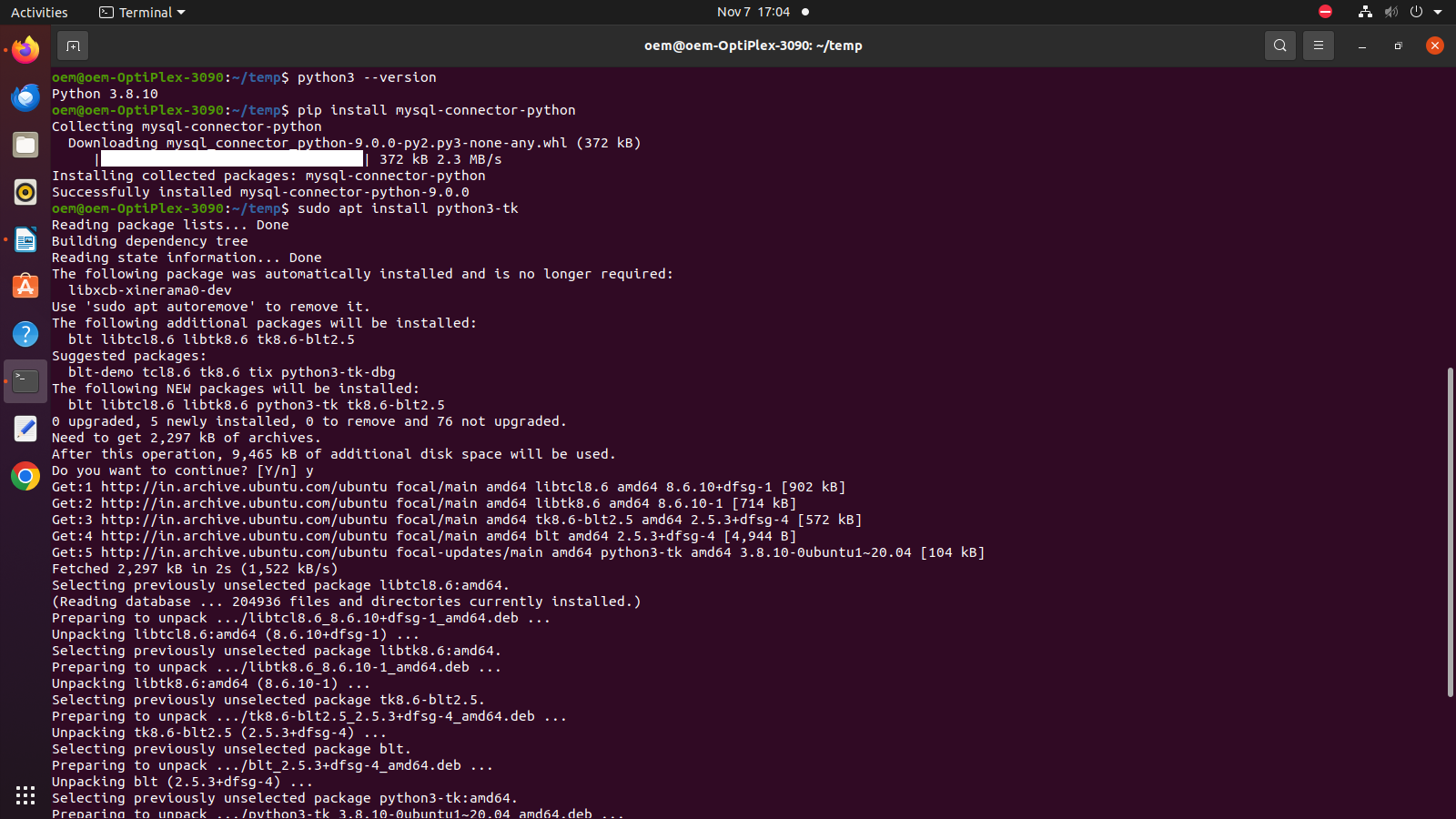
**Step 5:**

Perform CRUD operations

**Done...!!!**

**ScreenShots:**





* **In this PC pip was installed so directly installed connector**

