Problem Statement :

Design an Examination Registration Desk using Tkinter and connect it to a database. The system should allow students to register for upcoming exams by providing their personal details, selecting the exam they wish to appear for. The system should also allow administrators to view and manage the registered students' data and exam details.

Code :

```
import tkinter as tk
from tkinter import Label, PhotoImage, messagebox
import re
import pymysql

mydb = pymysql.connect(
  host="localhost",
  user="root",
  password="",
  database="student"
)

root = tk.Tk()
root.title("Examination Registration Form")
root.geometry("450x700")
bgImage=PhotoImage(file='bg.png')
bgLabel=Label(root,image=bgImage,bd=5,width=1500, height= 800 )
bgLabel.place(x=0,y=0)

frame = tk.Frame(root)

fname_label = tk.Label(frame, text="First Name:")
fname_entry = tk.Entry(frame,width = '30')

lname_label = tk.Label(frame, text="Last Name:")
lname_entry = tk.Entry(frame,width = '30')

email_label = tk.Label(frame, text="Email:")
email_entry = tk.Entry(frame,width = '30')
```

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phone_label = tk.Label(frame, text="Phone No:")
phone_entry = tk.Entry(frame,width = '30')

city_label = tk.Label(frame, text="City:")
city_entry = tk.Entry(frame,width = '30')

state_label = tk.Label(frame, text="State:")
state_entry = tk.Entry(frame,width = '30')

country_label = tk.Label(frame, text="Country:")
country_entry = tk.Entry(frame,width = '30')

pincode_label = tk.Label(frame, text="Pin Code:")
pincode_entry = tk.Entry(frame,width = '30')

aadhar_label = tk.Label(frame, text="Aadhar No:")
aadhar_entry = tk.Entry(frame,width = '30')

gender_type_label = tk.Label(frame, text="Gender:")
gender_type_var = tk.StringVar(value="Male")
gender_type_male = tk.Radiobutton(frame, text="Male",
variable=gender_type_var, value="Male")
gender_type_female = tk.Radiobutton(frame, text="Female",
variable=gender_type_var, value="Female")
gender_type_others = tk.Radiobutton(frame, text="Others",
variable=gender_type_var, value="Others")

course_label = tk.Label(frame, text="Highest Qualification:")
course_entry = tk.Entry(frame,width = '30')

date_label = tk.Label(frame, text="Exam Date and Time:")
date_options = ["April 10, 9:00 AM", "April 10, 2:00 PM", "April 11, 9:00 AM", "April 11,
2:00 PM"]
date_var = tk.StringVar(value=date_options[0])
date_menu = tk.OptionMenu(frame, date_var, *date_options)

exam_type_label = tk.Label(frame, text="Exam Type:")
exam_type_var = tk.StringVar(value="Online")
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exam_type_online = tk.Radiobutton(frame, text="Online",
variable=exam_type_var, value="Online")
exam_type_inperson = tk.Radiobutton(frame, text="Offline",
variable=exam_type_var, value="Offline")

password_label = tk.Label(frame, text="Set Password:")
password_entry = tk.Entry(frame, show="*")

confirm_password_label = tk.Label(frame, text="Confirm Password:")
confirm_password_entry = tk.Entry(frame, show="*")

fname_label.grid(row=0, column=0, padx=5, pady=5)
fname_entry.grid(row=0, column=1, padx=5, pady=5)

lname_label.grid(row=1, column=0, padx=5, pady=5)
lname_entry.grid(row=1, column=1, padx=5, pady=5)

email_label.grid(row=2, column=0, padx=5, pady=5)
email_entry.grid(row=2, column=1, padx=5, pady=5)

phone_label.grid(row=3, column=0, padx=5, pady=5)
phone_entry.grid(row=3, column=1, padx=5, pady=5)

city_label.grid(row=4, column=0, padx=5, pady=5)
city_entry.grid(row=4, column=1, padx=5, pady=5)

state_label.grid(row=5, column=0, padx=5, pady=5)
state_entry.grid(row=5, column=1, padx=5, pady=5)

country_label.grid(row=6, column=0, padx=5, pady=5)
country_entry.grid(row=6, column=1, padx=5, pady=5)
pincode_label.grid(row=7, column=0, padx=5, pady=5)
pincode_entry.grid(row=7, column=1, padx=5, pady=5)

aadhar_label.grid(row=8, column=0, padx=5, pady=5)
aadhar_entry.grid(row=8, column=1, padx=5, pady=5)

gender_type_label.grid(row=9, column=0, padx=5, pady=5)
gender_type_male.grid(row=9, column=1, padx=5, pady=5)
```

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gender_type_female.grid(row=10, column=1, padx=5, pady=5)
gender_type_others.grid(row=11, column=1, padx=5, pady=5)

course_label.grid(row=12, column=0, padx=5, pady=5)
course_entry.grid(row=12, column=1, padx=5, pady=5)

date_label.grid(row=13, column=0, padx=5, pady=5)
date_menu.grid(row=13, column=1, padx=5, pady=5)

exam_type_label.grid(row=14, column=0, padx=5, pady=5)
exam_type_online.grid(row=15, column=0, padx=5, pady=5)
exam_type_inperson.grid(row=15, column=1, padx=5, pady=5)

password_label.grid(row=16, column=0, padx=5, pady=5)
password_entry.grid(row=16, column=1, padx=5, pady=5)

confirm_password_label.grid(row=17, column=0, padx=5, pady=5)
confirm_password_entry.grid(row=17, column=1, padx=5, pady=5)

terms_var = tk.BooleanVar()
terms_checkbox = tk.Checkbutton(frame, text="I agree to the Terms and
Conditions", variable=terms_var)
terms_checkbox.grid(row=18, column=0, columnspan=2, padx=5, pady=5)

def validate_form():
    if not fname_entry.get() or not lname_entry.get() or not email_entry.get() or
not phone_entry.get() or not city_entry.get() or not state_entry.get() or not
country_entry.get() or not pincode_entry.get() or not aadhar_entry.get()  or
not gender_type_var.get()  or not course_entry.get() or not
password_entry.get() or not confirm_password_entry.get():
        messagebox.showerror("Error", "Please fill all the fields.")

    elif not re.match(r"[^@]+@[^@]+.[^@]+", email_entry.get()):
        messagebox.showerror("Error", "Invalid email address.")

    elif not re.match(r"[0-9]{10}", phone_entry.get()):
        messagebox.showerror("Error", "Invalid phone number.")

    elif not re.match(r"[0-9]{12}", aadhar_entry.get()):
```

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            messagebox.showerror("Error", "Invalid Aadhar number.")

    elif password_entry.get() != confirm_password_entry.get():
            messagebox.showerror("Error", "Passwords do not match.")

    elif not terms_var.get():
            messagebox.showerror("Error", "Please agree to the Terms and
Conditions.")

    else:
        cursor = mydb.cursor()
        cursor.execute("INSERT INTO users values('"+fname_entry.get()+"',
'"+lname_entry.get()+"','"+email_entry.get()+"','"+phone_entry.get()+"',
'"+city_entry.get()+"', '"+state_entry.get()+"',
'"+country_entry.get()+"','"+pincode_entry.get()+"','"+aadhar_entry.get()+"','"+gend
er_type_var.get()+"', '"+course_entry.get()+"',
'"+date_var.get()+"','"+exam_type_var.get()+"','"+password_entry.get()+"')" )
        mydb.commit()
        messagebox.showinfo("Success", "Form submitted successfully.")

        print("Name:", fname_entry.get(), lname_entry.get())
        print("Email:", email_entry.get())
        print("Phone:", phone_entry.get())
        print("Address:", city_entry.get(),",", state_entry.get(),",",
country_entry.get(),"-",pincode_entry.get())
        print("Aadhar No:", aadhar_entry.get())
        print("Gender:", gender_type_var.get())
        print("Course:", course_entry.get())
        print("Exam Date and Time:", date_var.get())
        print("Exam Type:", exam_type_var.get())
        print("Password:", password_entry.get())

        fname_entry.delete(0, tk.END)
        lname_entry.delete(0, tk.END)
        email_entry.delete(0, tk.END)
        phone_entry.delete(0, tk.END)
        city_entry.delete(0, tk.END)
        state_entry.delete(0, tk.END)
        country_entry.delete(0, tk.END)
```
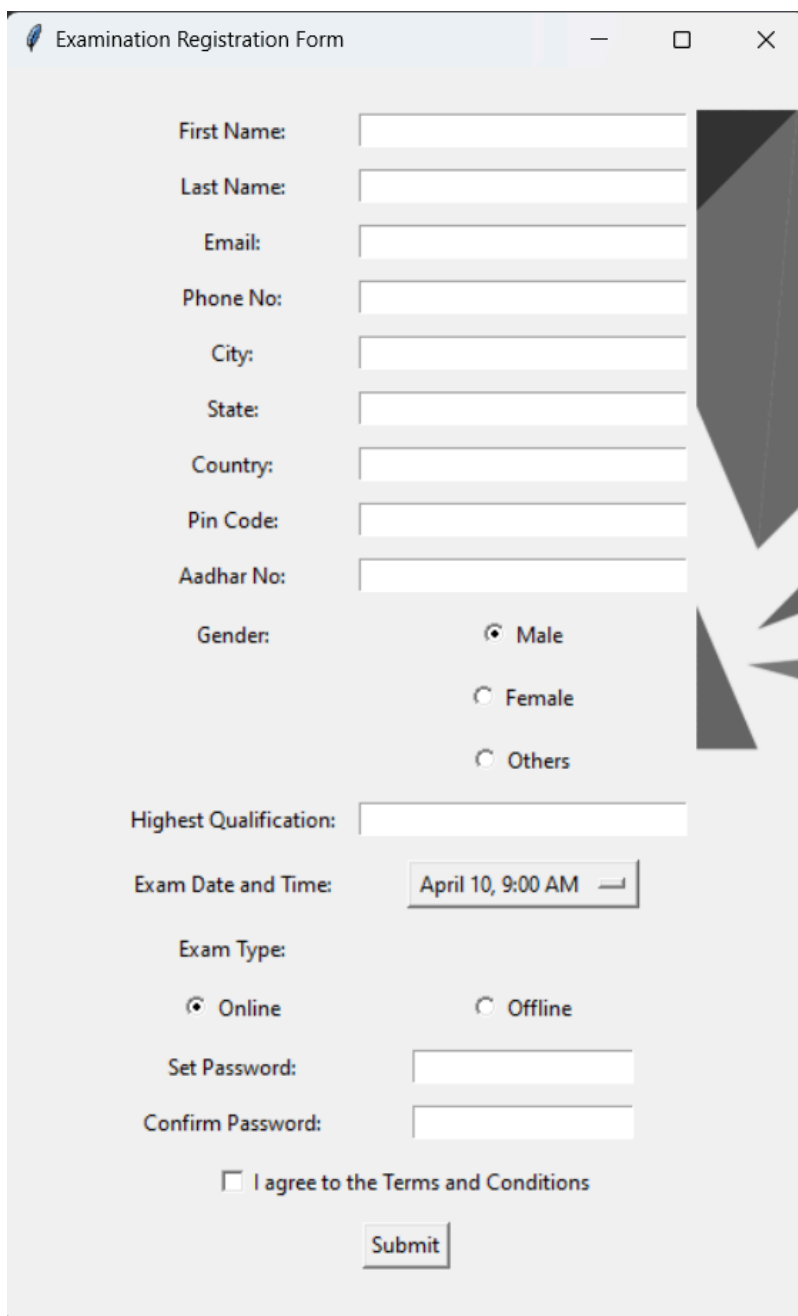
```
        aadhar_entry.delete(0, tk.END)
        pincode_entry.delete(0, tk.END)
        course_entry.delete(0, tk.END)
        password_entry.delete(0, tk.END)
        confirm_password_entry.delete(0, tk.END)

    submit_button = tk.Button(frame, text="Submit", command=validate_form)
    submit_button.grid(row=19, column=0, columnspan=2, padx=5, pady=5)
    frame.pack(padx=20, pady=20)
    root.mainloop()
```

Output:

First Name:

Last Name:

Email:

Phone No:

City:

State:

Country:

Pin Code:

Aadhar No:

Gender: ⦿ Male

○ Female

○ Others

Highest Qualification:

Exam Date and Time: April 10, 9:00 AM

Exam Type:

⦿ Online ○ Offline

Set Password:

Confirm Password:

☐ I agree to the Terms and Conditions

Submit

First Name:

Last Name:

Email:

Phone No:

City:

State:

Country:

Pin Code:

Aadhar No:

Gender: ⦿ Male

Error ✕

❌ Please fill all the fields.

OK

Highest Qu

Exam Date

Exam Type:

⦿ Online ○ Offline

Set Password:

Confirm Password:

☑ I agree to the Terms and Conditions

Submit

First Name: Prashant K.

Last Name: Pathak

Email: pathak@gmail.com

Phone No: 1234567890

City: Mumbai

State: Maharashtra

Country: India

Pin Code: 401105

Aadhar No: 123456789012

Gender: ⦿ Male

○ Female

○ Others

Highest Qualification: Under Graduate

Exam Date and Time: April 10, 9:00 AM

Exam Type:

⦿ Online ○ Offline

Set Password: *********

Confirm Password: *********

☑ I agree to the Terms and Conditions

Submit

Examination Registration Form

Field	Value
First Name:	Prashant K.
Last Name:	Pathak
Email:	pathak@gmail.com
Phone No:	1234567890
City:	Mumbai
State:	Maharashtra
Country:	India
Pin Code:	401105
Aadhar No:	123456789012

Gender: ⦿ Male

Success ✕

ⓘ Form submitted successfully.

[OK]

Highest

Exam D

Exam Type:
⦿ Online   ○ Offline

Set Password: *********
Confirm Password: *********

☑ I agree to the Terms and Conditions

[Submit]

Server: 127.0.0.1 » Database: student » Table: users

| Browse | Structure | SQL | Search | Insert | Export | Import | Privileges | Operations | Tracking | Triggers |

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available. ⓘ

✔ Showing rows 0 - 3 (4 total, Query took 0.0005 seconds.)

SELECT * FROM `users`

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

[Extra options]

first_name	last_name	email	phone	city	state	country	pincode	aadhar_no	gender	qualification	exam_date	exam_type	password
Ayush	Chaubey	chaubey@gmail.com	1234567890	nallasopara	maharashtra	india	401203	2147483647	Male	ug	April 10, 9:00	Online	123456789
prashant	Pathak	pathak@gmail.com	2147483647	bhayandar	maharashtra	india	401105	2147483647	Male	ug	April 10, 9:00	Online	12345
Priyan	Vishwakarma	priyan@gmail.com	1234567890	nallasopara	maharashtra	india	123456	2147483647	Male	fail	April 10, 9:00	Online	1234
Prashant K.	Pathak	pathak@gmail.com	1234567890	Mumbai	Maharashtra	India	401105	2147483647	Male	Under Graduate	April 10, 9:00	Online	123456789

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

🖨 Print   Copy to clipboard   Export   Display chart   Create view

Bookmark this SQL query

Label: [_____]   ☐ Let every user access this bookmark

Console