Central Digital Notice Board - Complete Project Documentation

This project is a Central Digital Notice Board System built using Python Tkinter and SQLite3. It allows Admin, HOD, Faculty, and Students to log in and manage/view notices.

Complete Source Code:

```
import tkinter as tk
from tkinter import messagebox
import sqlite3
from datetime import datetime

# ---------------- DATABASE ----------------
conn = sqlite3.connect("advanced_notice.db")
cursor = conn.cursor()
cursor.execute("""
CREATE TABLE IF NOT EXISTS notices (
    id INTEGER PRIMARY KEY AUTOINCREMENT,
    role TEXT,
    category TEXT,
    priority TEXT,
    audience TEXT,
    content TEXT,
    date TEXT,
    views INTEGER DEFAULT 0
)
""")
conn.commit()

# ---------------- USERS ----------------
users = {
    "admin": "admin123",
    "hod": "hod123",
    "faculty": "fac123",
    "student": "stud123"
}

# ---------------- LOGIN ----------------
def login():
    if users.get(user_entry.get()) == pass_entry.get():
        open_dashboard(user_entry.get())
    else:
        messagebox.showerror("Error", "Invalid Login")

# ---------------- DASHBOARD ----------------
def open_dashboard(role):

    for w in root.winfo_children():
        w.destroy()
    root.title("Central Digital Notice Board")
```

```
root.geometry("900x600")
root.config(bg="#0F172A")

def add_notice():
    if not content.get().strip():
        messagebox.showwarning("Warning", "Enter notice content")
        return

    cursor.execute("""
    INSERT INTO notices (role, category, priority, audience, content, date)
    VALUES (?, ?, ?, ?, ?, ?)
    """, (role, cat.get(), pri.get(), aud.get(),
          content.get(), datetime.now().strftime("%d-%m-%Y %H:%M")))
    conn.commit()
    load_notices()
    content.delete(0, tk.END)

def load_notices():
    notice_list.delete(0, tk.END)
    for row in cursor.execute("SELECT * FROM notices ORDER BY id DESC"):
        color = "#EF4444" if row[3] == "Urgent" else "#F1F5F9"
        notice_list.insert(tk.END,
            f"{row[0]}. [{row[3]}] {row[5]} - {row[6]}")
        notice_list.itemconfig(tk.END, fg=color)

def delete_notice():
    sel = notice_list.curselection()
    if sel:
        notice_id = notice_list.get(sel[0]).split(".")[0]
        cursor.execute("DELETE FROM notices WHERE id=?", (notice_id,))
        conn.commit()
        load_notices()
    else:
        messagebox.showwarning("Warning", "Select a notice")

tk.Label(root,
         text=f"CENTRAL DIGITAL NOTICE BOARD ({role.upper()})",
         font=("Times", 20, "bold"),
         bg="#0F172A",
         fg="#F1F5F9").pack(pady=15)

card = tk.Frame(root, bg="#1E293B")
card.pack(pady=10, padx=20, fill="both", expand=True)

if role != "student":
    content = tk.Entry(card, width=50)
    content.pack(pady=5)

    cat = tk.StringVar(value="Academic")
    pri = tk.StringVar(value="General")
    aud = tk.StringVar(value="Whole Campus")

    for var, options in [
        (cat, ["Academic", "Exams", "Placements", "Cultural", "Sports", "Circular"]),
        (pri, ["Urgent", "Important", "General"]),
        (aud, ["Department", "Year", "Whole Campus"])
    ]:
```

```
            tk.OptionMenu(card, var, *options).pack(pady=3)

        tk.Button(card, text="Add Notice", bg="#3B82F6",
                  fg="white", command=add_notice).pack(pady=5)

        tk.Button(card, text="Delete Notice", bg="#EF4444",
                  fg="white", command=delete_notice).pack(pady=5)

    notice_list = tk.Listbox(card, width=100, height=20,
                             bg="#1E293B", fg="#F1F5F9",
                             selectbackground="#3B82F6")
    notice_list.pack(pady=10)

    load_notices()

# ---------------- LOGIN WINDOW ----------------
root = tk.Tk()
root.title("Login - Digital Notice Board")
root.geometry("400x300")
root.config(bg="#F4E1C1")

tk.Label(root, text="LOGIN",
         font=("Palatino Linotype", 20, "bold"),
         bg="#F4E1C1").pack(pady=20)

tk.Label(root, text="Username", bg="#F4E1C1").pack()
user_entry = tk.Entry(root)
user_entry.pack()

tk.Label(root, text="Password", bg="#F4E1C1").pack()
pass_entry = tk.Entry(root, show="*")
pass_entry.pack()

tk.Button(root, text="Login",
          bg="#3B82F6", fg="white",
          command=login).pack(pady=20)

root.mainloop()
```

How to Run the Project:

1. Install Python (version 3.x recommended).
2. Open any code editor (VS Code / IDLE / PyCharm).
3. Save this file as notice_board.py.
4. Open terminal in that folder.
5. Run:
   python notice_board.py
6. Login credentials:
   admin / admin123
   hod / hod123
   faculty / fac123
   student / stud123