# main\_app.py

import streamlit as st

import os

st.set\_page\_config(

page\_title="Electronics Lab Simulator",

layout="wide",

initial\_sidebar\_state="collapsed" # Hide sidebar

)

# --- HEADER WITH LOGO ---

col\_text, col\_logo = st.columns([4, 1])

with col\_text:

st.title("SRM INSTITUTE OF SCIENCE AND TECHNOLOGY")

st.subheader("Department of Electronics and Communication Engineering")

with col\_logo:

st.image("image\_a2e0d8.png", width=150)

# --- MAIN TITLE ---

st.markdown("<h2 style='text-align: center;'>Welcome to the Electronics Lab Simulator!</h2>", unsafe\_allow\_html=True)

st.write("<p style='text-align: center;'>Click on an experiment below to run it.</p>", unsafe\_allow\_html=True)

# --- EXPERIMENTS (Map to page names) ---

experiments = {

"Basic Op-Amp Simulator": "Basic\_Op\_Amp\_Simulator",

"Integrator / Differentiator": "Integrator\_Differentiator",

"Precision Rectifier": "Precision\_Rectifier",

"Comparator": "Comparator",

"Schmitt Trigger": "Schmitt\_Trigger",

"Active Wave Shaping": "Active\_Wave\_Shaping",

"RC Phase Shift Oscillator": "RC\_Phase\_Shift\_Oscillator",

"Wien Bridge Oscillator": "Wien\_Bridge\_Oscillator",

"Square Wave Generator": "Square\_Wave\_Generator",

"Active Filter": "Active\_Filter"

}

# --- DISPLAY EXPERIMENTS AS BOXES ---

cols = st.columns(3)

for i, (exp, page\_name) in enumerate(experiments.items()):

with cols[i % 3]:

# Instead of button, we make clickable link styled as a card

st.markdown(

f"""

<a href="/{page\_name.replace(' ', '%20')}" target="\_self"

style="

display: block;

border: 2px solid #4CAF50;

border-radius: 12px;

padding: 20px;

margin: 10px;

text-align: center;

background-color: #f9f9f9;

box-shadow: 2px 2px 10px rgba(0,0,0,0.1);

text-decoration: none;

color: black;

font-weight: bold;

transition: 0.3s;

"

onmouseover="this.style.backgroundColor='#e6ffe6';"

onmouseout="this.style.backgroundColor='#f9f9f9';">

{exp}

</a>

""",

unsafe\_allow\_html=True

)

# --- FOOTER ---

st.markdown("---")

st.markdown(

"<p style='text-align: center;'>Developed by <b>Dr. Damodar Panigrahy</b>, Assistant Professor, Department of ECE, SRMIST, Kattankulathur.</p>",

unsafe\_allow\_html=True

)