CS 122 Assignment 7

Due: December 4, 2025
Total Points: 100
Topic: Simple Flask Web App

Overview

In this assignment, you will create a simple web application using Flask and a SQLite database. You will then host your web app on a Google Cloud VM, so it can be accessed using your external IP address on port 5000.

This is a basic introduction to running a Python web application on a server.

Task 1 (60 points): Build the Flask Web App

Your Flask application must include a **SQLite database** named *messages.db* with one table:

messages(id INTEGER PRIMARY KEY AUTOINCREMENT, text TEXT)

Your app must have the following **three routes**:

1. Route "/" — Home Page (20 points)

The home page must display:

- A welcome message such as:
  "Welcome to <your_name>'s Web App!"
- A link or button that goes to /add
- A link or button that goes to /view

2. Route "/add" — Add Message Page (20 points)

This page must contain:

- One text input field
- One Submit button

When a message is submitted:

- Save the text into the SQLite database
- Redisplay the same page with a message like:
  "Message saved!"

3. Route “/view” — View Messages Page (20 points)

This page must:

- Retrieve all messages from the database
- Display them in a simple list
- Include a link/button back to the home page

Task 2 (40 points): Host Your Web App on Google Cloud VM

You must:

- Run your Flask app on your Google Cloud VM
- Ensure your app is accessible at:
  http://YOUR_EXTERNAL_IP:5000/

Required: Run your app using nohup

To ensure your app continues running even after you close the SSH window, you **must** run it using:

nohup python3 <filename>.py &

This keeps the Flask server running in the background.

Your VM must remain ON and the app must remain accessible until the grading announcement is posted.

Submission Instructions

Submit only your external IP address in the format:

http://XX.XX.XX.XX:5000/

Make sure the link works at the time of grading.