URL SHORTNER PROJECT

FRONTEND DEVELOPMENT

layout.html
First, I created an html page layout.html for using it as template for every other pages of the web application.

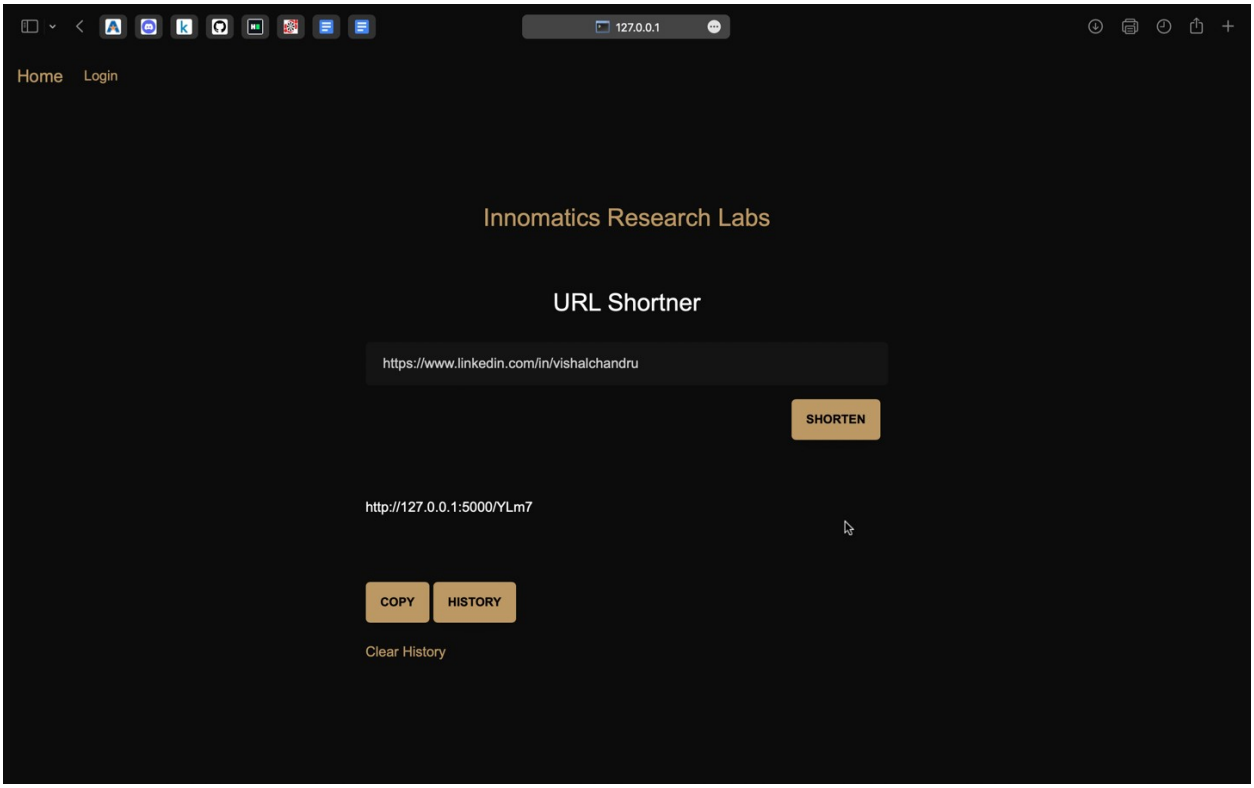
Index.html
A home page index.html with form tags consisting of an input type text and an input type button to send request to the backend. The text input type is used to enter the url. This page extends to layout.html

history.html
This page is used to display all the url that was shortened and its shorten url in table tag.This also extends to layout.html

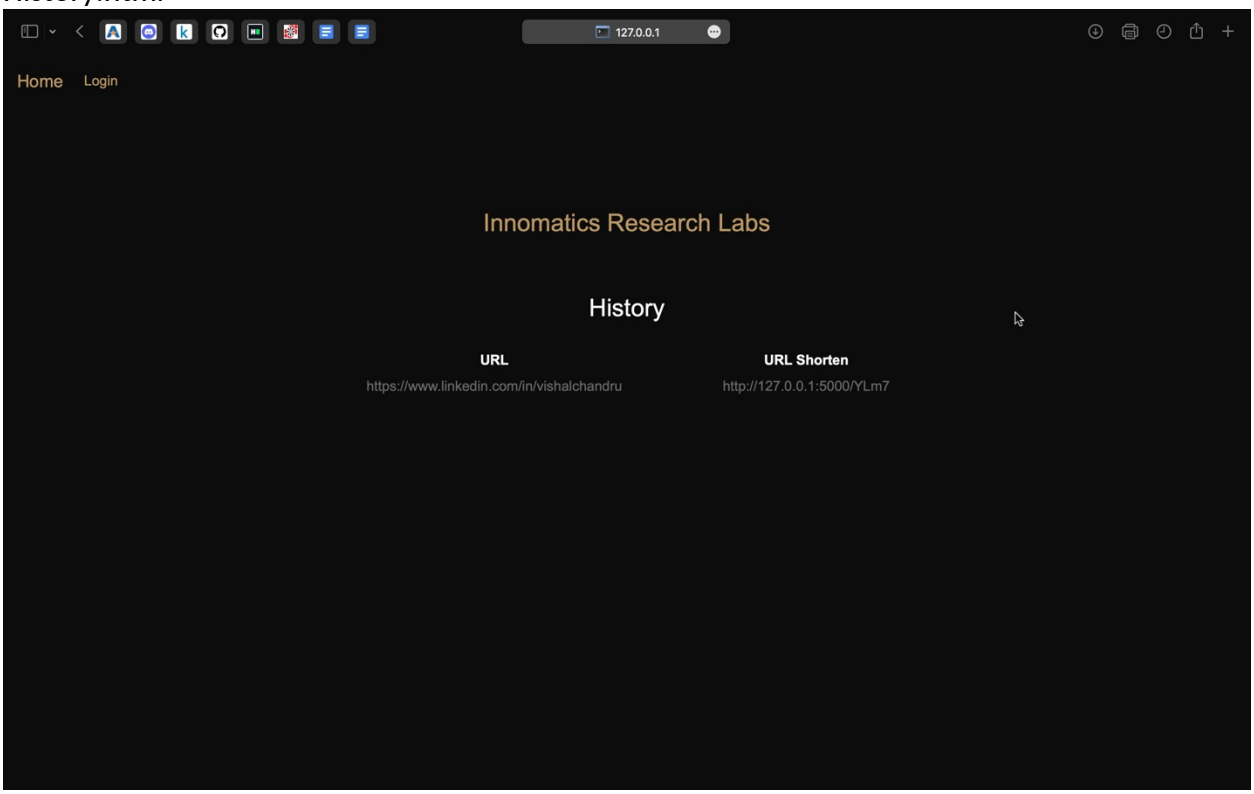
Invalid.html
This page is to display when a wrong url is typed in the text box of index.html and pushed to backend.

style.css
This file is a style cascade file used to design the web application. Boostrap css was used to style the web application

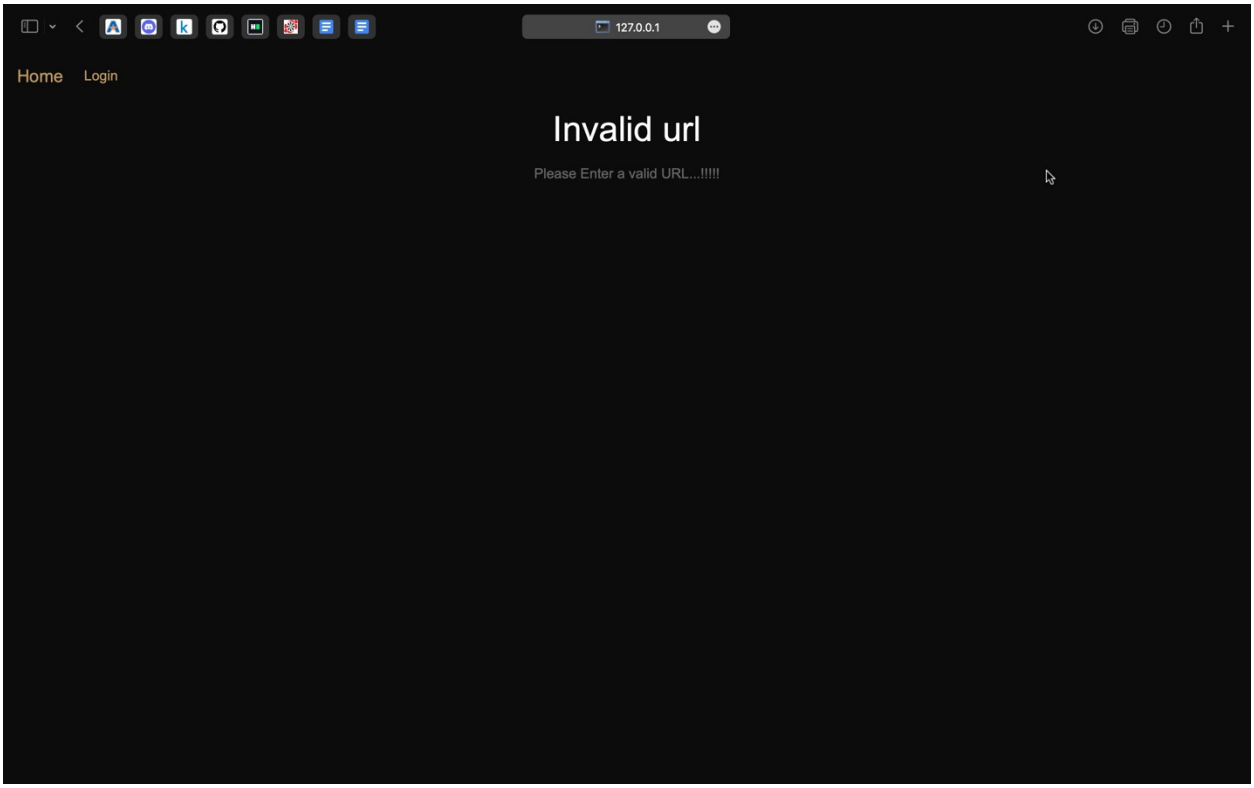
Index.html



History.html



Invalid.html



BACKEND DEVELOPMENT

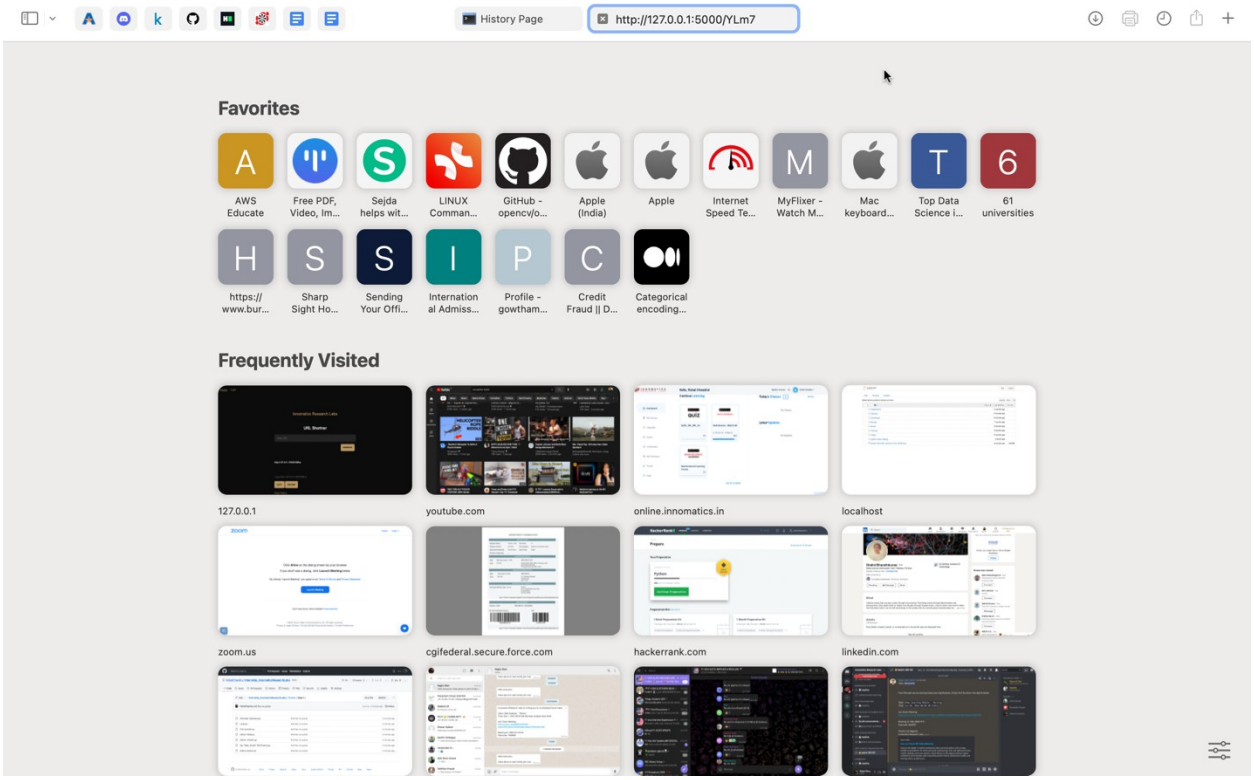
data.sqlite

Database is created using the sqlite and the flask application is connected to the database by SQLAlchemy ORM.
UrlShort table is created under data.sqlite.

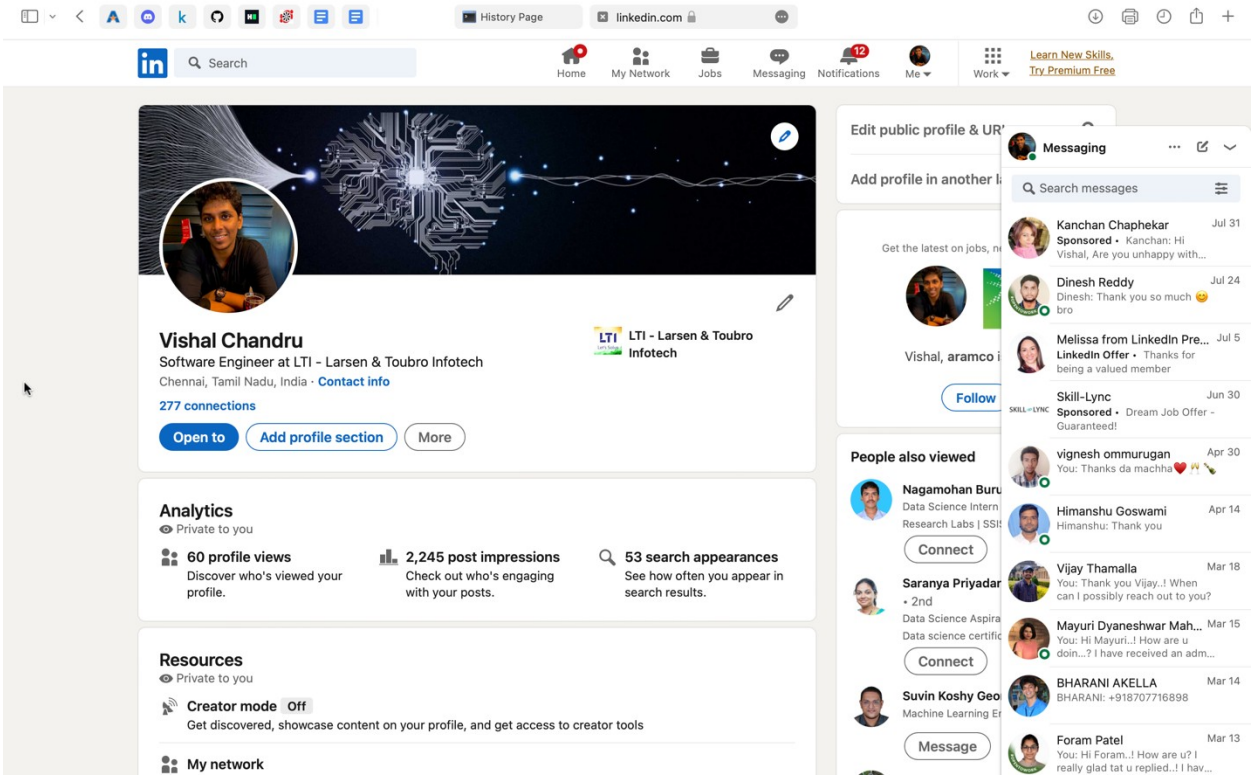
app.py

This is the file where all the request and response is handled. The respective functions of the route is called when the buttons are click in the respective pages.

Shorten URL



Request calls the original URL



WORKFLOW:

First the Front end of the application is built using the html and css codes.

Then the backend is built and connected with the web application.

The operations are explained in app.py and the application behaves accordingly.

Added Clear History which deletes all the history in the web application.

LIBRARY USED:

 # from hashids import Hashid
I used hashids library to encode the url and shorten it. And saved it along with the original url in the database.

 # import validators
To validate the url is authentic I used validators library and validator.url to verify if the entered string is in url format.

#import secrets
I used secrets to generate a random string of hex(16) of desired length. This is passed to app.config['SECRETS_KEY'] which acts as salt to hashid object. The salt is an additional value added to hashid to increase the randomness of the generated id.

#import subprocess
This library is used to generate a copy paste functionality through python code.

FUTURE SCOPE:

Given more time, I can work on the Login functionality and improve the security of the code.