**URL SHORTENER**

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**APPLICATION DESIGN:**

* **Designing Application Server:**

Language Used – python (Flask)

Required Modules – flask, flask\_sqlalchemy,flask\_migrate,pyshorteners

* **Designing Database:**

Language Used – SQLite

* **Designing Templates**
* Language Used – HTML, Javascript

**FRONT-END INFORMATION**

The front-end consists of 3 webpages:

* The first page is Home where the user needs to login or signup if he/she doesn’t have an account.
* The second one is the signup page where the user will enter his/her details regarding username and password.
* After signup, the page will be redirected to the login page where the user will enter his/her username and password to login.
* After logging in, a page will be shown where the user can enter the URL he/she wants to shorten. After the ‘shorten’ button is clicked, the shortened URL is displayed in the text-field which the user can copy using the copy button.

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**PROJECT WORKFLOW**

* During signup, the user has to enter a unique username. If he enters a username which is already taken then an error message will occur displaying “This username already exists…” Then the user needs to enter another username. The length of the username is valid only in the range of 5 and 9. If the username is not of valid length, then an error message will occur: “Username must be between 5 to 9 characters long”.
* After logging in, the main web-application opens which is the URL shortener. Here the user can enter the URL he wants to shorten. After entering a URL, click on the ‘shorten’ URL button to display the shortened URL in the following text-field which can be copied by clicking on the copy button.
* After the ‘shorten’ button is clicked, the URL that is entered is saved in our database with the shortened URL. It is saved in the database so that the user can look into the previous URLs he entered in our web-app with their shortened URL in the forms given below the copy button.

Follow the below mentioned steps before running the code available in URL\_Shortener :

**Step 1** - In command prompt install all the requirements

**Step 2** - Go to the directory where app.py is present and run below mentioned commands in cmd (we are running these command again because there is the change in overall database because we have added the User table):

flask db migrate -m “Message”

flask db upgrade

**Step 3** - Run the code and observe the code changes in the URL\_Shortener App