Assignment Report

URL Shortener (Basic Implementation)
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Introduction:

We need to share or send links and this can be tiresome and annoying to copy and paste long URLs. That is where URL shortener come in. Not only it helps in shortening the URL but it also allows the user to copy the shortened URL with a click of a button.

Objective:

1. The main objective is to make long URLs short where the shortens URL should be able to redirect to the original URL link.
2. The entries should be stored in the database which tells the history table.

Tools & Technology:

Front-End: Done with HTML and CSS.

Back-End:
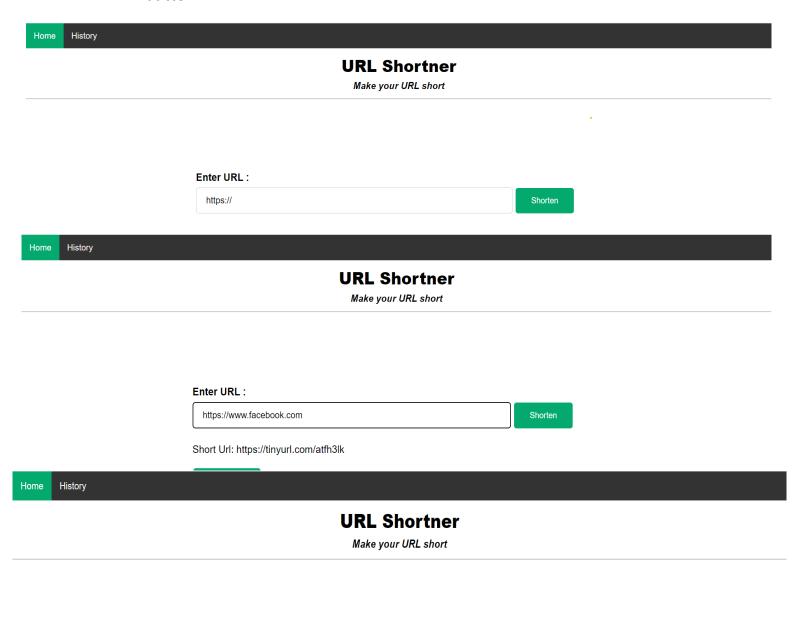
- **Application server**: Done with Python Flask.
- **Database server**: Done with MySQL.

Project Workflow:

1. Users can enter the URL they want 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.
2. 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.
3. Try to verify the URL entered by the user is correct or not. (Do some googling to find out how to make it possible)

Front-End - It contains 2web pages.

1. **Home Page** - It 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.

Home	History

URL Shortner
Make your URL short

Enter URL :

https://	Shorten

Home	History

URL Shortner
Make your URL short

Enter URL :

https://www.facebook.com	Shorten

Short Url: https://tinyurl.com/atfh3lk

Home	History

URL Shortner
Make your URL short

Enter URL :

https://www.any_random_site.com	Shorten

Please enter a valid URL

2. **History Page** - Contains all Original URLs along with the Shortened URLs.

URL Shortner

Make your URL short

History Table

Original URL	Short URL
https://www.google.com	https://tinyurl.com/bjnwp7u
https://www.facebook.com	https://tinyurl.com/atfh3lk
https://youtube.com	https://tinyurl.com/24ra4f
https://netflix.com	https://tinyurl.com/3k225fv

Back-End - It contains a database which will store all the contents of history page.

Pre-Work – I have explicitly created a table and a database to store the user entered values in order to work history page correctly.

```
mysql> CREATE DATABASE urllogs;
Query OK, 1 row affected (0.01 sec)

mysql> use urllogs;
Database changed
mysql> CREATE TABLE logs(Original_url VARCHAR(700) UNIQUE, Short_url VARCHAR(700));
Query OK, 0 rows affected (0.07 sec)
```

Future Work –

- Add a login functionality, only the registered user can we the history page.
- Instead of explicitly creating table and database use ORM in flask to automatically create a table in database.