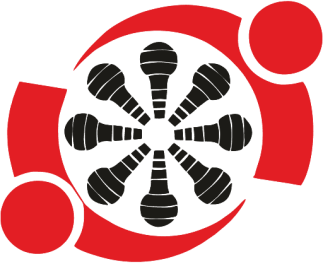
**Innomatics Research Labs, Hyderabad**



Internship Project Report

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Project Title:

**Web Based URL Shortener**

**Submitted By: Under the Guidance of:**

Thippineni Lavanya Kanav Bansal

(Chief Data Scientist) Innomatics Research Labs, Hyderabad

**Web Based URL Shortener**

**What is this URL Shortener?**

URL shortening is a technique on the World Wide Web in which Uniform Resource

Locator (URL) may be made substantially shorter and still direct to the required page. This is achieved by using a redirect() which links to the web page that has a long URL. For example, the URL "https://example.com/assets/category\_B/subcategory\_C/Foo/" can be shortened to "https://example.com/Foo", and the URL "https://en.wikipedia.org/wiki/URL\_shortening" can be shortened to "https://w.wiki/U". Often the redirect domain name is shorter than the original one. A friendly URL may be desired for messaging technologies that limit the number of characters in a message (for example SMS), for reducing the amount of typing required if the reader is copying a URL from a print source, for making it easier for a person to remember.

# Why we need URL shortening?

There are several reasons to use URL shortening. Often regular unshorten links may be aesthetically unpleasing. Many web developers pass descriptive attributes in the URL to represent data hierarchies, command structures, transaction paths or session information. This can result in URLs that are hundreds of characters long and that contain complex character patterns. Such URLs are difficult to memorize, type out or distribute. As a result, long URLs must be copied and pasted for reliability. Thus, short URLs may be more convenient for websites or hard copy publications.

# Goal of the Project

The goal of the project is to built the system which allows user to enter a URL, which we wanted to shorten. The provided URL should be a valid URL unless the application would not shorten the URL he provided. If the provided URL is valid or with a status code of 200, user will receive a shorten URL which user can use to redirect to the original page. The original URL plus the shorten URL will be saved into database. If the user enters the URL which he has shortened before then he will receive the short URL from the database. The shorten URL will redirect the user to the original URL page. User can also see the History of URLS(Long & short urls).

# Technology Stack

* Python
* Flask
* HTML
* Sqlite3
* JavaScript

# Working Phases

The application working is divided into four phases:

1. **Login & Logout** : First User should register with his details and later, user can login to make this URL Shortener and Logout feature also available in this application.
2. **URL input**: The goal of the URL input is to accept the valid URL from the user which he wants to shorten.
3. **URL shortening**: The goal of this phase is to map the given URL to only 5 alphanumeric characters. After that there is option to copy the short URL.
4. **URL Mapping**: The goal of this phase is to map the original URL and it’s short URL into the database, so the same short URL for the original URL can be used in future.
5. **URL redirection**: The goal of this phase is to enable shorten URL to redirect to the original URL web page.

# Feature Scope

I can add two more features to make this application more interactive:

1. **Registration feature for the new user**: If a new user want to use this application he have to register himself/herself with required credentials to create his account.
2. **Login feature for the old user**: Old user can use this application by just logging in into his account.