INNOMATICS
RESEARCH LABS

INTERSHIP PROJECT REPORT

ON

WEB BASED URL SHORTENER

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Web-based URL Shortener

- ## Summary

URL shortening is a technique on the World Wide Web in which a URL (Uniform Resource Locator) made substantially shorter and still redirect a user to a required webpage. This is achieved by using the redirect () which link webpages to each other for redirection and often the redirect name is shorter than the original one. A friendly URL may be desired for messaging technologies that limits the number of character in a message (for example SMS), for reducing the amount of typing required is the reader is copying the URL from a print source, also for making it easier for a person to remember.

- ## AIM

There are several reasons to use URL shortening. Often regular unshorten link may be aesthetically unpleasing. Many web developers pass descriptive attribute in the URL to represent data hierarchy, command structure, transition path or session information. This can result in URL's that are hundreds of character long and contains complex character pattern. Such URL's are difficult to memorize, type out or distribute. As a result a Long URLs must be copied and pasted from reliability. Thus, short URLs may be more convenient for a websites or hard copy publications

- ## Goal

The Goal of the project is to build the system which allows user to enter a URL. The URL should be a valid URL and the request to shorten the URL should not be possible unless and until it enters URL is valid based on semantics. If the URL is valid, the shortened URL is given to the user.

- ## Technology used

1. Python
2. Flask
3. HTML 5
4. CSS

5. JavaScript
6. ORM

- Tool Stack

  PyCharm IDE
  Sqlite3 Browser

- Working:

  The system working is divided into 4 parts –
  1. URL input – The goal of the URL input is to accept the valid URL from a user and pass it to the URL shortening module to shorten the URL.
  2. URL shortening -- The goal of this phase is to map the given URL with max of 10 unique alphanumeric character.
  3. URL Mapping – The goal of this phase is to map the short and long URL in the database so that the URL redirection phase can use this information for future use.
  4. URL redirection – The goal of this phase is to concatenate the unique alphanumeric character with the systems domain, to make the shorten URL work.

- Basic Structure of URL: