Software design document
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Web Shorter URL

Tamer aamas

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Purpose :

URL shortening web service, which provides short aliases for redirection of long URLs.

Service:

The homepage includes a form which is used to submit a long URL for shortening. For each URL entered, the server adds a new alias in database and returns a short URL and can go from short link to original link.

Short URL aliases are seen as useful because they are easier to be written down, remembered or distributed. They also fit in text boxes with a limited number of characters allowed.
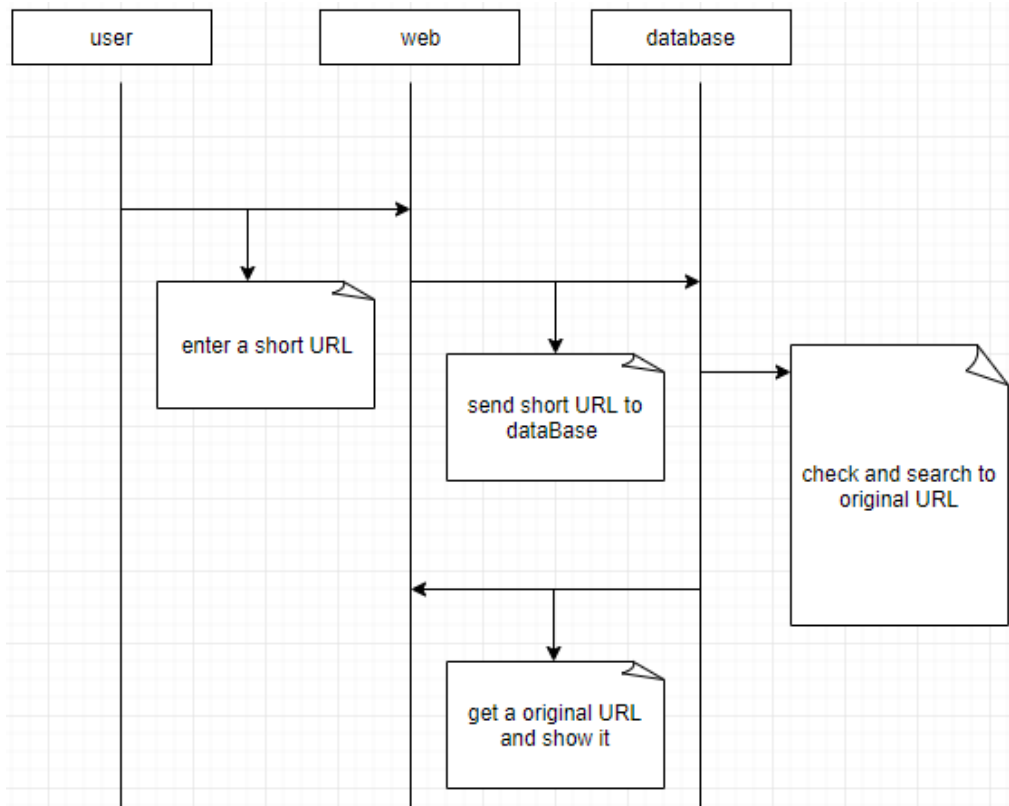
The method of allocating shorter web addresses has inspired an action. Random letters and numbers can be placed after the first forward slash in an attempt to hit interesting sites without knowing what they will be.
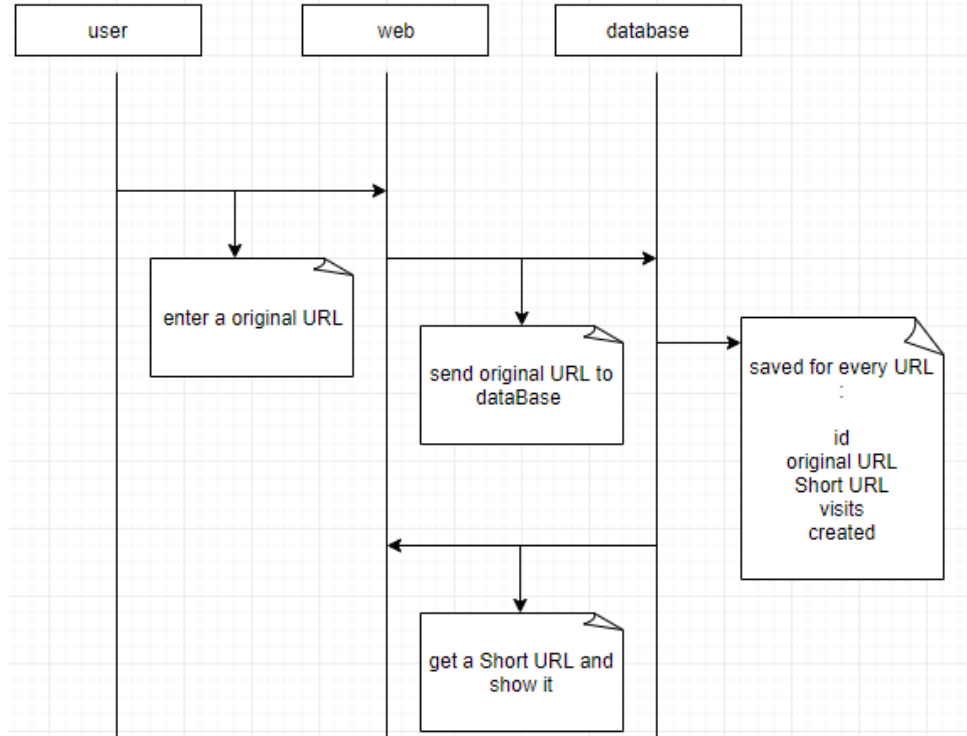
The backend should be implemented using:

- **Python** - the programming language used python 3.

- **Flask** - Web Framework - https://flask.palletsprojects.com/en/1.1.x/.

- **SQLite** - Database; note that SQLite is natively supported in python.

- **Vue.js**. - the front-end.

Attaches :

Sequence original URL to short URL diagram
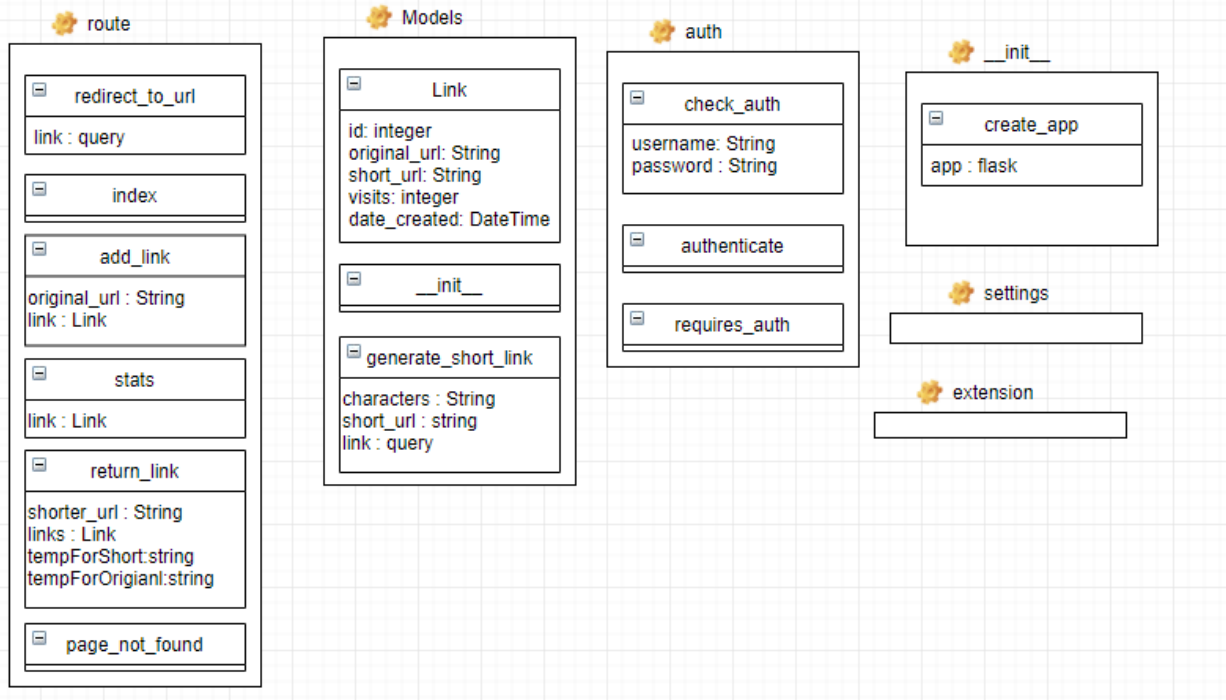
Sequence short URL to original URL diagram

user	web	database

enter a original URL

send original URL to
dataBase

saved for every URL
:

id
original URL
Short URL
visits
created

get a Short URL and
show it

classes diagram

route

redirect_to_url

link : query

index

add_link

original_url : String
link : Link

stats

link : Link

return_link

shorter_url : String
links : Link
tempForShort:string
tempForOrigianl:string

page_not_found

Models

Link

id: integer
original_url: String
short_url: String
visits: integer
date_created: DateTime

__init__

generate_short_link

characters : String
short_url : string
link : query

auth

check_auth

username: String
password : String

authenticate

requires_auth

__init__

create_app

app : flask

settings

extension

Templates diagram

Idex.html

Add_link.html

Return_link.html

localhost:5000/return_link

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Shorter URL

http://localhost:5000/sfXg

Original URL

https://www.youtube.com/watch?v=Z1RJmh_OqeA&t=440s

Stats.html

localhost:5000/stats

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Original URL	Short URL	Visits	Modifile
https://google.com	http://localhost:5000/ZdV	0	2019-06-12 06:48:25.106288
https://prettyprinted.com	http://localhost:5000/U2C	0	2019-06-12 06:49:54.722733
https://prettyprinted.com	http://localhost:5000/PN4	3	2019-06-12 06:51:06.121191
https://google.com	http://localhost:5000/sDy	4	2019-06-12 06:52:41.703178
https://google.com	http://localhost:5000/wzO	0	2019-06-12