OSlash Assignment Documentation

The kind of API chosen

The API server created is that of REST.
Reason for choosing REST:
- The APIs can be organized on the basis of endpoints, making it easier to scale with respect to the identity of the object
- Ease of adaptability for anyone new working on it, with a small learning curve.

The kind of authentication

Authentication used is JWT token-based.
Reason:
- Each JWT is content with all its information, including information, expiration time, etc. which are digitally signed.
- A single token can be used with multiple backends.
- Decentralized: The token can be generated anywhere. Authentication can happen on the resource server or be easily separated into its own server.

The database chosen

The database used is PostgreSQL.
Reason:
- write-ahead logging makes it a highly fault-tolerant database.
- Low maintenance and administration
- Low learning curve
- Easy to scale.
- Can handle millions of rows without any performance downgrade.

Table(s) design.

USERS [Store information of users]:

1	id	int4
2	email	varchar
3	password	varchar
4	fname	varchar
5	lname	varchar
6	createdAt	varchar
7	updatedAt	varchar
8	active	bool

TOKEN [Store all the tokens issued and their state]:

1	id	int4
2	user	int4
3	token	varchar
4	active	bool
5	createdAt	varchar
6	updatedAt	varchar

SHORTCUTS [Store the information of shortcuts created]:

1	id	int4
2	user	int4
3	shortcut	varchar
4	complete_url	varchar
5	createdAt	varchar
6	updatedAt	varchar
7	active	bool
8	description	varchar
9	tags	varchar

Endpoints:

Authentication Parameter: x-auth-token

Register User:

URL: http://localhost:5000/user/register
METHOD: POST
Sample Body:
{
  "email": "tbhardwaj97@gmail.com",
  "password": "gmail123"
}
Authentication Required: False

Login User:

URL: http://localhost:5000/auth/login
METHOD: POST
Sample Body:
{
  "email": "tbhardwaj97@gmail.com",
  "password": "123123"
}

Authentication Required: False

Logout User:

URL: http://localhost:5000/auth/logout
METHOD: GET
Sample Body:
NA
Authentication Required: True

Create Shortcut:

URL: http://localhost:5000/shortcut
METHOD: POST
Sample Body:
```
{
  "user": "2",
  "shortcut": "gmail",
  "complete_url": "https://www.gmail.com/",
  "description": "Email check",
  "tags": "productivity, mail"
}
```

Authentication Required: True

Delete Shortcut:

URL: http://localhost:5000/shortcut/13
METHOD: DELETE
Sample Body:
NA
URL Parameter required
Authentication Required: True

Get/Search/List Shortcut:

URL: http://localhost:5000/shortcut?q=&_sort=['createdAt', 'DESC']
METHOD: GET
Sample Body:
NA

Optional Query Parameters:
q = search string

_sort = [{parameter_name}, {ASC/DESC}]
Authentication Required: True