**URL Shortener Microservices Web-app:**

**1. Tech stack used :**

- Spring Boot ( Security, Web, Data JPA, Cloud Gateway, Eureka)

- Database: SQL Server

- Frontend: React, Ant Design, axios

**2. Architecture**

React Frontend

Discovery Server  
(Eureka)

API Gateway  
(Spring Cloud Gateway)

Auth Service

Auth DB

Url Shorten Service

Url DB

- **Frontend ( React ) :** Perform API calls and display data.

- **Auth Service:** To authenticate user, sign up new user and give JWT token for authorizing another endpoints.

- **URL Shorten Service:** Perform shorten urls and redirect short links into their original.

- **API Gateway**: Gateway for frontend to perform service endpoints call.

- **Discovery Server:** Register all the service and gateway in the microservices.

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| **urls** |
| Id: int PK  original\_url: varchar(255)  short\_code: varchar(10)  created\_by\_id: int  create\_at Datetime |

**3. Database Schema**

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| **users** |
| Id: int PK  username: varchar(100)  email: varchar(100)  password\_hash: varchar(255)  create\_at Datetime |

**4. Endpoints**

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| --- | --- | --- | --- |
| **API** | **Body** | **Method** | **Response** |
| /api/auth/signin (Login) | {  Username: string,  password: string  } | POST | - 200 OK:  {  Username: string,  token: string  } - 400 Bad Request: Error Message |
| /api/auth/signup  (Signup) | {  username: string,  email: string  password: string  } | POST | - 200 OK:  {  Username: string,  token: string  } - 400 Bad Request: Error Message |
| /api/auth/whosOwner  (Check Owner Id) | @Parameter token: string | GET | - 200 OK:  Integer - 400 Bad Request: Error Message |
| /api/auth/valid  (Validate JWT) | @Parameter token: string | GET | - 200 OK:  Boolean - 400 Bad Request: Error Message |
| /api/auth/changePass  (Change user password) | {  token: string,  oldPassword: string,  newPassword: string,  confirmPassword: string,  } | POST | - 200 OK:  {  Username: string,  token: string  } - 400 Bad Request: Error Message |
|  |  |  |  |
| /url  (Shorten URL) | {  token: string,  url: string,  } | POST | - 200 OK:  String - 400 Bad Request: Error Message |
| /url/s/{code}  (Redirect to link associated with code) | @PathVariable code: string | GET | - 301 MOVED\_PERMANENTLY:  Redirect to link  - 400 Bad Request: Error Message |
| /url/{id}  (Remove a link based on its Id) | @PathVariable id: string | DELETE | - 200 OK:  String - 400 Bad Request: Error Message |
| /url/getAll  (Get link list based on user created\_id) | @Parameter token: string | GET | - 200 OK:  [{  Id: integer,  originalLink: string,  shortCode: string,  created\_at: Date  }] - 400 Bad Request: Error Message |