Coding challenge

This application FuelApp interacts with Monday.com to retrieve and update work items. FuelApp application is authenticated using JWT token.

**Pre-requisite:**

1. Java 17
2. Spring boot 2.7.15
3. H2 Database
4. Postman
5. Test Account in Monday.com

**Cloning application source and run:**

Git Hub link: <https://github.com/Vishnupriya-1/FuelApp.git>

Command to run the application: ***mvn spring-boot:run***

On successful execution of application, below logs will appear in the console

2023-08-31 19:31:20.834 INFO 36448 --- [ main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8081 (http) with context path ''

2023-08-31 19:31:20.859 INFO 36448 --- [ main] com.test.fuelApp.FuelAppApplication : Started FuelAppApplication in 5.617 seconds (JVM running for 6.024)

**About the Service:** The service uses an in-memory database (H2) to store the data. User can also use any database. After successful database setup, user can start using the REST endpoints defined in “com.test.fuelApp.controller”; on port 8081.

*Available endpoints:*

1. POST: ***/register*** - to register the user by providing username and password as a request body. This will create a new user entry in the database.

<http://localhost:8081/register>

*Request: { "username":"TestUser\_1", "password":"test123" }*

*Response: { "username":"TestUser\_1"}*

1. POST: ***/authenticate*** - to authenticate the user by validating the given credential with data base and provides the authentication token to login.

<http://localhost:8081/authenticate>

*Request: { "username":"TestUser\_1", "password":"test123" }*

*Response:* *{*

*"token": "eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJ0ZXN0NSIsImV4cCI6MTY5MzU3NzE1NCwiaWF0IjoxNjkzNTU5MTU0fQ.o4q\_uEh3FHTL7DLRy2iZ1-DofOdgHSrxWHxOyHYrGjzhtcWNvmiKVuOf\_bZWrKLzIZPBMHNz7RK5f4WQ3fRF9A"*

*}*

1. GET: ***/getItems*** - to retrieve the work items from Monday.com by passing the Monday account API token as a param and the request body which contains the query string as an input to call the API URL. Also pass the bearer token response received from the above endpoint.

<http://localhost:8081/getItems?token=>

*Request: { "query": "query { boards(ids:1259058835) { items { id name } } }" }*

*Authorisation: Bearer Token*

*Params : Pass Monday.com API token as token*

*Response: {*

*"data": {*

*"boards": [*

*{*

*"items": [*

*{*

*"id": "1259058839",*

*"name": "Completed Item"*

*},*

*{*

*"id": "1259058837",*

*"name": "Task1"*

*},*

*{*

*"id": "1259058838",*

*"name": "Task2"*

*}*

*]*

*}*

*]*

*},*

*"extensions": {*

*"warnings": [*

*{*

*"message": "Replaced by Board.items\_page in 2023-10",*

*"locations": [*

*{*

*"line": 1,*

*"column": 34*

*}*

*],*

*"path": [*

*"query",*

*"boards",*

*"items"*

*],*

*"extensions": {*

*"code": "deprecatedField",*

*"typeName": "Board",*

*"fieldName": "items"*

*}*

*}*

*]*

*},*

*"account\_id": 18520804*

*}*

1. GET: ***/updateItemName*** - to update the item name in Monday.com by passing the Monday account API token as a param and the request body which contains the query string as an input to call the API URL. Also pass the bearer token response received from the above endpoint.

<http://localhost:8081/updateItemName?token=>

*Request: { "query": "mutation {change\_multiple\_column\_values(item\_id:1259058839, board\_id:1259058835, column\_values: "{\"name\" : \"Completed Item\"}") {id}}" }*

*Authorisation: Bearer Token*

*Params : Pass Monday.com API token as token*

*Response:* *{"data":{"change\_multiple\_column\_values":{"id":"1259058839"}},"account\_id":18520804}*

**To view H2 in-memory database:**

Application runs on H2 in-memory database. To view and query the database you can browse to <http://localhost:8081/h2-console>. Default username is 'sa' with password as 'password'.

**Flow diagram:**

