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Coding Challenge

Technologies used:

Spring Boot

Database - H2 database – In memory – Embedded (Easy to test coding challenge – less config)

Tomcat – Embedded

Spring security – Token based.

Steps to execute

1. Download the code base from the repository and open in the IDE
2. Inside package com.tabcorp there is spring boot launch class with main method.
3. Run main method

From Postman

1. Use following URL to Sign up – post method

<http://localhost:8080/users/sign-up>

POST /users/sign-up HTTP/1.1

Host: localhost:8080

Content-Type: application/json

Cache-Control: no-cache

Postman-Token: dc2713a0-b374-46d9-b4c0-09521832a5e5

```
{  
  "username": "admin",  
  "password": "test123"  
}
```

2. Use following URL to get authentication token

<http://localhost:8080/login>

POST /login HTTP/1.1

Host: localhost:8080

Content-Type: application/json

Cache-Control: no-cache

Postman-Token: 7c2be197-209e-497d-b8c4-09f650f43b29

```
{  
  "username": "admin",  
  "password": "test123"  
}
```

Response Headers will contain token

Authorization → Bearer

eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pbilslmV4cCI6MTUzMjY5OTU5Mn0.a_s4F0S3gvok0kBtpQp_GymoS1vSoQuLKbb2BjFzYUtttD_foAE2h7qtFb6KSa0lqntUcq_v-jYzsO-k-YbCmg

Cache-Control → no-cache, no-store, max-age=0, must-revalidate

Content-Length → 0

Date → Sun, 24 Jun 2018 10:19:53 GMT

Expires → 0

Pragma → no-cache

X-Content-Type-Options → nosniff

X-Frame-Options → DENY

X-XSS-Protection → 1; mode=block

3. Use the authorization header token to get reports from following endpoints

Post request (insert bets in database)

<http://localhost:8080/api/bet>

Get Requests

<http://localhost:8080/api/bet/getInvestmentByCustomer>

<http://localhost:8080/api/bet/getInvestmentByBetType>

<http://localhost:8080/api/bet/getTotalBetsByType>

<http://localhost:8080/api/bet/getTotalBetsPerHour>

Design Approach

- One customer can place many bets, so to implement this, one to many relationships between Customer and Bet entities used.
- Used centralised exception handling strategy to loosely couple exception handling code from business logic.
- Used JWT authentication token for security.
- Services are exposed through interface to achieve abstraction.
- There is no any business logic in controller (BetsController). All business logic available in-service layer. Data layer concentrates on domain models and repositories.