Pfizer Hackathon Presentation

Presented by Evangelos Dimopoulos
MSc in Computer Engineering and Information Technology

Proposal to Improve Diabetes Management
Web Application

Contents

1. My assignment on Hackathon - Challenges

2. My approach on the assignment

3. My approach on the assignment #2 – AWS Deployment

4. Roadmap for further improvements

5. Roadmap for further improvements-#2

6. If I join Pfizer

7. Questions?

5/16/21

My assignment on Hackathon

- *Improve a junior developer's project and deploy it on cloud, in 7 specific milestones, within a week.*

Challenges

- *Only Backend*

- *With no initial database*

- *New framework, Restlet*

- *Hibernate-JPA*

- *Lack of enhanced security*

- *No implementation of Unit/Functional/Integrated Test*

My approach on the assignment

- Achieve Successful Compilation and Deployment

- Test basic API calls via postman

- Create Simple Junit test

- Run a basic stress test scenario with Scaling

Users/Requests parameters

My approach on the assignment
#2 AWS Deployment

- Create RDS MySQL Server Instance

- Create EC2 Ubuntu Server Instance

- Configure Security Groups/Key Pair /VPC /Storage

- Successfully Deployed Application

Roadmap for further improvements

1) Junit5 Suite with >=50% Code Coverage goal

2) Integrate SonarQube and JaCoCo(via Maven), to monitor and investigate

3) Refactor Code

4) Check API Calls using Postman

5) Implement Stress test using Locust

6) Redesign API

Roadmap for further improvements-#2

1) Refactor every Request to HTTPS

2) Use Bcrypt to hash passwords, to prevent SQL injections or similar.

3) Add a request timestamp as an HTTP request parameter, to prevent DDoS attacks

4) Further investigation for adding compression/caching/pagination services to improve response times

If I join Pfizer

- I will be part of a company, that actually makes a difference, in people's living

- I'd have the opportunity to be involved with big projects and advance my skills

- I'd might have the opportunity, to achieve knowledge in new technologies , like ML/AI

- And of course, I'd be part of a company, that really cares about their employees

ANY QUESTIONS?