Project "CodeIn"

"Connect with Coders"

SSW695: Software Eng. Capstone Studio
Team Members: Alla, Sreedhar, Maryam, Youhao, Zack
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1. Introduction

Until today, it is hard for any user to find a developer to develop a project unless you know the developer, or someone referred you to him. Crafting a platform that accumulates multiple talented, quality and productive developer's portfolios will help the user and recruiters to search for developers for work or volunteer. This project will act as a networking platform connecting developers with new recruiters to accomplish ideas and build real life projects.

The project will have a minimal requirements and architecture document. The developer will initiate a portfolio that will include his experiences, what language does he know, any real-life projects he has built throughout his development career, the clubs or open source he contributed in, and if he is open for employment.

2. Roles and Responsibilities

The highlighted roles below are the ones we will need in developing this software:

Development Lead (Maryam)
Buildmeister (Master)
Architect (Maryam)
Developers (Back-end: Alla, Zack, Maryam. Front-end: Youhao, Sreedhar)
Test Lead (Maryam)
Testers (Front-end: Youhao, Everyone on the team is responsible for testing the features he/she implemented)
Documentation (Sreedhar)

Documentation Editor (Maryam)
Designer (Youhao, Maryam)
User advocate (Youhao)
Risk Management (Sreedhar)
System Administrator (Maryam)
Modification Request Board (Maryam)
Requirements Resource (Maryam)
Customer Representative (The whole team)
Customer Responsible for Acceptance Testing

3. Development Life Cycle

- Software:
    - Language(s):HTML, JavaScript, CSS, React Framework. Django Rest Framework, and SQLite.
    - Operating System(s): Windows 10, Mac.
    - Software packages/libraries: react: 16.2.0, redux: 3.0.4, Semantic UI, and JWT tokens.
    - Code conventions – Python PEP 8 official style guide.

- Hardware:
    - Using windows 10 with CPU: 1.7GHz Intel Core i5-4210U (dual-core, 3MB cache, up to 2.7 GHz with Turbo Boost).
    - The software will be deployed using amazon services AWS.

- Backup plan: A version control is used to keep track of the developed code sources and have all the developed versions on hand when it is needed. Having a small team, enforces a continuous development progress, but in case any of the team had issue or needed time apart from the project, the leader will find a good replacement and another representative for the missing developer.

- Review Process:
    - Team will participate in architecture review
    - Informal Peer Reviews are performed for design and code to ensure the artifacts are meeting the industry design and code standards/practices
    - Software Lead keeps track of reviews/issues and developer is accountable for getting all the artifacts reviewed by an independent developer
- Build Plan:
    - Repository is used for storage
    - Daily builds triggered at 9 PM EST

- Manual tests and regression testing is used to verify the conformity of the build

- Modification Request Process:
    - Change control and management system is used to keep track of changes
    - Change Control Board(CCB) decides the features to implemented. Currently team acts as CCB.

4. Virtual and Real Work Space

<u>Virtual Work Space</u>

- What's app Group
    - instant communication
- Email
    - non-urgent communication/ issues
- Google Hangout
    - live regular meeting every week once or more as needed.
- Google Doc
    - plan
    - reports
    - meeting notes
- GitHub
    - version control
    - code repository
- Heroku
    - deployment for front-end

<u>Real Work Space</u>

- ADS Lab
    - class meeting.

5. Communication Plan

- "Heartbeat" meetings

Two weekly meetings will be conducted throughout this project to ease the development process.

Meeting 1	
Day	Wednesday, After class
Time	3 PM EST.
Duration	15 minutes.
Participants	Team.
Purpose	● Discuss the features to be implemented, or any issues regarding previous work. ● Everyone may present his/her materials.
Method	Google Hangouts.
Requirements	● Everyone must understand what he has to do. ● The leader must make a summary about what happened during this meeting.

Meeting 2	
Day	Coordinated with team members
Time	9 PM EST.
Duration	45 minutes.
Participants	Team.
Purpose	● Wrap up the implemented features, and make sure that app isn't fragile and works perfectly in and out. ● The teammates are expected to report any issue regarding these features earlier before the second meeting, so we can discuss it and try to help make it work. ● Provide status on assigned tasks ● Everyone may present his/her materials. ● Prepare for the upcoming Status meeting with Product Owner "Prof. Vesonder".

Method	Google Hangouts.
Requirements	- Everyone has to understand what he has to do. - The leader must make a summary about what happened during this meeting.

● Status meetings

The project has a lot of meetings. Each one of them will help to demonstrate the status of the project. However, this one will provide a remarkable and effective status because in this formal meeting we review the overall progress with the Product Owner "Prof. Vesonder".

Day	Wednesday.
Time	3 pm EST.
Duration	30 to 60 minutes.
Participants	Team and Product Owner "Prof. Vesonder".
Purpose	- Show completed work and demonstrated outputs. - Review overall project status. - Prepare for the following week tasks. - Discuss used strategies and obstacles that we faced. - Allow Questions and Answers between team and Product Owner "Prof. Vesonder". - Everyone may present his/her materials. - Make sure that everything is accepted by the Product Owner "Prof. Vesonder".
Method	Walk-in class.
Requirements	- Everyone has to understand what he has to do. - Make sure to assign task to the following week. - The leader must make a summary about what happened during this meeting.

* Before the class began, a quick 10-minute meeting should be conducted to speak about our preference.

● Issues meetings

Urgent meetings may be conducted between two or more team members as required. All other members received an email and a WhatsApp message to be known.

Method	Google Hangouts.
Day & Time	When needed.
Duration	As needed.
Purpose	Solve the issue that brings this meeting.
Requirements	Make sure the issue is solved.

6. Timeline and Milestones

Week	Date	Undertaken Work
Week 1	17 January	*Expressing ideas and defining project.*
Week 2	24 January	*Initializing Requirements and Development Plan.*
Week 3	31 January	Initialize System Architecture and Design.
Week 4	7 February	Sprint 1 (Finalize System Architecture and Design).
Week 5	14 February	Sprint 1 result.
Week 6	21 February	Sprint 2 (Design Database, website's User Interfaces). Demo 1
Week 7	28 February	Sprint 2 result and code reading 1.
Week 8	7 March	Sprint 3 (Design Database and website User Interfaces). Demo 2
14 March - Spring Break.		
Week 9	21 March	Sprint 3 result code reading 2.
Week 10	28 March	Sprint 4 (Establish Web Server, Web Portal User Interfaces, and APIs). Demo 3
Week 11	4 April	Sprint 4 result code reading 3.
Week 12	11 April	Sprint 5 (Backend Development).
Week 13	18 April	Sprint 5 result.
Week 14	25 April	Final testing.
Week 15	2 May	Final demo and presentation for Final Product.

7. Test Plan

Testing will be a continuous process overlapping with the development since we are using test driven development methodology(TDD) while developing the software, resulting in each developer developing and testing the features he/she implements.

8. Risk and Opportunities

Risks	Description	Probability	Impact	Mitigation Plan
R1	Data Leak	40%	System may be become vulnerable to hacking	Use Data encryption
R2	New tool/software releases	30%	Latest updates to tools and software may make the application incompatible	Develop SW with platform independent and latest version of tools such that backward compatibility is retained.
R3	Limited User Support due to DB limitations	40%	DB limitations does not support "X" users to be online logged in at a time.	Log off the inactive users or users based on time zone + inactive.

9. High Level Assumptions

1. Develop a Website to link all the developers A.K.A Coders
2. Website will have user registration and authentication
3. Website will allow external users to search the Coders based on skills and their knowledge area and connect with them.
4. Website will have various fields to record the Coder data like profile, skills, projects.
5. Website will be compatible with all frequently used Web Browser Like Chrome.

10. DISTRIBUTION LIST

This document will act as an official development plan to be used by the team and the professor.