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Purpose

The purpose of this document is to provide evidence for the different roles of the team members.

Introduction

Throughout our project we created a project management system using Java, HTML, Javascript, CSS, Amazon Web Services (AWS), S3 bucket, and RDS database. Utilizing all of these technologies. The main purpose of the project was to make a Project Management System that would be divided into different areas such as Projects, Teammates, Tasks, and Assignments. This project was very difficult to execute because one of our team members left at the beginning of the project. This puts a lot more stress on everyone in the group since we each have to do more work in terms of coding and documentation.

To stay successful during the project iterations we had to meet a lot more often since we don't have four team members. This required our team to meet more and we had a lot more work to do before iterations were due. To make this project successful with only three team members we each had to do more tasks on each and every week.

Team organization, members, and responsibilities

During the duration of the course final group project we met 5-7 days a week with most of the meetings at 5pm. This helped us be very productive and helped all of our group members keep up to date with all of the tasks that needed to be completed for each specific week. All of our meetings were on Discord with the exception of some of them during after class times. We had to learn a lot really quickly since the member we lost knew a lot about the frontend and the backend to effectively advance our project forward.

Responsibilities:

- Yifei Zhao - Team Leader, also doing full-stack soft engineering work including HTML web page, JavaScripts for frontend, API, UI design, backend Java, and organizing meeting schedules.
- Miles Gregg - AWS, Java Lambda Functions Backend, Use Case Writer, Test Case Writer, Document Writer, and HTML.
- Witt Wang - Java Lambda Functions Backend, Testcase Writer, AWS

Process

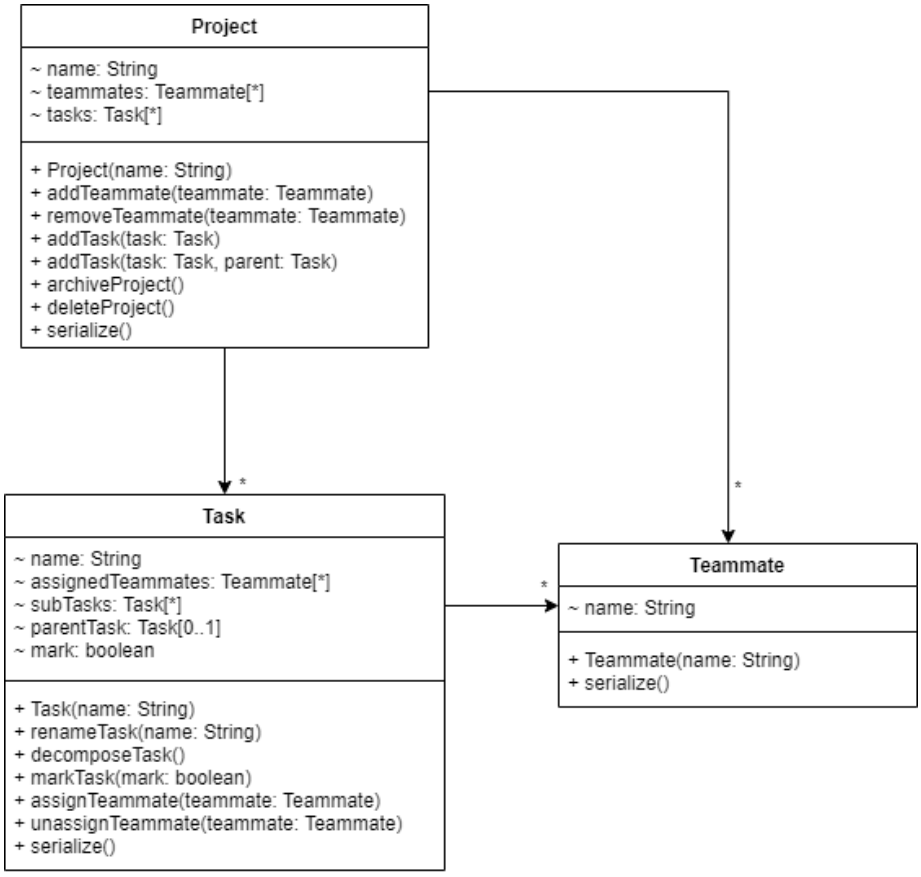
We first read assignment requirements. Then we tried to assign each teammate an equal amount of workload. Whenever we have problems, we do a short discord call to discuss. Each team member will also have a deadline for the part of work they are assigned to. If the work is still not done before the individual deadline, the assignment will be handed over to Yifei so that others can keep focusing on their current work. Also, asking questions and sharing experiences are promoted within the group. Pair programming is the most useful technique that our team has been using frequently. There is a subjective difference between each teammates' level of programming skills. Pair programming between an experienced programmer and a less experienced one dramatically helps the team become more efficient. Because the experienced programmer can consolidate their knowledge by teaching and the less experienced programmer can improve knowledge by learning. To make sure our production is kept at a high quality, we test our program like we are the customer or potential user of this application. We tried our best to find ways that would fail the system. If that scenario did not happen even if we tried, then we are in a good shape for submission. The most useful communication tools that we have been using are the discord channels. It allows quick messaging and popping into voice channels. Our team has functioned well, the key evidence is that we are keeping producing excellent quality of work throughout the second half of the term. Each teammate had a chance to work on different parts of the project. Either on the frontend, backend, or API design.

Tools

1. Amazon Web Services (AWS): using Lambda Functions, S3, RDS database, and API Gateway
2. MySQL Workbench: used to edit information in the RDS database and store information
3. Eclipse: every group member used Eclipse for writing all of the backend code
4. Visual Studio Code: used to write HTML, CSS, and JS code
5. Swagger Hub: for api requests
6. Discord: all communication and meetings happened on Discord
7. GitHub: all of the project code was stored and shared on GitHub
8. Google Drive: all group project documents

Accomplishments

Our project fits all of the use cases well. Including create project, view project view, view team view, add teammate, remove teammate, add tasks, decompose task, mark task, assign teammate to task, unassign teammate from task, rename task. Users can click on buttons to apply these functions. Besides, our project can automatically do loading processes like adding a new project etc. We also include administrator page and user page. People can convert to each other easily. We all have accomplished learning how to use AWS effectively in a real world application and how to have the frontend and backend to each other.



Deliverables

Iteration	Type
1	Setup participant landing page, Administrator landing page, RDS database, and working calculator example.
2	Adding key features such as add/remove teammate, top-level taks, and administrator page to delete projects.
3	Rest of the project features such as mark task complete, decompose task, code coverage, unassign from task, and add teammate to task.

Reflection

What worked, what didn't work

Our group communication worked well on discord. We had our daily meetings everyday in discord which was very nice. At the same time we used GitHub which made it very nice to share code easily between each other.

Our biggest mistake

We had no big mistakes as a team. We all had very difficult schedules throughout the term with a very rigorous course load. We did our very best to meet all the expectations throughout the course with our three person team.

Changes we would make

Getting more test cases done would have been nice. However we were able to hit the 60% code coverage required. We didn't have any major problems in our project. The front end is absolutely not as nice as we would have expected but also definitely not disastrous. If we had another team member or more time to work on this project, we would like to make our user interface and experience better.

Lessons learned

When Professor Heineman gave us the calculator demo project code it was an essential part for our code base for the Project Management System. The backend and frontend UI was very nice to look at when comparing the two programs if we had any issues.

Things we learned

The most important thing we learned as a team is teamwork and cooperation. The project is divided into frontend and backend. Different group members are assigned to different tasks. After each member finishes their own tasks, communication is very vital. Connecting frontend and backend is the key point to success. We need to set the

environment on Amazon Web Service, and upload handlers and html to the cloud. It is a complex process actually. A small change on the backend may cause a huge change on the frontend. Before doing our own part, group members should communicate actively in order to make sure that each person is working for the same goal.

Advice to future teams

The most important thing is teamwork. The AWS project has a lot of parts inside of it. It is difficult for one person to handle a majority of them. Each team member should complete their own tasks and help other people to solve problems at the same time. Distributing tasks to each group member is also significant. Group members should meet frequently, at least 3-5 times a week. The connection between frontend and backend is the key point to succeed. If people talk with each other frequently, they can help each other in time. The efficiency of doing projects will be very high. Besides, setting up an environment like AWS is also very vital. Group members should watch each video that the professor gave us carefully. Following each step and trying to work on it by themselves.