Taskboard Manager

Authors: Nishesh Saikrishna (nisheshsai9@vt.edu), Peter Murphy (pmurphy26@vt.edu), Benjamin Hurt (benjaminhurt@vt.edu), Joel Buba (joelb1@vt.edu)

ABSTRACT

Our problem is that oftentimes software engineering teams have a lot of tasks at hand and can have trouble coordinating those tasks. This may include instances where a software engineer forgets what tasks they are currently working on or tasks that they need to complete in the future. There is also a chance where a software engineer forgets the deadlines for the tasks. Confusions among team members can also be a potential problem, where team members are confused about who are responsible for which tasks.

Our proposed solution is the Taskboard Manager. This will help users add and delete tasks, set deadlines for tasks, and assign tasks to team members. It will also have an option to change the status of a task, such as complete, in-progress, or upcoming tasks.

Introduction

In the vast majority of workplaces, software engineers have to work in teams. This applies to small and large workplaces. One of the biggest challenges that decrease the productivity of work done in these workplaces is that the teams cannot communicate well and cannot split the work evenly in order to ensure the most efficiency as a group. This is where the Taskboard Manager will be useful.

The Taskboard manager will help all types of employees in the office with their own respective tasks. For example, in the case of a manager, they will be able to assign work to their employees as well as be able to set and adjust deadlines for these tasks. As for the employees, they will be able to update their status on a task in order to let their managers and fellow employees know how they are progressing within a task, whether they have completed it, are still working on it, or have not yet started it.

This tool can not just be useful for office employees but all sorts of software engineers. This can include computer science university students working on a team project or even an individual who wants to keep track of their own tasks. This tool will help any software engineer become more efficient and productive by helping them keep track of the tasks they need to complete and the deadlines they need to meet.

Related work

An example of related work to our Taskboard Manager project is GitHub's tools for project management. With GitHub's tools, issues can be assigned to projects with a specific user being assigned a task. You can also view project boards, which will split each task involved in a project to tasks that are currently in progress, tasks that have been completed, and tasks that have not yet been started. Also, similar to our Taskboard Manager, a user has the ability to click on one of these tasks within a project and assign it to a member of the team.

However, our Taskboard Manager also has differences from Github's system. We want to improve the usability of existing systems. To do this, we are planning on adding clear instructions for users on how to add and delete tasks and will have a simpler user interface which will make it easier to use, even for users that have never used any task management software before. We will also allow our users to add multiple notes to tasks instead of just being able to add a description, so that other users will be able to have a list of revisions and other important information associated with the project. In addition, due to our software engineering process, we will be able to make changes to the task according to what the users desire, so we will be able to add and remove features from our product at a fast pace in order to best improve the user experience.

Description of Software Engineering Process

We plan to use the extreme programming software development process. Because this is an agile process it focuses on the developers, which is ideal considering there are not any explicit stakeholders or customers. Instead there will simply be an expectation that we will follow user centered design principles and make sure that we evaluate our own software during testing. Additionally, we have an initial plan but we assume that we will deviate from it to some degree as we evaluate the project during testing and decide to make changes to improve our application. In our

lightning talk we have listed the functional requirements of our software, and plan to implement these requirements into our software using Java due to the benefits of it being an object oriented language (OOP). Being a group of four doing pair programming is rather simple, and continuous integration and testing of the different parts of our program will allow for us to iteratively develop our program until its completion.

REFERENCES

[1] "Planning and tracking work for your team or project," GitHub Docs, https://docs.github.com/en/issues/tracking-your-work-with-issues/planning-and-tracking-work-for-your-team-or-project (accessed Feb. 18, 2024).