I. CUSTOMIZABLE SCRUM SYSTEM

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II. ABSTRACT

Many companies struggle with finding project management systems that are suited for their team's needs. Some teams prefer longer sprints and daily standups, while others prefer the opposite. Our team planning app allows teams to create a system that's suited to their specific team instead of the other way around.

III. INTRODUCTION

Many companies struggle with scheduling sprints. A standard sprint doesn't always suit every team. With many teams having different requirements from their sprint, they need the ability to customize how often they do standups and how long their sprints are. It could even account for periods between sprints where teams can prepare for upcoming projects by gaining skills necessary or discuss with other teams how the sprint may be improved. When necessary, it could even mark in calendars when people within or across teams need to meet at the end of their sprint to discuss their next step. Our more customizable platform will allow for teams to change sprint requirements for their needs.

IV. BACKGROUND

A. When doing Agile planning and methodology, it is important to plan sprints in the most optimal way. It is essential to combat the issue of sprint planning so that teams can work the best in the most optimal way. Some key ideas include having the most appropriate planning time, set sprint goals, project goals, etc. (Golfarelli et.al, 2014)
B. In Onur Erdoğan's report, "more effective sprint retrospective with statistical analysis", their team analyzed the correlation between "Story Point and Actual Effort" in order to improve the efficiency of future sprints. Essentially, by breaking down the effort per story point, the point system assigned to each task, the team was able to find ways to improve product quality and efficiency. (Erodogan, 2012)

C. By exploring patterns found in high performance scrum teams, this paper discovers that teams that follow certain patterns finish earlier and accelerate through work faster. Some of these patterns include swarming, interrupt patterns, daily clean code, and emergency procedures. When a team swarms, it means that a team focuses most of their attention on the most important Sprint Backlog items. It allows teams to finish the most important parts of their project quicker than lesser value tasks. Another pattern found in high performing teams was that they allotted time for interruptions based off of past projects. Each unexpected item went through the product owner for priority and often would be pushed towards subsequent sprints if they were not found to be critical. Our platform could implement easier ways to push tasks between sprints and assign multiple people

to higher priority tasks. It could also take down low priority tasks during “swarm” times, allowing teams to focus their full effort towards the biggest problems (Sutherland et.al, 2014).

V. SOFTWARE ENGINEERING PROCESS

Over the course of our project, we plan on using the Scrum methodology as our software engineering process because it is the most relevant process related to our system. Scrum involves having a set project goal and backlog, and planning work for each sprint. Our team will meet at the beginning of the sprint to plan our goals for that sprint. We will also hold near daily standups to update each other on our work and any problems we ran into. Afterwards, we will have a retrospective meeting where we discuss if we met our sprint goals and what needs to get done or change in the next sprint. This method will be most effective for our team because we will be able to update each other constantly and work on the project iteratively.

VI. References

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