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Homework 03: Scrum

Deliverable 1: Scrum Description

Scrum is a useful development strategy which facilitates team collaboration and division of labor. Scrum primarily features several different project milestones and work sessions that are organized into a hierarchy of scope, need and importance. The largest of these is the Product, representing a significant amount of work, time, and development progress. Next is the Release, which is a smaller and more-frequent collection of features and completed items. Finally comes the Sprint, which is an immediate list of features and forms the core basis on how Scrum is organized. In terms of roles, the Product Owner controls the overall direction of the Product and has authority to approve/veto any features or functionalities. In this scenario the Product Owner has final say over driverless car functionality. The Development Team represents the engineers, developers and technicians that will implement the required functionality. The Development Team is self-organizing and can work independently provided they are supplied with requirements and consistent stakeholder input. The Scrum Master is responsible for facilitating this provision. This member coordinates communication between the Development Team and the outside Product Owner/stakeholders and serve to help the team collaborate with each other, yet they do not hold authority over the team.

Deliverable 2: Sprint 1 Overview

The Planning stage for the first Sprint represents the formation of the project's objectives, required functionalities and end-state requirements. The Product Owner delivers requirements and lists the desired features of the product. For the driverless car, some of these can be things like spot identification and obstacle detection. The Product Owner submits these requirements to the Development Team, which then decides upon how these requirements will be technically implemented. Each of these desired features are listed in a task list and estimation is performed to determine the approximate amount of effort each task will take. Each of these items serve to divide functionality into smaller goals that can be accomplished piecemeal by the development team, combining when done to form the finished feature. Meanwhile, the Scrum Master serves to assist the team in applying Scrum best practices to the project. This can be in the forms of assisting in task division, facilitating collaboration, and tracking the project's schedule.

Deliverable 3: Sprint 1 Day-to-Day

The Development Team and Scrum Master are involved during the day-to-day operation of Sprint 1. The Product Owner may play a role as well, but this is typically more sporadic and is not required. Daily Stand-Up meetings take place so that the Development Team and Scrum Master can discuss the current state of the project. These meetings are typically informal and serve as a general reflection of the day's events, progress, goals, and issues. If issues are brought up, the team is all present so that they may be handled in the most optimal manner. Each day the Developers are to complete more technical work and add to the builds of the system ensuring a minimum-viable-product is always available (in this case a driverless car). The Scrum Master facilitates this discussion and provides whatever assistance they can.

Deliverable 4: Sprint 1 Ending

The Sprint 1 Review session will showcase completed features to the Product Owner. Here, the Development Team and Scrum Master will demonstrate the team's progress during that sprint, with the Product Owner providing feedback for both the individual sprint as well as the overall progress of the project. In the Retrospective session, the Development Team and Scrum Master will discuss the more internal dynamics of the sprint. Metrics such as positives, negatives, issues, and surprising factors will be discussed in this environment in preparation for the next sprint.

Deliverable 5: Measuring Progress

Progress is measured through the measurement of the backlog. This allows the team to see the current state of development and an itemized list of what issues are currently being resolved. Additionally, problems such as delayed issues can also be reviewed. The Burn-Down Chart serves as an easy-to-read visualization of what the current project progress is, as well as providing a useful estimate of project completion.

Deliverable 6: Adjustment

While Priorities themselves are set by the Product Owner, the team does have some flexibility in dealing with them. While the most crucial and pressing priorities must be handled first, the team does have the option to review sprint progress with the Product Owner and request priorities based on work experience. This helps the project remain flexible enough to adjust to a changing development environment

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