CS2450-601 C++ Group1

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There are many ways to complete a project. What will work best for any given project depends on many factors. Though there are some standardized methodologies that have been developed to make the planning, testing, and completion of a project much more efficient. In any project time, information, organization, quality, and money must be accounted for and optimized.

Some of the process models that have been developed to improve results, save money, and engineer better software are the waterfall method, V model, Incremental, RAD, iterative, and Agile. There are many other process models as well. For this comparison we will be looking at two Agile style process models. The Scrum model and a model called KANBAN.

What is the Scrum process model? The Scrum process model is a set of practices and frameworks that focus on delivering quick responsive prototypes to the user and making changes based on feedback received. Scrum is broken up into five main events or things. The Sprint, Sprint Planning, Daily Scrum, Sprint Review, and the Sprint Retrospective. Sprints are set chunks of time where the mentioned parts of Scrum are iterated through. Sprints increase predictability by ensuring inspection and adaptation to a goal. Sprint planning includes deciding why a given sprint is valuable, what can be accomplished in this sprint, and how will the work get done. The daily scrum is a short meeting where the progress of the sprint is discussed and any changes that do not endanger the sprint goal are made. The sprint review includes stakeholders and the team to discuss progress made and changes needed. The scrum retrospective looks at how the last sprint went by evaluating the interactions, processes, tools etc.

Kanban is a type of Agile process model, yet it differs in some ways. Kanban implements Agile principles. Kanban is based on the added principle of Just in Time manufacturing developed by Toyota Motor company. It seeks to maximize efficiency between true consumption of products with the production of them. Kanban focuses on Work in Progress or WIP. Which allows teams to judge their capacity for work. The WIP is visualized using a Kanban board which can be physical or digital. The purpose is to visually shows each team member what work needs to be done, is being worked on, and done. The baseline truth for the team is based on the board. This make mapping capacity to need more efficient because every team member knows where a given task is in the process.

Three reasons to use a Scrum process model. Scrum, by using Agile principles allows for flexibility while also increasing predictability within a team. It reduces costs by delivering working software often and rapidly making changes. It allows those members of a team to be utilized most effectively with flexibility on task assignments. It encourages teamwork which can reduce mistakes and bugs in the end software product. Scrum utilizes input from stakeholders keeping the delivered software and the User’s requirements closely related.

Three reasons to use the Kanban process model. The biggest difference and improvement Kanban makes is utilizing the Kanban board. This increases visibility of the entire process. Like other Agile processes it emphasizes flexibility and rapid change. This can all be optimized through visualization of the progress made. Because every team member knows what work is being done it allows for better task assignments within a team. It also reduces team member overload. Because member’s workload is visible everyone can rapidly adapt and help any given member who may be overloaded, or the assignment of tasks can be altered to reduce burn out.

For this class we were assigned the Scrum model to work through our projects. Because Scrum is very popular and implements the Agile process which Kanban also uses, we can learn the fundamentals of many process models at the same time. Many models work towards the same goals of better, safer, cheaper software. I believe therefore we are using the Scrum model. The Kanban board could even be implemented within the Scrum process without much change to the baseline process of Scrum.