CS-250-T5575 Software Development Lifecycle

Final Exam

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Demonstrate how the various roles on your Scrum-agile Team specifically contributed to the success of the SNHU Travel project. Be sure to use specific examples from your experiences.

* Scrum Master
  + The scrum master managed the team
  + The scrum master oversaw the daily scrum meetings and made sure it stayed on point and on-time.
  + The scrum master ran interference for the team to prevent unneeded distractions.
  + The scrum master resolved any impediments that were made known during the daily scrum meetings.
  + The scrum master made available any requirements needed by the team to complete their tasks.
  + The scrum master is responsible for keeping the moral of the team positive.
* Product Owner
  + The product owner held meetings with stakeholders to get their feedback on the desires they had for the Travel app
  + The product owner held a meeting with the team to communicate the requirements of the stakeholders.
  + The product owner is responsible for updating the backlog on the new requirements that were made by the stakeholders during their meeting.
  + The product owner would communicate any feedback on the application from the stakeholders and users to the team unless a dedicated person were to be assigned this task.
* Developer
  + The developer creates a plan for the Sprint backlog.
  + The developer helps create the definition of done.
  + The developer helps select the product backlog items that will be completed during the Sprint
  + The developer was to perform testing on the software as they went along to find issues.
  + The developer continuously works toward completing the Sprint Goal.
  + The developer was responsible in assigning the user stories points.
* Tester
  + The tester was tasked with defining the metrics for the test cases.
  + Used the user stories to create those test cases.
  + Wrote a letter to the product owner requesting additional information needed to successfully create test cases.
  + Worked with developers to test the product to find bugs in the software

Describe how a Scrum-agile approach to the SDLC helped each of the user stories come to completion. Be sure to use specific examples from your experiences.

When presented with the requirements of the stakeholders the agile approach allowed for the incorporation of those requirements into the backlog, paving the way for the creation of the user stories and subsequently the test cases were created from those stories. The team would then assign story points to the user stories and if to large they would divide the user stories into increments. Creating a letter to the product owner requesting additional information as to how the stakeholders wish specific details on the functionality would aid in creating test cases and the development process. With providing the expected information in return the developers and tester can ensure the proper information would be returned.

The above shows how using Agile in the Travel app made the process ever changing but the team was able to adapt to the requirement changes and if needed the Agile approach would allow for the change of delivery date based on requirements. Agile makes the project dynamic and allows for changes then adapting accordingly.

Describe how a Scrum-agile approach supported project completion when the project was interrupted and changed direction. Be sure to use specific examples from your experiences.

As stated above, the scum-agile approach allowed the team to adapt when the requirements of the Travel app changed. Using user stories allowed for the creation of the test cases which then would be used to test the software for bugs. Using story points the team could assign the tasks weight by assigning them points which signified the difficulty of the given task. The Agile approach would allow for feedback to the team on bugs encountered by end users testing the software or the satisfaction of the stakeholders in the functionality of the software.

Demonstrate your ability to communicate effectively with your team by providing samples of your communication. Be sure to explain why your examples were effective in their context and how they encouraged collaboration among team members.

To communicate effectively with my team, I would use virtual face-to-face meetings, face-to-face meetings, telephone calls, emails. In face-to-face meetings or virtual face-to-face meetings, the use of a white board could assist with showing details on various aspects of the development phase. Collaborating with other team members no longer must be done in-person with the use of collaboration software and/or meeting software. If any information is being requested can be outlined and verified, the context in which these requests are made can be taken into consideration. Using the communication listed above can be quite effective when collaborating with other team members by being able to do screen shares and team members to check one another’s code for errors or functionality issues. If I were writing a letter to request additional information, I would make sure to include what information I expected in return or if performing tests while collaborating with a tester would give instant feedback to any errors or issues encountered which could increase productivity. Using technologies of modern times to collaborate could only help an Agile project in most circumstances which would then encourage team members to continue to use those methods in the future.

Evaluate the organizational tools and Scrum-agile principles that helped your team be successful. Be sure to reference the Scrum events in relation to the effectiveness of the tools.

1. The tool I would like to evaluate would be JIRA, in JIRA the project would be created.
2. In the backlog, user stories or tasks are created and then prioritized.
3. A sprint would be created with the following specifications:
   1. Duration: 2 weeks
   2. Sprint Goal: The amount of story points the team is capable of handling during the sprint which is determined by the developers while participating in the sprint planning meeting
   3. Sprint Name: A name for the sprint will be determined
4. The team would then hold the sprint planning meeting in which the team would discuss:
   1. the sprint goal in number of story points the team could complete during the sprints
   2. the user stories in the backlog
   3. give each user story points using Fibonacci’s form of numbering based on the difficulty of the tasks associated with the story.
5. In JIRA, the story points are added to a field called Story Point Estimate.
6. During this time in JIRA, specific details can also be entered into user stories to give context into the desired functionality. Sub-tasks can also be created to further break down user stories.
7. The Sprint would then be started with specific information being entered such as the start and end dates, the duration of the sprint, the schedule of the team, the sprint goal in number of story points to be completed.
8. Once the sprint has been started, according the to the team schedule each morning at the beginning of the day the team will hold a daily scrum meeting which will allow each team member a given amount of time by which they can address:
   1. What he/she worked on yesterday
   2. What he/she intend to complete today
   3. Any impediments encountered that need to be resolved
   4. Any requirements such as collaborations or assistance from other team members is also made known
9. In JIRA, the board is used to keep track of the active sprint which can be referenced during the daily scrum meeting.
10. A burndown chart can greatly benefit a team as it shows the current progress and how it relates to the estimated progress. The burndown chart can also show a team if the sprint goal is not ambitious enough or overly ambitious.
11. The sprint review meeting is the teams time to shine, this allows the team to show what they have been working on, if successful, the sprint will produce a working product for stakeholders to see. During this meeting a lot of feedback will be received on the product and then the team can decide how to proceed next.
12. After this the sprint retrospective meeting is held where three questions are asked:
    1. What did we do well during the sprint?
    2. What could we have done better?
    3. What are we going to do better next time?

During this meeting the team can find out what works and what doesn’t and then focus on what does. For what doesn’t work, find solutions as a team to fix what is not working. This will help keep the momentum of the team up.

1. In JIRA, you would use a product like Confluence to document the retrospective meetings. You would then complete the sprint, move any incomplete tasks back to the backlog.
2. Then would start over with the sprint planning

The above steps would keep the team informed as to what is happening during the sprint, what is expected of the team during the sprint. It will keep the team on point and assist the team in reaching the ultimate goal of operating like a well-oiled machine. Using Agile principles outlined above and a tool like JIRA a team would be very effective at completing their tasks, understand the customer desires for the software and have a visual representation of the backlog, the sprint and the expectations of the team.

Assess the effectiveness of the Scrum-agile approach for the SNHU Travel project. Be sure to address each of the following:

The Scrum-agile approach was very effective. It allowed the team to address the requests made by the stakeholders and the sprint was updated accordingly. If the delivery date had to been altered the Scrum-agile approach would have allowed for that. Ultimately, it allowed the team to be very dynamic.

Describe the pros and cons that the Scrum-agile approach presented during the project.

Pros –

Flexibility to adapt to changes that were made during the project.

Test the product for bugs and known issues

Update the requirements of the software as laid out by the stakeholders without having to start from the beginning

Cons –

Steep learning curve and a complete understanding of the agile process is required by all team members. This was demonstrated during the daily scrum meeting when one of the team members didn’t believe he had to attend the meeting because it didn’t directly relate to him.

The team would require additional guidance until they become experienced and a high-performance team.

Determine whether or not a Scrum-agile approach was the best approach for the SNHU Travel development project.

It is my opinion that using the Scrum-agile approach was the best approach for the Travel project. If using the waterfall approach the team would not have been able to adapt to the requirements made by the stakeholders.

The team would not have been able to update the backlog and account for those changes. Using the Scrum-agile approach allow the team to streamline the development process which ultimately would have cut down on cost and development time. Using this approach allowed the software to be developed, tested, and dealing with bugs and other issues immediately instead of the testing being completed by an outside company. The waterfall approach would have required the stakeholders to inform the team of all application requirements during the planning phases and would not allowed for changes without extreme difficulties and ramifications.