

Problem Set:

Complete this assignment after you have completed the Lean Software Development: A Tutorial reading and have watched the videos in this module. Provide the answers to the following and then submit your document:

1. In the reading assignment this week, Poppendieck and Cusumano point out that some of the principles of the lean philosophy have been practiced by software developers in the past before Agile methods like XP and Scrum were invented. Describe how Microsoft applied lean principles according to the Poppendieck paper.
2. Value stream mapping is an important tool used by the lean team. Describe Value Stream mapping.
3. Describe your GEDCOM team's current process (you don't need to draw a diagram), including how you communicate, how you integrate code from each team member, how you test code from all test members, and how you package and submit the results.
4. Evaluate your GEDCOM team's current process and identify waste in your process. Describe a new process for your team to follow to eliminate waste in your team's current process.

Use complete sentences; provide thorough and thoughtful responses to each prompt. Clearly identify each response.

Solution:

1. In the reading assignment this week, Poppendieck and Cusumano point out that some of the principles of the lean philosophy have been practiced by software developers in the past before Agile methods like XP and Scrum were invented. Describe how Microsoft applied lean principles according to the Poppendieck paper.

Any type of development, according to the writers, is essentially "generating knowledge" and "embedding that information" in a product.

Lean principles propose treating the concept differently depending on the circumstance. Constantly learn in two ways:

- Lean First Approach - This technique pushes us to consider numerous alternatives to the costly - to - change decisions, such as
 - Fundamental architecture
 - Choice of language
 - Design Language for user interaction

As the content of most software systems evolves over time, this method encourages developers to postpone key choices until the last responsible minute (it does not advise us to miss the deadline). When numerous alternatives are available, it is recommended that the option that best optimizes the entire system be chosen.

- Begin by developing basic criteria and delivering often to obtain consumer input and modify the product accordingly.

This continuous learning method will decrease the work spent on building features that the client does not desire.

2. **Value stream mapping is an important tool used by the lean team. Describe Value Stream mapping.**

You may construct a complete picture of all phases in your work process using the value stream mapping technique. It depicts the movement of products from the supplier to the customer across your firm.

For example, the value that a software firm provides to its clients is software solutions and all the features that come with it.

A value stream map depicts all the critical elements in your work process that are required to deliver value from beginning to end. It allows you to view every job that your team works on and offers status reports on the progress of each assignment briefly. It is critical to understand that value in Lean is defined as everything that the client would pay for. When mapping a value stream, some phases may not provide direct value to your consumer but will assist guarantee that you provide the product/service.

- 3. Describe your GEDCOM team's current process (you don't need to draw a diagram), including how you communicate, how you integrate code from each team member, how you test code from all test members, and how you package and submit the results.**

The GEDCOM Team is presently working on Sprint 3, which will finish approximately 70% of the project once completed. Until then, our team is concentrating on various types of user stories based on the GEDCOM family tree.

We constantly communicate about user stories, test cases, and difficulties encountered during the development process using WhatsApp group and Zoom conversations. We store our codes in GitHub and integrate them by pulling the updated project from our repository after a group member is finished with their part and uploads their code to GitHub, then we add our own portions to the updated codes and push them back to the GitHub repository to maintain it constantly up to date. We collaborate on the Sprint report, but for each submission, we select one to submit the results to Canvas.

- 4. Evaluate your GEDCOM team's current process and identify waste in your process. Describe a new process for your team to follow to eliminate waste in your team's current process.**

In our current development approach, we would create an instance in the GEDCOM file to demonstrate that the implemented user narrative is functional. All the user stories that have been implemented are checking to see if there is a certain sort of mistake in the GEDCOM file. To test the code, we build an instance in the GEDCOM file that this user narrative function may validate and output. This usually occurs at the finish of a race when everyone is rushing in the last minute. I would believe that establishing the instances in the GEDCOM file before beginning the development process would be beneficial to both the development process and saving time and not rushing before the sprint deadline.