

Quiz 07: Lean

Due Mar 23 at 10pm**Points** 50**Questions** 10**Time Limit** None

Instructions

You **may** use the slides from the lecture and other sources to answer these questions. Please be sure to cite any references but be sure to answer the following questions in your own words. Do NOT simply cut and paste the information from the slides. You will receive a score of 0 if you copy the prose from the slides.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	4,796 minutes	0 out of 50 *

* Some questions not yet graded

Score for this quiz: **0** out of 50 *

Submitted Mar 26 at 11:02pm

This attempt took 4,796 minutes.

Question 1

Not yet graded / 5 pts

Explain Palmer's quotation,

"Kanban is the science of not trying to do too much at once"

Your Answer:

Kanban helps the team to prioritize work. It optimize process by identifying and avoiding wastes. Waste is anything that slows the software delivery pipeline or does not add direct value to the customer. By doing things like prioritizing, limiting the work in progress and eliminating the waste. Kanban helps a team not to do so much at a time and focus only on the quality of the most relevant features. This is why Palmer said "Kanban is the science of not trying to do too much at once".

Stop starting and start finishing. Kanban boards are used to make sure that not too much is being worked on, and focuses on moving the items completely across the board rather than just getting them onto the board. Kanban helps the team to prioritize work and focus on process improvement

Question 2**Not yet graded / 5 pts**

Describe two of the seven principles of lean.

Your Answer:

Empower Team: In lean, management facilitate and empowers the developers instead of dictating what to do and how to do it. This is how they achieved by letting the developers choose their own tasks processes and tools. developers also provide their own estimates of efforts which empowers them to grow learn and perform better in the process.

Eliminate waste: In lean, Eliminating waste is a good strategy. We should remove the unnecessary functionalities and bad code . Waste does not add a value to the customer.

One principle of lean is to amplify learning. This principle involves continuous learning so that the team can be getting better and better, and become more efficient over time. This means the team has to constantly ask for feedback from the stakeholders on the product, so they can fix what they are doing wrong, and prevent it from happening again. This also means the team is has to keep their code relevant and as efficient as possible by refactoring, and having it reviewed by team members.

Another principle of lean is to empower the team by giving them the freedom to chose the work they are passionate about. Teams are given the opportunity to chose their work within a sprint, once the work is laid out, which means they must feel responsible for whatever work they decide to do for the team, which makes them more proud to display it and create it well. Management can aid in moving this process along, but they should not be putting anyone in roles.

Also, eliminate waste, decide as late as possible, deliver as fast as possible, build integrity, see the whole

Question 3

Not yet graded / 5 pts

What is value stream mapping? Why is it done?

Your Answer:

Value Stream mapping consist of 2 maps: Current map and the future map.

It means that in the current map we need to identify the wastes and remove it from there. Also we need to identify what changes should be made to establish the future map.

It is done because if once the waste will be removed then it provide a smooth flow. Value stream mapping is done to deliver a value to the

customer.

Diagram the flow of goods and/or information. I has the current map which shows the current situation and the future map which shows the desired situation. This is done to identify waste that should be removed from the current map and changes needed to establish the future map

Question 4

Not yet graded / 5 pts

How was Piggly Wiggly's inventory process different from other grocery stores in 1950?

Your Answer:

Before Piggly Wiggly, the customers used to ask the employee behind the counter for each item they wanted to buy. Piggly Wiggly was the first self-service grocery store where customers went and took what they wanted ,and pay the bill to employee. Their restocking mechanism was particularly different. Several goods were reordered only when the current stock was almost finished and this is now known as the just in Time strategy.

The stores were the first to have people shop for food on their own, and not have clerks go and grab items from stock. The workers would just restock what was running low when it started to run low. This followed the lean principle of deciding as late as possible, and eliminating the waste in the existing process of shopping one customer at a time per worker.

Question 5**Not yet graded / 5 pts**

What are Kanban Boards? How are they used?

Your Answer:

Kanban Boards visual display items at each stage of the process and it consists of columns which represent each stage of the process. For example user story, development, test ,deployment. Cards are used for each incoming request. The cards are moved from column to column as tasks are completed. Limit is set for how many items can be in each column to avoid too many task at a time. Items are pulled when capacity is available.

Kanban boards visually display the progress of the team as stories are going through the stages from becoming a story to being deployed. Each column, which includes story creation, acceptance, development, testing, and deployment, should only have a specific amount of items in each column. This prevents items from being left over in the sprint when too many stories are moved into one phase, and don't reach completion. Kanban boards are used to manage time and prioritize the most valuable aspects of the system.

Question 6**Not yet graded / 5 pts**

Why is it important to limit work in progress?

Your Answer:

If we will not limit the work in progress then it may result in too many concurrent tasks in a single stage and it will create backlog. This in Kanban terms is waste as waiting time increases and slows down the entire process. Limiting work in progress maintains a smooth flow and

less waiting. It also helps to increase the value delivered and reduce cycle time.

Limiting work in progress helps the overall process to go smoothly by limiting backups at bottlenecks in the process. A bottleneck causes delays in the steps leading up to the bottleneck so adding more work before the bottleneck can add more backlog at the bottleneck. Optimal flow is achieved when each step generates exactly the same flow as can be accepted by the following step.

Think about maximizing the number of cars moving on a 3 lane highway. The optimal solution is to have exactly the number of cars that can fit simultaneously in the 3 lanes. Adding more cars causes traffic to back up.

Question 7

Not yet graded / 5 pts

How does Kanban limit work in progress?

Your Answer:

In a Kanban, each column has a number which specifies the item limit. More items than the given limit cannot be added to a particular column. It ensures that a new work is started only when time is available and flow of work is restricted to the slowest step which helps to identify and address bottlenecks. In this ways, Kanban can limit the work in progress.

Each column in the Kanban board limits the number of tasks that can be worked and tasks are pulled from the column to the left rather than pushed from the right.

Question 8**Not yet graded / 5 pts**

What is set-based development? Why is it done?

Your Answer:

In set-based development method, we figure out several designs instead of considering only one design. Then-after, invest some time in implementing all alternatives and select the best option among them. In this way we make different sets and by eliminating alternatives we can find a single solution.

This method is done to ensure that best design is selected for implementing the software. Sometimes it may happen that we only move with one solution without considering all other alternatives.

Set-based development is a process done to figure out which technology or style to use before going fully into development. This makes sure that all stakeholders are ok with the technology before it is implemented. Set-based development is the process of developers testing out different technologies by creating prototypes or taking courses on them to get as familiar with them as the developers need to make a decision, or to go to a stakeholder and explain to them the options clearly so all can come to a decision on a technology.

Question 9**Not yet graded / 10 pts**

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.

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.

Your Answer:

My GEDCOM team has completed 20 user stories till sprint 2 and we have started to work for sprint 3 user stories. We all communicate using whats app and try to do a video call at least twice a week. We use Github to integrate our code. For testing, we are using automated tests in Java with JUnit. At the end of every sprint, we collaborate our work and zip the file with the latest GEDCOM which contains user stories of every team member.

Question 10

0 / 0 pts

"I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source."

Correct!

☒ True

☐ False

Quiz Score: 0 out of 50