**SSW 555 Agile Methods for Software Development**

**Quiz 7: Lean**

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**1.  Describe 2 of the 7 principles of lean.**

Principles of Lean are:

* **Eliminate waste**
* In lean, “waste” is anything that doesn’t either add customer value directly or add knowledge about how to deliver that value more effectively.
* Some of the biggest factors of waste in software development

are unnecessary features, lost knowledge, partially done work, handovers, and multitasking.

* **Amplify Learning**
* Lean development recommends approaching this in two different ways, depending on the context.
* First is to explore multiple options for expensive-to-change decisions such as fundamental design, choice of language, design language for user interaction, and so on.
* Delay the important decisions to the very last moment and then make those decisions based on customer feedback.
* Second way is to build a minimum set of capabilities to get started, followed by frequent delivery, while using feedback from real customer experience to make product content decisions.

**2. What is value stream mapping? Why is it done?**

* Value stream mapping is a lean practice that uses a diagram to show the flow of goods or information.
* It has a current map that shows the current situation and a future map that shows the desired situation.
* By using these maps, we can determine the we can the flaws or waste that should be removed from the current system and changes that should be made for achieving the desired result in the future.

**3. What is set‐based development? Why is it done?**

* Set based development is a practice that maintains multiple requirements and designs that will satisfy the customer requirements.
* In this, time is spent exploring some alternatives at the early stages of the project and even implementing some of them.
* The alternatives get eliminated as the project moves forwards with constant customer feedback.
* By this we can offer the customer maximum flexibility rather than binding early to a final option.

**4. What are Kanban Boards? How are they used?**

* A Kanban board is a work and workflow visualization tool that enables you to optimize the flow of your work.
* Physical Kanban boards, typically use sticky notes on a whiteboard to communicate status, progress, and issues.
* Kanban focus on statuses rather than due dates.
* Each task moves through stages so that teams can see the progress at a glance and find impediments in tasks if any.
* The statuses can be: To Do, In Progress, waiting for and Delegated. Sticky notes of different color are arranged under each status. The color codes may correspond to projects going on. Also under each status, the notes may be arranged with respect to priorities.