SSW 555 Agile Methods for Software Development

**Quiz 1: Introduction**

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**1. What is a plan‐driven software development process?**

* A plan driven software development process is a process in which all the **process activities are planned in advance and progress is measured against the plan.**
* For example, the waterfall model is a plan-driven software development method. The phases in waterfall model are executed sequentially.
* The fundamental logic behind this approach is that the plan, which drives everything, is based on an assumption that the requirements are fixed and won't change.
* Experience has shown us that this is never the case. Requirements are never fixed -- they always change. When the requirements change, the plan is affected; as a result, the completion date needs to change too.
* Unfortunately, that is often impossible, and the team has to deliver by the date they committed to. This is when a major crisis occurs and the project starts to go out of control.
* To overcome the drawback of the Waterfall model, Agile methods gained traction. They promote collaboration, results, and adaptability over following plans -- all of which means using a value-driven approach, not a plan-driven one.

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**2. Describe 2 of the principles of the Agile Manifesto**

Answer: Principles behind the Agile Manifesto:

**1. Customer Satisfaction**:

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

**2. Changing Requirements:**

Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

**3. Delivering Working Software:**

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

**4. Interaction between business people and developers:**

Business people and developers must work together daily throughout the project.

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**3. Describe 2 of the 12 practices of Extreme Programming**

Answer: 2 practices are:

**1. Pair Programming:**

All code to be sent into production is created by two people working together at a single computer. Pair programming increases software quality without impacting time to deliver. It is counter intuitive, but 2 people working at a single computer will add as much functionality as two working separately except that it will be much higher in quality. With increased quality comes big savings later in the project.

**2. Simple Design:**

A simple design always takes less time to finish than a complex one. So always do the simplest thing that could possibly work next. If you find something that is complex replace it with something simple. It's always faster and cheaper to replace complex code now, before you waste a lot more time on it.