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ECET 32900 – Lab 7

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**Goal:**

This lab was to learn about Agil and SCRUM project management process as well as how they can be implemented into future embedded system projects.

**Summaries:**

1. Agile Philosophy
   1. Agile is a mindset that emphasizes iterative development, customer collaboration and customization, and adaptability over stiff fixed planning.
   2. Some of the core values are as follows:
      1. Individuals and interactions are preferred over processes and other tools.
      2. Creating working software over comprehensive documentation.
      3. Having customer collaboration over contract negotiation.
      4. Responding to change over following a fixed plan.
   3. Key principles include:
      1. Continuous Feedback
      2. Sustainable Development
      3. Delivering Working Increments frequently.
2. Scrum Framework
   1. Scrum is an Agile subset that focuses more on interactive progress through fixed-length cycles called Sprints. These sprints typically last anywhere from 2-4 weeks.
   2. Typical Roles Seen in Scrum Framework:
      1. Product Owner: Manages the product, creates the task priority, and represents the stakeholders.
      2. Scrum Master: Implements Scrum practices, removes issues in the process, and ensures that all members are following the Agile principles.
      3. Development Team: Those who are responsible for delivering the increments.
   3. Typical Scrum Events:
      1. Spring Planning: Defines the goals and makes items for the backlog.
      2. Daily Scrum: A roughly 15 minute meeting where team members discuss progress.
      3. Sprint Review: Demonstrates the completed work to stakeholders and gathers stakeholder feedback.
      4. Sprint Retrospective: Reflects on the improvements for the next Sprints.
   4. Typical Scrum Documentation:
      1. Backlog of prioritized list of features and requirements.
      2. A prototyped, shippable product version delivered after each sprint.
3. Key Terminologies
   1. User Stories: Description of features from the user’s perspective.
   2. Story Points: Metrics used to estimate task complexity based on effort, dependencies, and testing.
   3. Burn-Down Charts: Track remaining work in a Sprint.
4. Scrum Implementation
   1. Scrum is suitable for complex projects with changing and evolving user requirements.
   2. Scrum requires collaboration, communication, and interactive feedback loops in order to find success.

**Conclusion:**

**References**