**AGILE Development**

**In**

**Cloud Computing Environments**

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**Access Platform for Providers**

**(APP)**

Masters in Engineering

Information Technology

Project Members

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# Introduction

## Agile Methodology & its Principles

Agile is a project management methodology that was created as a more adaptable and effective means of launching goods. The capacity to move swiftly and effortlessly is referred to as "agile." Compared to other approaches, an agile strategy enables teams to adjust more quickly and easily. Agile project plans typically have short project timelines and may be subject to frequent adjustments based on requirements. This makes it possible to produce usable products quickly.

Agile projects are often divided into sprints, or project intervals, of one to four weeks each, with a deliverable product at the end of each sprint. Pulling is the process used in agile, not pushing. While pulling entails an engineer grabbing their next task as soon as they have the time to work on something new, pushing involves assigning work to an engineer. The only reliable method to prevent team members from juggling four or five tasks at once and failing to do any of them on time is to pull. This is helpful in a number of ways as well, as we are aware that certain tasks or requirements may take longer than others. It does not appear unbiased to assign equal task with equal time. As a group, this was also helpful.

Kanban is one of the frameworks that was used in the creation of the Provider Management Platform in an Agile project. It is a common Lean workflow management strategy for establishing, managing, and enhancing knowledge work services. It enables you to visualise your job, increase productivity, and continuously improve. Based on the job, requirements are divided into user stories and allocated to one or two developers. These user stories are displayed on the Kanban Board, allowing you to optimize job delivery across various teams and manage complex projects in a single location. Sprints 2, 3, and 4 carried out most of the development, therefore they were lengthier and separated to lessen workload during each sprint.

## Sprint Planning

Sprint Planning, within the Scrum framework, is a meeting that establishes what tasks or features can be completed in the upcoming sprint and outlines the approach to accomplishing that work.

Sprint planning steps include :

1. **Reiterate the Main Goal:** Start by reminding the team about the main goal or what the project aims to achieve in the current sprint.
2. **Share Important Updates:** Discuss any new information that could affect the plan. This might include changes in requirements or anything significant that the team needs to know Confirm team capacity and any currently known issues and concerns and record as appropriate.
3. **Check Team Capacity and Note Concerns:** Make sure the team has enough capacity to handle tasks for the sprint. Also, identify and write down any issues or worries that might affect the work.
4. **Get Clear Answers from Product Owner:** The person in charge of the product provides clear answers to questions and explains the criteria that need to be met for each task to be considered complete.
5. **Agree on the Plan Together:** The person leading the team ensures that everyone agrees on the plan. They make sure that all team members are on the same page and comfortable with the tasks they need to do.
6. **Task Breakdown and Time Estimation:** Break down tasks into smaller steps so that they are easier to manage. Also, estimate how much time each task might take to complete.
7. **Identify Task Relationships:** Figure out if any tasks are dependent on others. Knowing this helps in arranging the tasks in a way that makes sense and avoids delays.
8. **Set a Clear Goal for the Sprint:** Define a clear and achievable goal for what the team aims to accomplish by the end of the sprint.
9. **Team Commitment:** Each team member commits to completing their tasks within the sprint and takes responsibility for their part of the work.
10. **Prepare for Changes:** Plan for unexpected changes that might happen during the sprint. Be ready to adjust tasks if needed.
11. **Document the Plan:** Make sure to write down and share the finalized plan with all team members. This helps everyone stay on track and accountable for their tasks.

* ***Sprint 1 (Length - 1 week)***