Brief summary of differences on agile and waterfall.

**Agile and Waterfall** are two distinct software development methodologies. The **Waterfall model** follows a linear and sequential approach where each phase, such as requirement gathering, design, implementation, testing, and deployment, is completed before moving on to the next. It is rigid and best suited for projects with well-defined and unchanging requirements. Once a phase is completed in Waterfall, going back to make changes is difficult and costly.

In contrast, the **Agile model** is iterative and incremental. It focuses on flexibility and customer collaboration. Development is broken into smaller cycles called **sprints**, and working software is delivered at the end of each sprint. Agile encourages continuous feedback, allowing teams to adapt to changing requirements throughout the project. This makes Agile ideal for dynamic and evolving projects where frequent updates and client input are essential.

In summary, Waterfall is structured and best for fixed-scope projects, while Agile is adaptable and better suited for projects with uncertain or changing requirements.