

# Software Project Management

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## 1.

Applying an SDLC model helps manage a software project in a clear and organized way. For example, when building a web application using the Waterfall model, the project follows fixed steps from start to finish. First, the requirements phase is done, where the team gathers all user needs such as login features, dashboards, and reports. This step is very important because changes later are difficult. Next is the design phase, where developers plan the system structure, database, and user interface. After design, the development phase begins, where the actual coding of the web app is done. Once coding is complete, the testing phase checks for errors, bugs, and performance problems. Finally, the system is deployed and maintained. Using the Waterfall model makes the project easy to understand and manage because each phase is completed before moving to the next one. It works best when project requirements are clear and unlikely to change.

## 2.

Scrum is an SDLC model that focuses on flexibility, teamwork, and fast delivery. Instead of completing the project in one long process, Scrum divides work into short cycles called sprints, usually lasting two to four weeks. During each sprint, the team plans tasks, develops features, tests them, and reviews progress. Scrum allows teams to respond quickly to changes and user feedback. Its role in software project management is to improve communication, reduce risks, and deliver working software regularly. Scrum is very useful for modern projects where requirements change often, such as mobile apps or web platforms.

## 3.

Creating a project plan in Trello helps manage tasks according to the SDLC model. In Trello, lists are created for each SDLC phase, such as requirements, design, development, testing, and deployment. Each task is added as a card and assigned a deadline. This makes it easy to track progress and see which tasks are completed or still pending. Using Trello shows how project management tools improve organization and teamwork. It also helps reduce confusion and keeps everyone focused on their responsibilities. Trello is simple to use and very effective for managing software projects.

## 4.

An SDLC diagram visually explains the steps involved in software development. In the Waterfall model diagram, the phases are shown in order: requirements analysis, system

design, implementation, testing, deployment, and maintenance. Each phase flows into the next one, like water falling down steps. This diagram helps developers and project managers understand the full development process clearly. It also shows that each phase must be completed before moving forward. Using an SDLC diagram improves planning, communication, and understanding of roles within the project.

