

A Sprint: A fixed period or duration (e.g., 1-4 weeks) in which a team works to complete a set of tasks. For SmartSDLC, we've planned **5-day sprints**.

An Epic: A big task or project that is too large to complete in one sprint. It is broken down into smaller tasks (stories) that can be completed over multiple sprints.

A Story: A small task. It is part of an Epic. Stories are written from the user's perspective, e.g., "As a [user persona], I can [action], so that [benefit]."

A Story Point: A number that represents how much effort a story takes to complete. This is usually estimated using a relative sizing technique (like Fibonacci series: 1, 2, 3, 5, 8, 13...).

Typical Story Point Meanings:

- **1 (Very Easy task):** Minimal effort, clear path.
- **2 (Easy task):** Straightforward, few dependencies.
- **3 (Moderate task):** Some complexity, manageable.
- **5 (Difficult task):** Significant complexity, potential unknowns.

SmartSDLC Sprint Planning:

Sprint 1: Requirement Classification (5 Days)

- Epic: Requirement Classification
- Stories/Tasks:
 - As a user, I can upload a PDF file to the "Requirements" tab, so that the system can analyze its content. (2 Story Points)
 - As a user, I can see requirements classified into SDLC phases (e.g., Requirements, Design), so that I can easily understand their category. (4 Story Points)
 - As a developer, I can implement robust PDF text extraction, so that all content from the uploaded PDF is captured accurately. (2 Story Points)
- Total Story Points for Sprint 2 = $2 + 4 + 2 = 8$

Sprint 2: Code Generation (5 Days)

- Epic: Code Generation
- Stories/Tasks:
 - As a user, I can input a natural language prompt for code generation, so that the AI can generate Python code. (5 Story Points)
 - As a user, I can see the generated Python code clearly formatted, so that I can copy and use it. (3 Story Points)
- Total Story Points for Sprint 3 = $5 + 3 = 8$

Sprint 3: Bug Fixing & Summarization (5 Days)

- Epic: Bug Fixing & Summarization
- Stories/Tasks:

- As a user, I can input a buggy Python code snippet, so that the AI can suggest fixes. (5 Story Points)
- As a user, I can input a code snippet for summarization, so that I can understand its purpose. (3 Story Points)
- Total Story Points for Sprint 4 = 5 + 3 = 8

Sprint 4: Testing & Chatbot (5 Days)

- Epic: Testing & Chatbot
- Stories/Tasks:
 - As a user, I can generate test cases for a given code/requirement, so that I can ensure proper testing. (5 Story Points)
 - As a user, I can interact with a floating chatbot, so that I can get immediate answers to SDLC questions. (3 Story Points)
- Total Story Points for Sprint 5 = 5 + 3 = 8

Velocity Calculation for SmartSDLC:

Velocity is a key metric in agile, representing the amount of work (in story points) a team completes in a sprint.

Formula: Velocity = Total Story Points Completed / Number of Sprints

Let's assume we have completed Sprint 1 (8 points), Sprint 2 (8 points), Sprint 3 (8 points), Sprint 4 (8 points), and Sprint 5 (8 points).

Total Story Points Completed = 8 + 8 + 8 + 8 + 8 = 40 Number of Sprints = 5

Calculated Velocity: Velocity = 40 / 5 = 8 (Story Points per Sprint)

This means, on average, your SmartSDLC development team has been consistently completing 8 story points per 5-day sprint. This velocity can be used to forecast future sprint capacities.