

Assignment 2: Agile Estimation, User Stories, and Reporting

1. Writing User Stories (15 mins)

a. Project: College Library System

b. User Stories:

- As a student, I want to search for books by title or author, so that I can quickly find the book I need.
- As a librarian, I want to add new books to the system, so that they become available for students.
- As a student, I want to reserve a book online, so that I can ensure its availability when I visit the library.
- As a librarian, I want to manage late return fines, so that students are encouraged to return books on time.
- As a student, I want to view my borrowing history, so that I can keep track of my past readings.

c. Acceptance Criteria (for two user stories):

Story: Search for books

- The search returns results matching title or author
- Results show book availability status

Story: Reserve a book online

- Students can reserve only available books
- Reservation confirmation is sent via email

2. Agile Estimation (15 mins)

a. Story Point Estimations (Fibonacci Series):

1. 1. 3 points - As a student, I want to search for books by title or author, so that I can quickly find the book I need.

2. 2. 5 points - As a librarian, I want to add new books to the system, so that they become available for students.
3. 3. 5 points - As a student, I want to reserve a book online, so that I can ensure its availability when I visit the library.
4. 4. 8 points - As a librarian, I want to manage late return fines, so that students are encouraged to return books on time.
5. 5. 2 points - As a student, I want to view my borrowing history, so that I can keep track of my past readings.

b. Estimation Reasoning:

1. Searching for books involves some logic but is relatively straightforward – 3 points
2. Adding books involves database updates and validations – 5 points
3. Reserving books includes checking availability and notification – 5 points
4. Managing fines requires rules, tracking, and UI – 8 points
5. Viewing history is simple data retrieval – 2 points

c. Tasks Requiring Refinement:

Managing fines (8 points) may need to be split into:

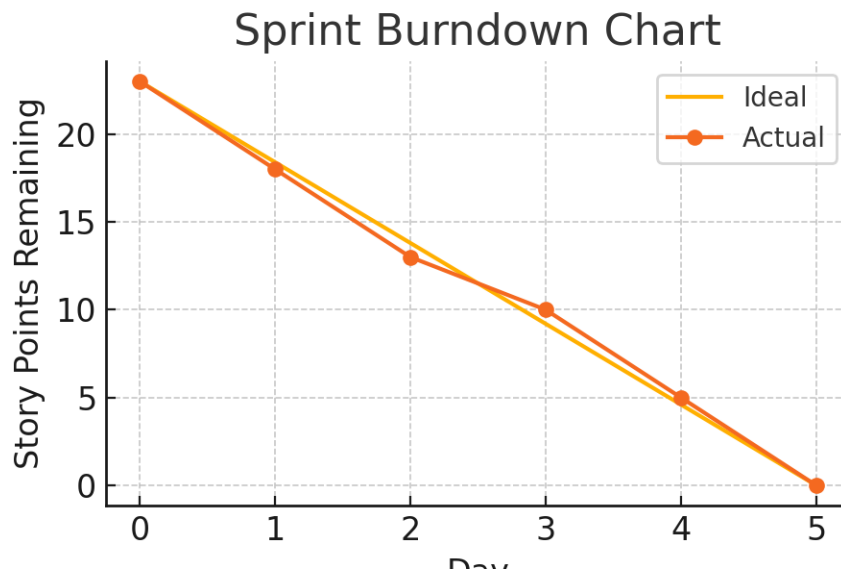
- Define rules for fines
- Integrate fines with user accounts
- Send reminders for overdue books

3. Agile Metrics and Reporting (15 mins)

a. What is a Burndown Chart?

A Burndown Chart shows the remaining work (usually in story points) versus time. It's used to track the progress of a sprint. A steep decline shows rapid progress; a flat line may indicate blockers.

b. Mock Burndown Chart:



c. Other Useful Agile Metrics:

1. Velocity – Measures how many story points a team completes per sprint. Helps with future sprint planning.
2. Lead Time – Time taken from story creation to completion. Helps identify delays in delivery.