Assignment 1: Agile Project Planning - Create a one-page project plan for a new software feature using Agile planning techniques. Include backlog items with estimated story points and a prioritized list of user stories.

One-Page Agile Project Plan: New Software Feature

Project Name: Real-Time Collaboration Feature for Document Editor

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Objective

Enable multiple users to collaboratively edit a document in real-time, improving teamwork and productivity.

Backlog Items with Story Points

Backlog Item	Story Points
Design and implement real-time sync mechanism	8
Develop user presence indicators (avatars)	5
Build conflict resolution system	8
Create a user permissions module	5
Implement collaborative cursors (live pointers)	5
Write automated tests for real-time functionality	3
Conduct usability testing	3
Optimize server performance for real-time data	8

Prioritized User Stories

1. **As a user**, I want to see who else is editing the document in real time so that I can collaborate effectively.
2. **As a user**, I want to see the changes made by others instantly so that the document stays up to date.
3. **As a user**, I want the system to resolve conflicting edits automatically to avoid overwriting others' work.

4. **As an admin**, I want to control who can edit the document to maintain privacy and security.
5. **As a user**, I want to view live pointers of other users to know what part of the document they are working on.
6. **As a developer**, I want automated tests to ensure the stability of real-time functionality.
7. **As a stakeholder**, I want the real-time collaboration feature to be performant for up to 50 concurrent users.

Sprint Breakdown

Sprint 1 (2 Weeks)

- **Goal:** Set up the foundation for real-time collaboration.
- Tasks: Design sync mechanism, basic live editing functionality, and conflict resolution system.

Sprint 2 (2 Weeks)

- **Goal:** Enhance user visibility and interaction.
- Tasks: Develop user presence indicators and collaborative cursors.

Sprint 3 (2 Weeks)

- **Goal:** Ensure functionality is robust and user-friendly.
- Tasks: Create a user permissions module, optimize server performance, and conduct usability testing.

Success Metrics

- <90ms latency for real-time edits with up to 50 users.
- Usability score of 8/10 from initial testers.
- 95% test coverage for the real-time feature module.