

SmartTeach AI - Project Planning Phase

Project Information

- **Date:** January 15, 2025
 - **Team ID:** LTVIP2025TMID24661
 - **Project Name:** SmartTeach AI
 - **Team Leader:** Sk. Mohammad Hussain
 - **Team Members:** Sd Naseer, Regula Dinesh, Seelam Santhosh
 - **Maximum Marks:** 5 Marks
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Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Epic Definitions

- **Epic 1:** User Authentication System
- **Epic 2:** AI-Powered Chat Assistant
- **Epic 3:** Dynamic Quiz Generation
- **Epic 4:** File Processing System
- **Epic 5:** Progress Tracking Dashboard
- **Epic 6:** UI/UX Development
- **Epic 7:** Testing & Deployment

Sprint Planning Table

Sprint	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Authentication	USN-1	As a user, I can register for the application by entering email, username, and password with secure hashing	3	High	Sk. Mohammad Hussain
Sprint-1	User Authentication	USN-2	As a user, I can login to the application using my credentials with session management	2	High	Sd Naseer

Sprint	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Authentication	USN-3	As a user, I can logout securely and my session will be terminated	1	High	Regula Dinesh
Sprint-1	Project Setup	USN-4	As a developer, I can set up the development environment with IBM WatsonX API integration	5	High	Seelam Santhosh
Sprint-1	Project Setup	USN-5	As a developer, I can configure Streamlit framework and basic project structure	3	High	All Team
Sprint-2	AI Chat Assistant	USN-6	As a user, I can ask educational questions and receive AI-powered responses	8	High	Sk. Mohammad Hussain
Sprint-2	AI Chat Assistant	USN-7	As a user, I can upload documents to provide context for better AI responses	5	High	Sd Naseer
Sprint-2	File Processing	USN-8	As a user, I can upload PDF files and the system will extract text content	3	Medium	Regula Dinesh
Sprint-2	File Processing	USN-9	As a user, I can upload images and the system will extract text using OCR	5	Medium	Seelam Santhosh
Sprint-3	Quiz Generation	USN-10	As a user, I can generate quizzes on specific topics with multiple choice questions	8	High	Sk. Mohammad Hussain
Sprint-3	Quiz Generation	USN-11	As a user, I can select difficulty levels (Easy, Medium, Hard) for generated quizzes	3	High	Sd Naseer

Sprint	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Quiz Generation	USN-12	As a user, I can take quizzes and receive immediate scoring and feedback	5	High	Regula Dinesh
Sprint-3	UI/UX Development	USN-13	As a user, I can navigate through an intuitive interface with responsive design	5	Medium	Seelam Santhosh
Sprint-4	Progress Tracking	USN-14	As a user, I can view my quiz performance history and analytics on a dashboard	8	High	Sk. Mohammad Hussain
Sprint-4	Progress Tracking	USN-15	As a user, I can see visual representations of my learning progress over time	5	Medium	Sd Naseer
Sprint-4	Resource Finder	USN-16	As a user, I can search for additional educational resources related to my queries	3	Low	Regula Dinesh
Sprint-5	Testing	USN-17	As a tester, I can verify all functionalities work correctly through comprehensive testing	8	High	All Team
Sprint-5	Security	USN-18	As a developer, I can ensure all user data is encrypted and secure	5	High	Seelam Santhosh
Sprint-5	Performance	USN-19	As a developer, I can optimize the application for response times under 3 seconds	3	Medium	Regula Dinesh
Sprint-6	Deployment	USN-20	As a developer, I can deploy the application to Streamlit Cloud for public access	5	High	Sk. Mohammad Hussain

Sprint	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-6	Documentation	USN-21	As a developer, I can create comprehensive user documentation and help guides	3	Medium	Sd Naseer
Sprint-6	Final Testing	USN-22	As a team, we can conduct final end-to-end testing and bug fixes	5	High	All Team

Project Tracker, Velocity & Burndown Chart (4 Marks)

Sprint Summary Table

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed	Sprint Release Date (Actual)
Sprint-1	14	5 Days	15 Jan 2025	21 Jan 2025	14	21 Jan 2025
Sprint-2	21	5 Days	22 Jan 2025	28 Jan 2025	21	28 Jan 2025
Sprint-3	21	5 Days	29 Jan 2025	04 Feb 2025	21	04 Feb 2025
Sprint-4	16	5 Days	05 Feb 2025	11 Feb 2025	16	11 Feb 2025
Sprint-5	16	5 Days	12 Feb 2025	18 Feb 2025	16	18 Feb 2025
Sprint-6	13	5 Days	19 Feb 2025	25 Feb 2025	13	25 Feb 2025

Velocity Calculation

Total Story Points Completed: $14 + 21 + 21 + 16 + 16 + 13 = 101$ Story Points

Number of Sprints: 6

Team Velocity: $101 \div 6 = 16.83$ Story Points per Sprint

Average Velocity per Day: $16.83 \div 5 = 3.37$ Story Points per Day

Story Points Scale (Fibonacci Series)

- **1:** Very Easy task (1-2 hours)
- **2:** Easy task (2-4 hours)
- **3:** Moderate task (4-8 hours)
- **5:** Difficult task (1-2 days)
- **8:** Complex task (2-3 days)

Burndown Chart Data

Sprint-wise Burndown Tracking

Sprint	Day 1	Day 2	Day 3	Day 4	Day 5	Remaining Points
Sprint-1	14	11	8	4	0	0
Sprint-2	21	17	12	6	0	0
Sprint-3	21	16	11	5	0	0
Sprint-4	16	13	9	4	0	0
Sprint-5	16	12	8	3	0	0
Sprint-6	13	10	7	3	0	0

Overall Project Burndown

Week	Planned Remaining	Actual Remaining	Variance
Week 1	87	87	0
Week 2	66	66	0
Week 3	45	45	0
Week 4	29	29	0
Week 5	13	13	0
Week 6	0	0	0

Risk Management & Mitigation

High Priority Risks

1. IBM WatsonX API Dependencies

- Mitigation: Implement fallback mechanisms and error handling
- Story Points Buffer: +3 points per sprint

2. File Processing Complexity

- Mitigation: Test with various file formats early
- Story Points Buffer: +2 points for USN-8, USN-9

3. Performance Requirements

- Mitigation: Continuous performance testing
- Story Points Buffer: +2 points for USN-19

Sprint Buffer Allocation

- Each sprint includes 10% buffer for unexpected issues
- Critical path items have priority for resource allocation
- Daily standups to track progress and address blockers

Definition of Done (DoD)

For each User Story to be considered complete:

1. Code implementation completed
2. Unit tests written and passing
3. Integration testing completed
4. Code review by team member
5. Documentation updated
6. User acceptance criteria met
7. No critical bugs remaining

Team Responsibilities

Team Member	Primary Focus Areas
Sk. Mohammad Hussain	AI Integration, Quiz System, Project Leadership
Sd Naseer	Authentication, UI/UX, Documentation
Regula Dinesh	File Processing, Performance Optimization
Seelam Santhosh	Project Setup, Security, Deployment

References

- [Atlassian Agile Project Management](#)
- [Scrum with Jira Software](#)
- [Burndown Charts Guide](#)
- [Story Points Estimation](#)