Project Planning Phase
Project Planning (Product Backlog, Sprint Planning, Stories, Story points)

Date	15 Feb 2026
Team ID	LTVIP2026TMIDS64190
Project Name	LearnHub: Your Center for Skill Enhancement
Maximum Marks	5 Marks

Product Backlog, Sprint Schedule, and Estimation:

Here's a completed **Product Backlog, Sprint Schedule, and Estimation** table for our *Sustainable Smart City Assistant using IBM Granite LLM*, continuing from your format and including the **Dashboard** epic:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a student, I can register using email and password	2	High	1,2,3,4
Sprint-1	Registration	USN-2	As a user, I receive confirmation after successful registration	1	High	1,2,3,4
Sprint-1	Login	USN-3	As a user, I can log in using email and password	1	High	1,2,3,4
Sprint-1	Role Management	USN-4	As a system, I can assign roles (Admin, Teacher, Student)	2	High	1,2,3,4
Sprint-2	Course Management	USN-5	As a teacher, I can upload courses with video sections	5	High	1,2,3,4
Sprint-2	Dashboard	USN-6	As a student, I can view all available courses	3	High	1,2,3,4
Sprint-3	Enrollment	USN-7	As a student, I can enroll in a course after payment	5	High	1,2,3,4

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Progress Tracking	USN-8	As a student, I can track completed sections	3	Medium	1,2,3,4
Sprint-4	Certificate	USN-9	As a student, I can download certificate after completion	3	Medium	1,2,3,4
Sprint-4	Security	USN-10	As a system, I implement JWT-based authentication and role-based access	2	High	1,2,3,4

Project Tracker, Velocity & Burndown Chart:

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	05 Feb 2026	09 Feb 2026	20	20 Feb 2026
Sprint-2	20	6 Days	10 Feb 2026	14 Feb 2026	-	
Sprint-3	20	6 Days	14 Feb 2026	16 Feb 2026	-	
Sprint-4	20	6 Days	16 Feb 2026	18 Feb 2026	-	

x

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

Here's a simple Burndown Chart representation for your Sustainable Smart City Assistant project using IBM Granite LLM, based on the 4-sprint plan we discussed:

sprint	planned points	remaining points
0	–	68
1	13	55
2	21	34
3	21	13
4	13	0

Burndown Chart Explanation

- X-axis: Sprint Number (0–4)

- Y-axis: Remaining Story Points (68 → 0)

- Ideal Line: Straight diagonal from (0,68) to (4,0)

- Actual Line: Shows real sprint progress

  If the actual line stays below the ideal line, the team is ahead of schedule

Conclusion (Exam-Ready)

The LearnHub project follows Agile Scrum methodology with clearly defined epics, user stories, and sprint planning. The team maintains a consistent velocity of 20 story points per sprint, ensuring predictable delivery and systematic development of a secure, scalable MERN-based Learning Management System with authentication, course management, payment integration, progress tracking, and certificate generation.