

SOFTWARE ENGINEERING PROJECT

Team 23 - May 2024

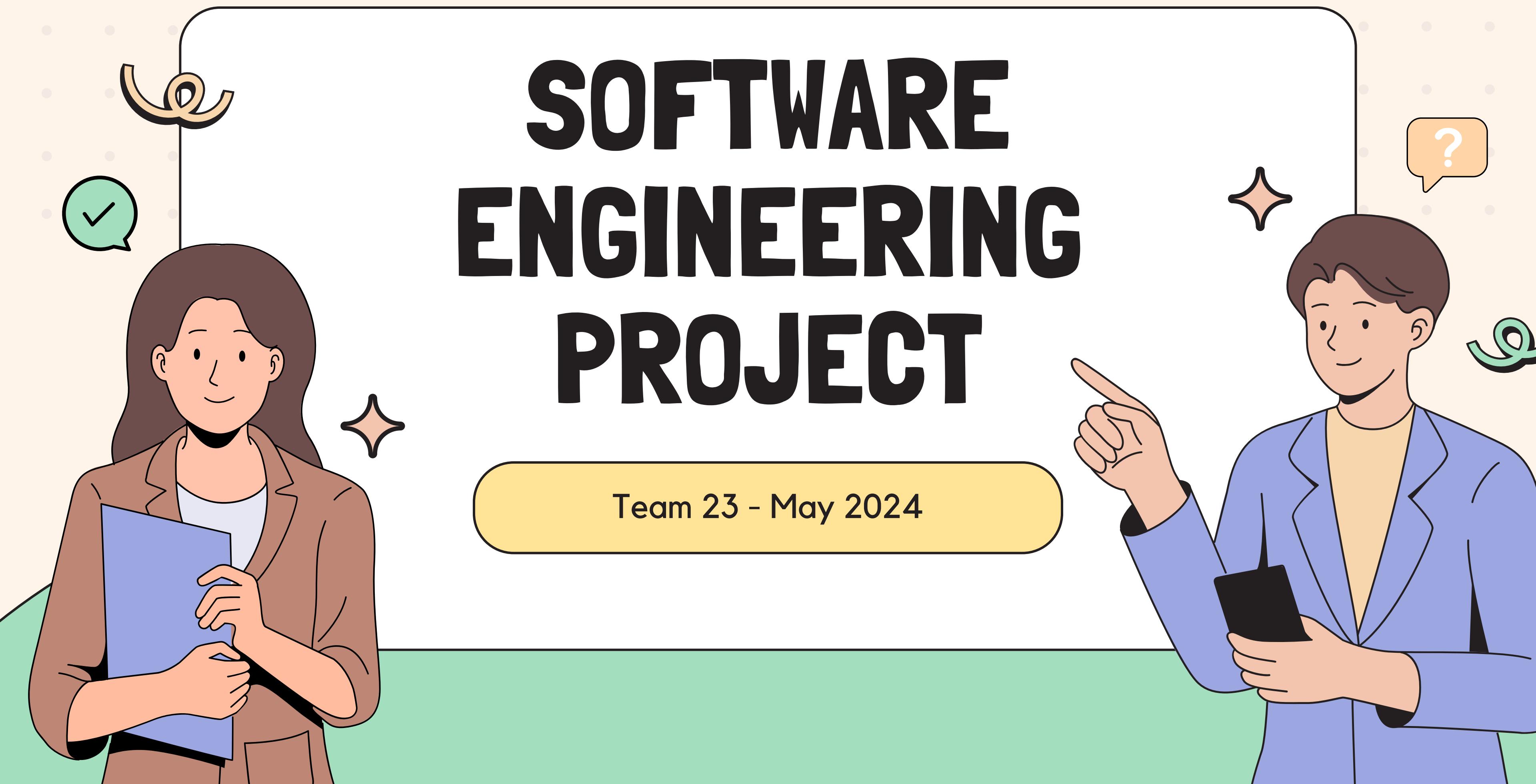


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MEET OUR TEAM



Aradhana Anand
Backend Developer



Charvi Maini
Tester



Lokesh Kumar
Frontend Lead



Naman Sehwal
Project Lead



Ravi Kumawat
Full Stack Developer



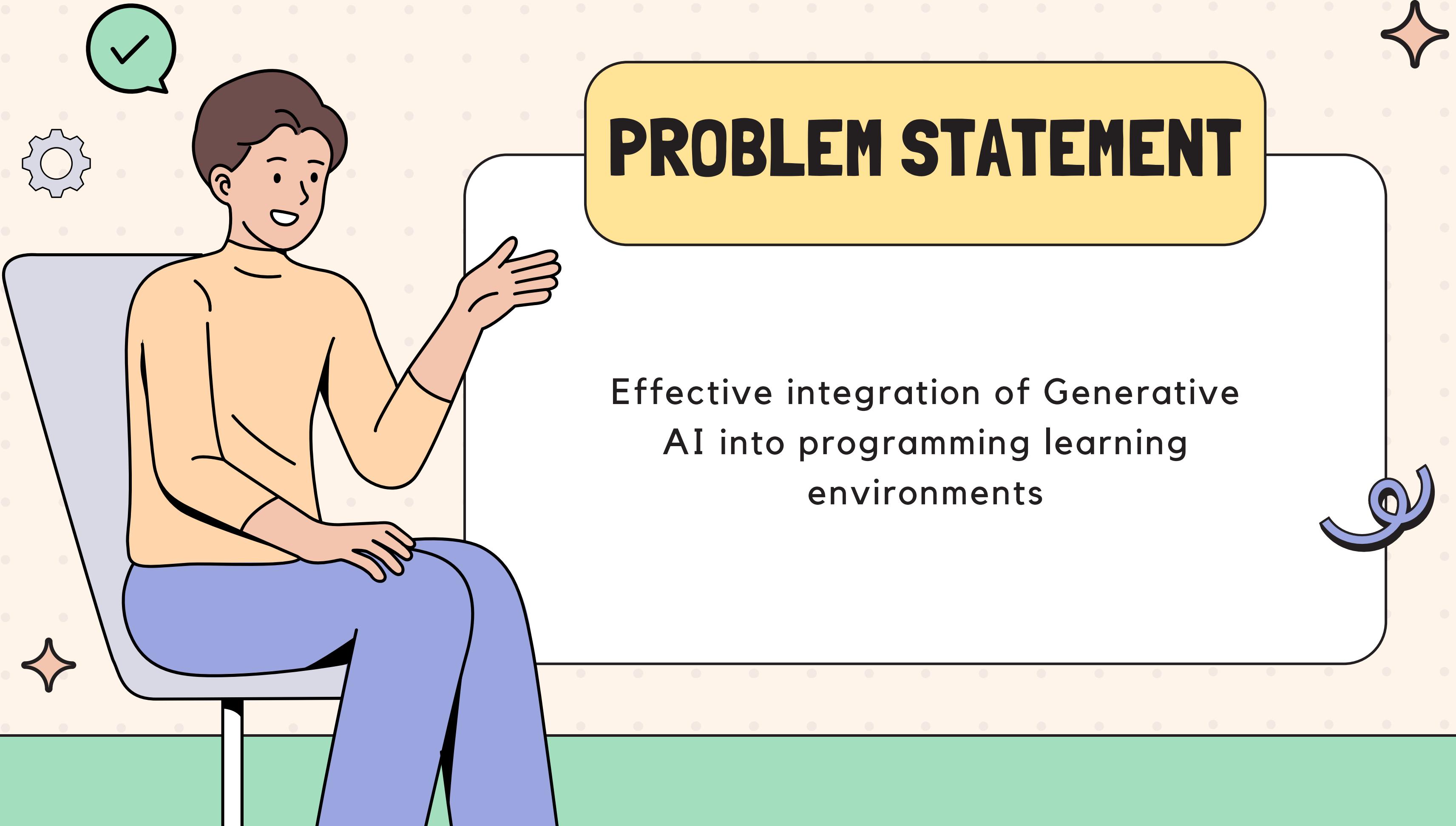
Sajal Dhingra
Scrum Master



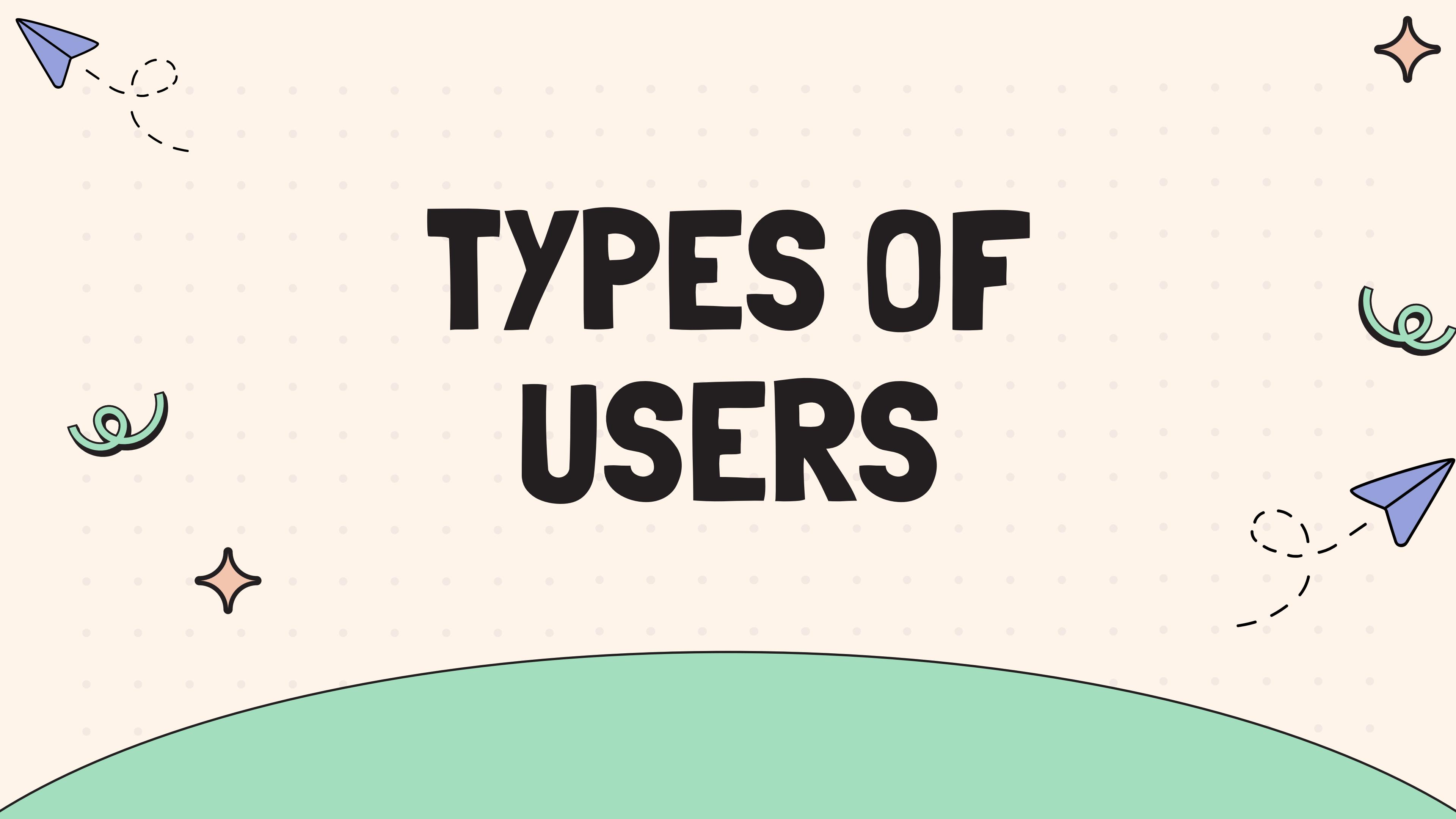
Ullas Kumar
Frontend Developer



Vineet Kalosiya
GenAI Developer



TYPES OF USERS



TYPES OF USERS

01

PRIMARY USERS are the main users for whom the product or service is intended. They are the most frequent and direct users who will interact with the system on a regular basis. The design and functionality of the product are primarily focused on fulfilling the needs, goals, and tasks of these users. Here, STUDENTS are the primary users of the seek portal.

02

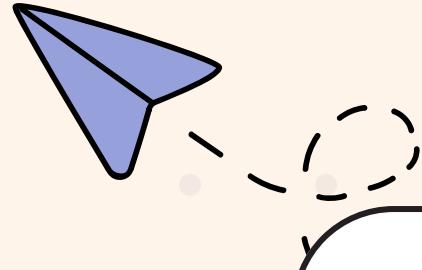
SECONDARY USERS are individuals who interact with the product occasionally or indirectly. They might not use the product as frequently as primary users but still have significant interactions that need to be considered in the design process. They might support or influence the primary users. Here, COURSE INSTRUCTORS are the secondary users of the seek portal.

03

TERTIARY USERS are those who do not use the product directly but are affected by its implementation or have an interest in its outcome. They might be individuals influenced by the product's performance and results. Here, TECHNICAL SUPPORT are the Tertiary Users of the seek portal.

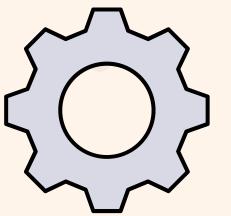
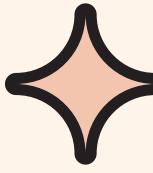
USERS STORIES

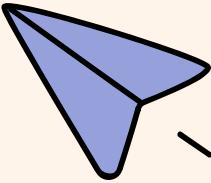




STUDENTS

- As a Student , I want a Video Summarizer, So that I can obtain summaries of lengthy video lectures containing key points, aiding quick review and identification of focus areas.
- As a Student , I want a Related Resource Presenter, So that I can view the links of all previous videos that have contents related to or required for the understanding of the current lecture.
- As a Student , I want a Code Explanation Generator, So that I can get feedback on my code in an easy-to-understand language, understand what the code does, see examples and learn ways to make the code better.
- As a Student , I want to generate Topic-Specific Test Questions, So that I get test questions generated from any specific topic (in a specified difficulty level) in accordance with my needs.

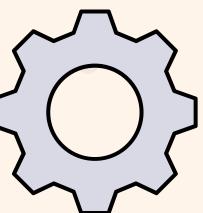




STUDENTS

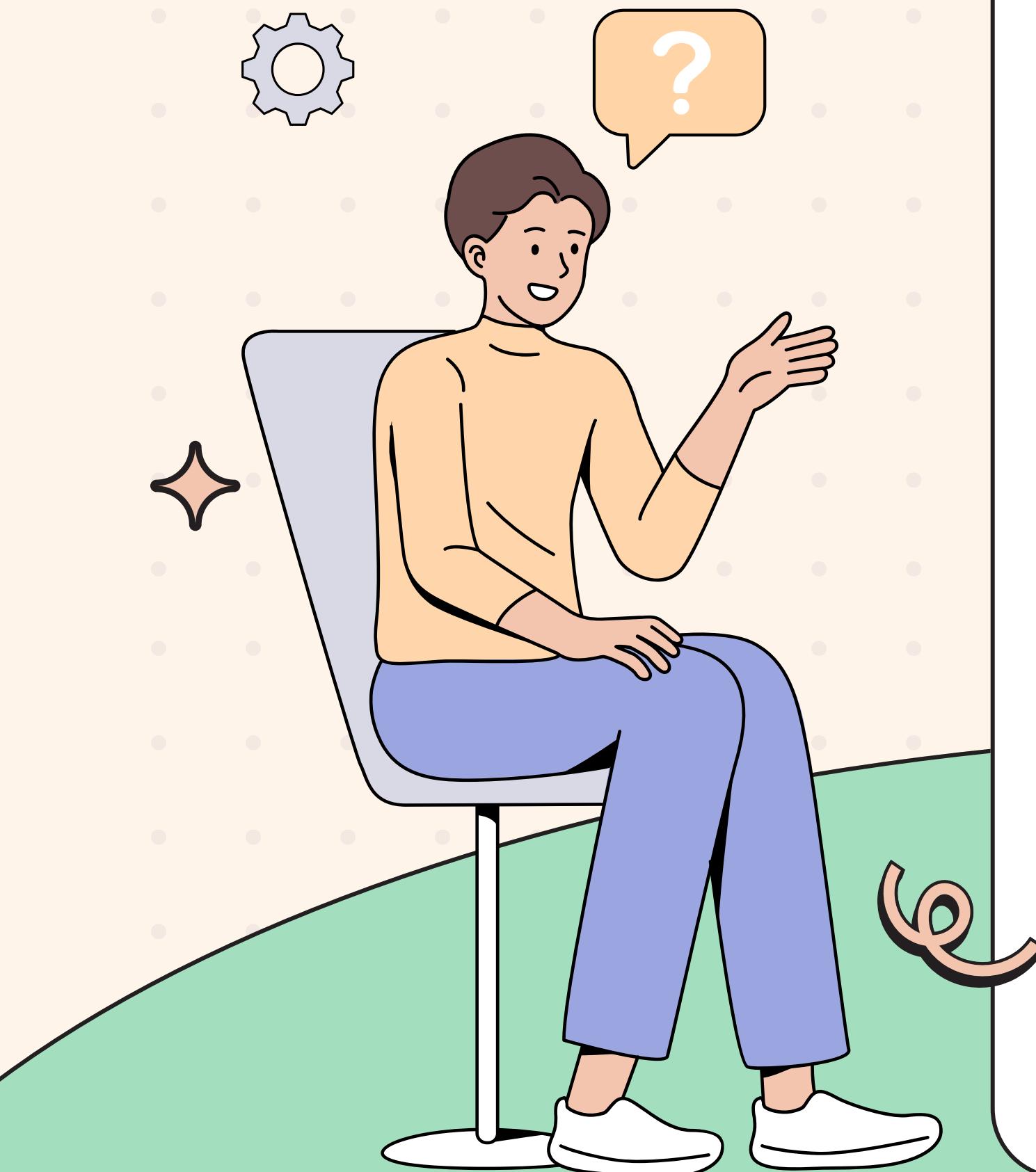


- As a Student , I want a Skill Progress Dashboard, So that I can get detailed insights about my progress, strengths, and areas requiring improvement through a personalized dashboard which will also offer targeted exercises and resources to address specific challenges.
- As a Student , I want a Study Planner Generator, So that I can obtain a weekly study planner based on hours of content, number of assignments etc.
- As a Student , I want a Notes Generator, So that I get well organized notes for the lecture videos which will assist in retaining important concepts and for exam preparation.
- As a Student , I want Chatbot Support, So that I can obtain Generative AI responses for basic support related to definitions and doubt clearing.



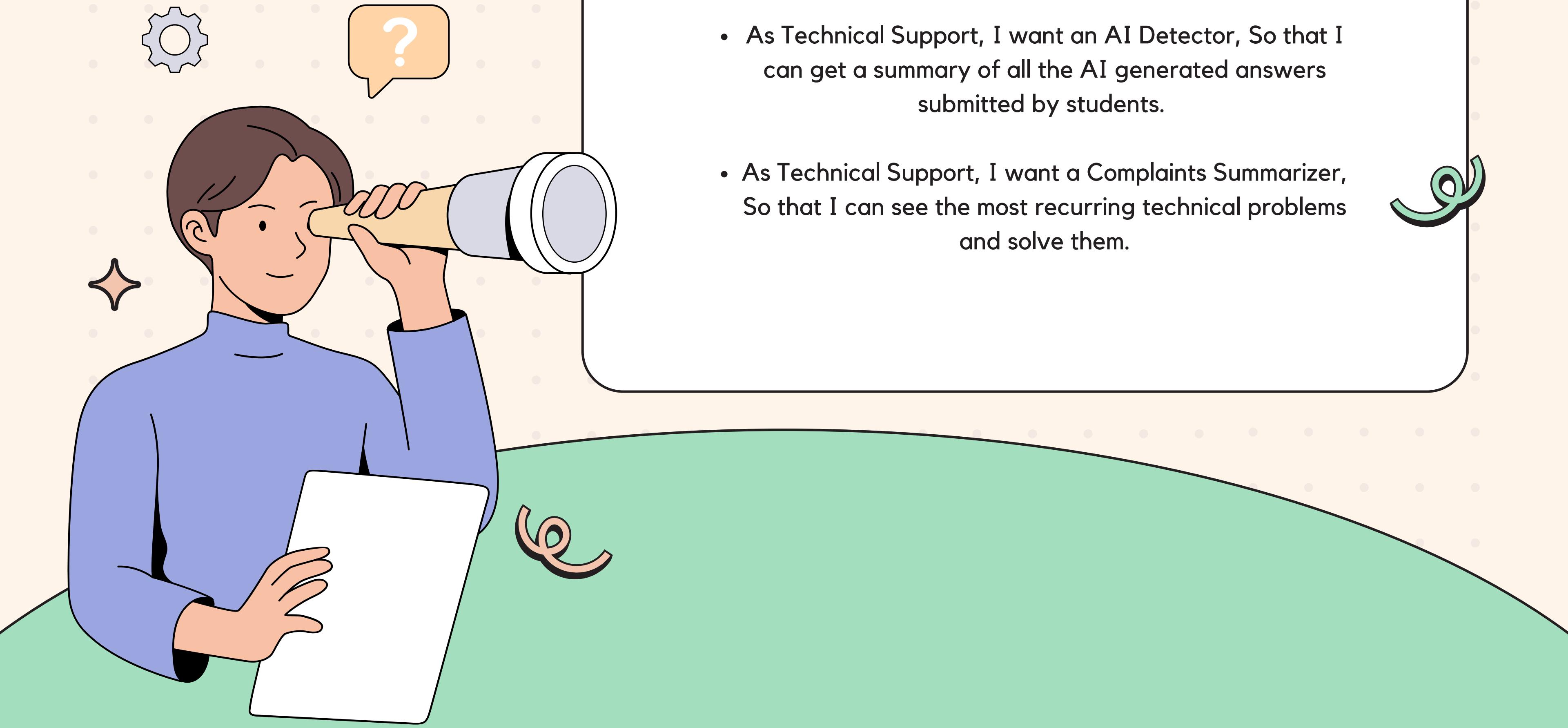
INSTRUCTOR

- As a Course Instructor, I want an Assignment Generator, So that I can ensure that practice assignments and activity questions cover all topics taught in the course.
- As a Course Instructor, I want a Doubt Summarizer, So that I can get a summary of the topics where students have doubts most often.
- As a Course Instructor, I want a Quiz Analyzer, So that I can get a list of topics that are found difficult by most students and then cover those topics in the live sessions.
- As a Course Instructor, I want a Subjective Answer Analyzer, So that I can check for all the keywords required in subjective-type answers.

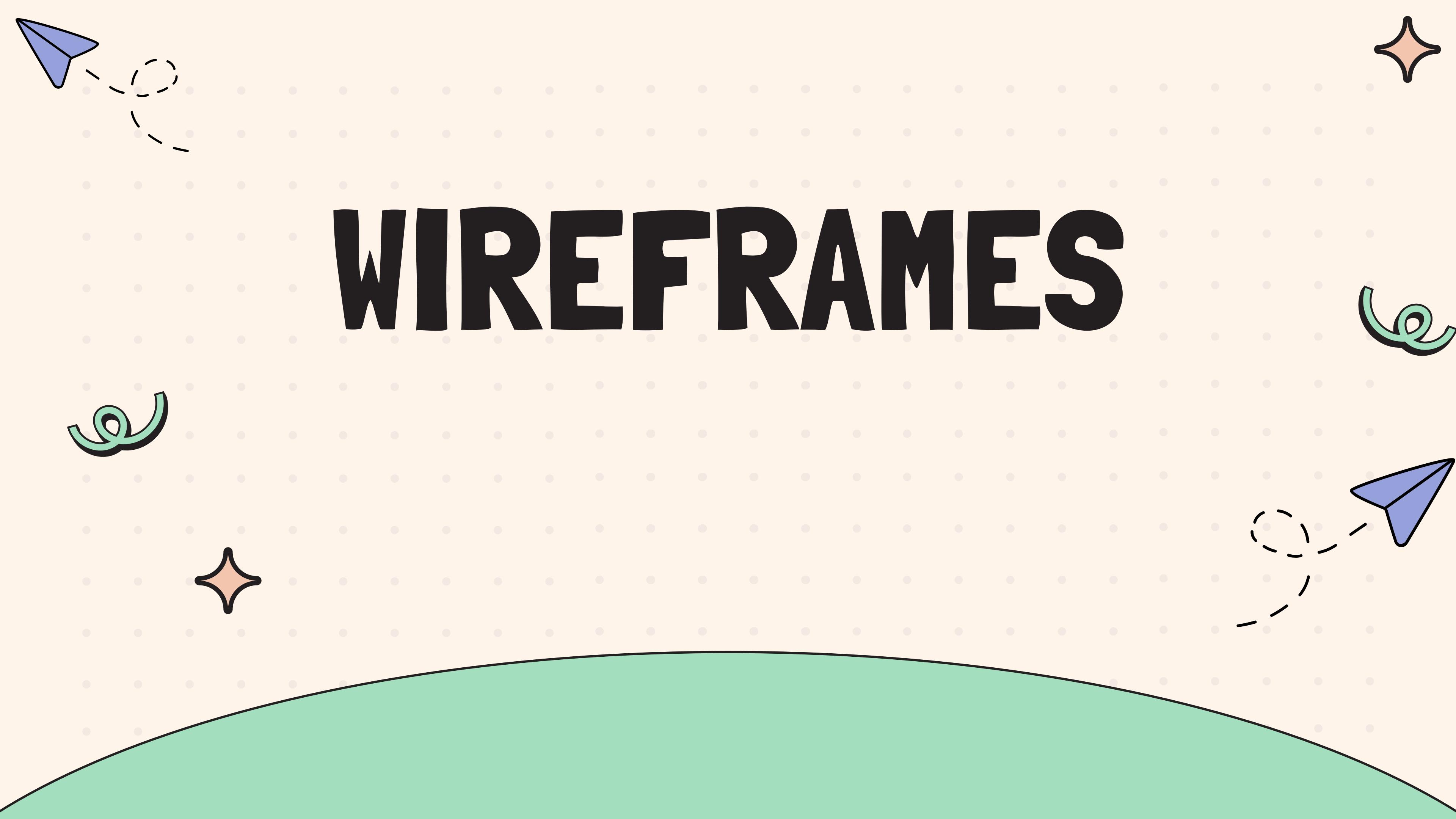


TECHNICAL STAFF

- As Technical Support, I want an AI Detector, So that I can get a summary of all the AI generated answers submitted by students.
- As Technical Support, I want a Complaints Summarizer, So that I can see the most recurring technical problems and solve them.



WIREFRAMES



STUDENT DASHBOARD

Dashboard

Student

Courses

Projects

Calendar

Software
Engineering

Software
Testing

Deep
Learning

COURSE PAGE

SE

Student

Lectures

Graded
Assignment

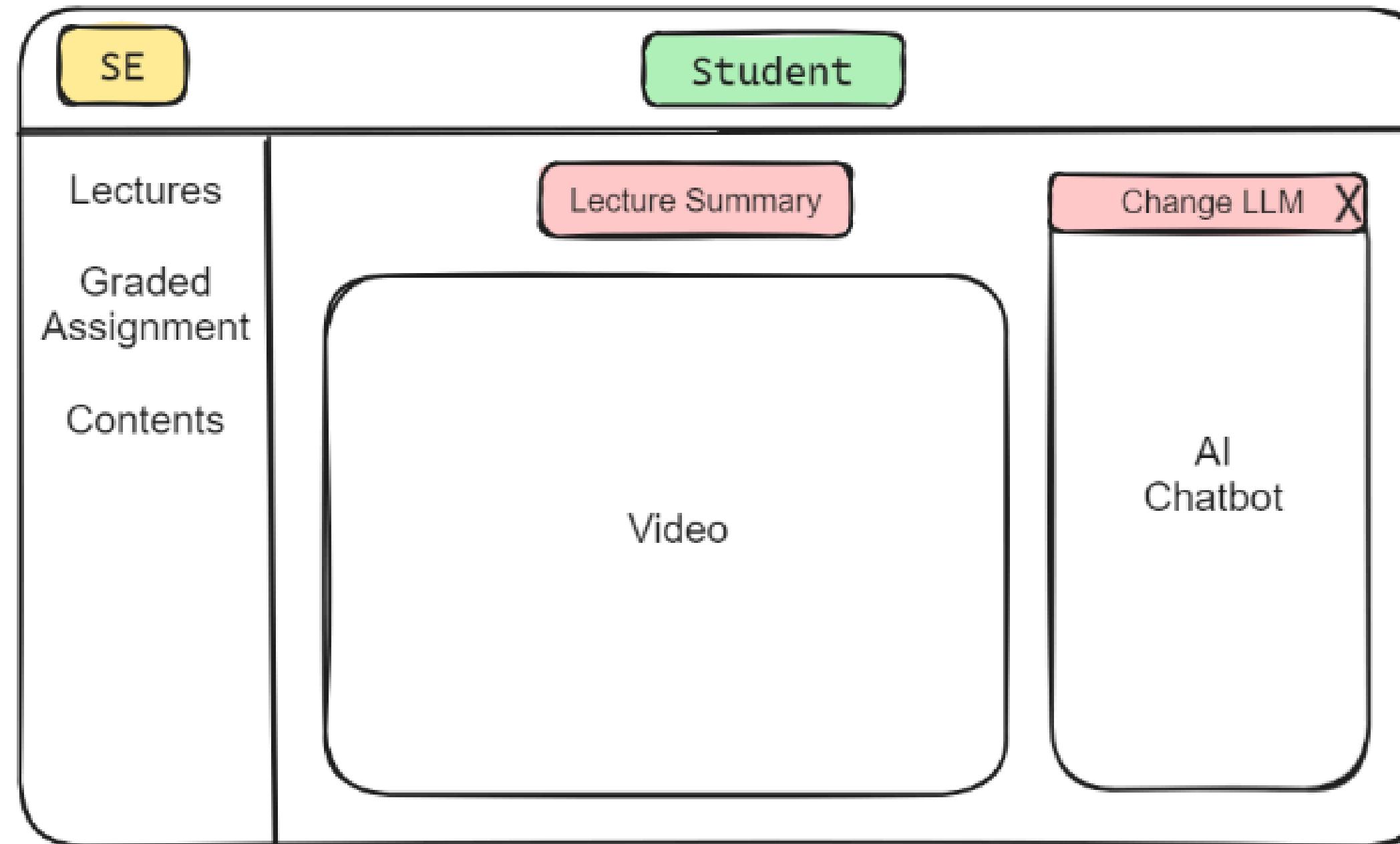
Contents

Lecture Summary

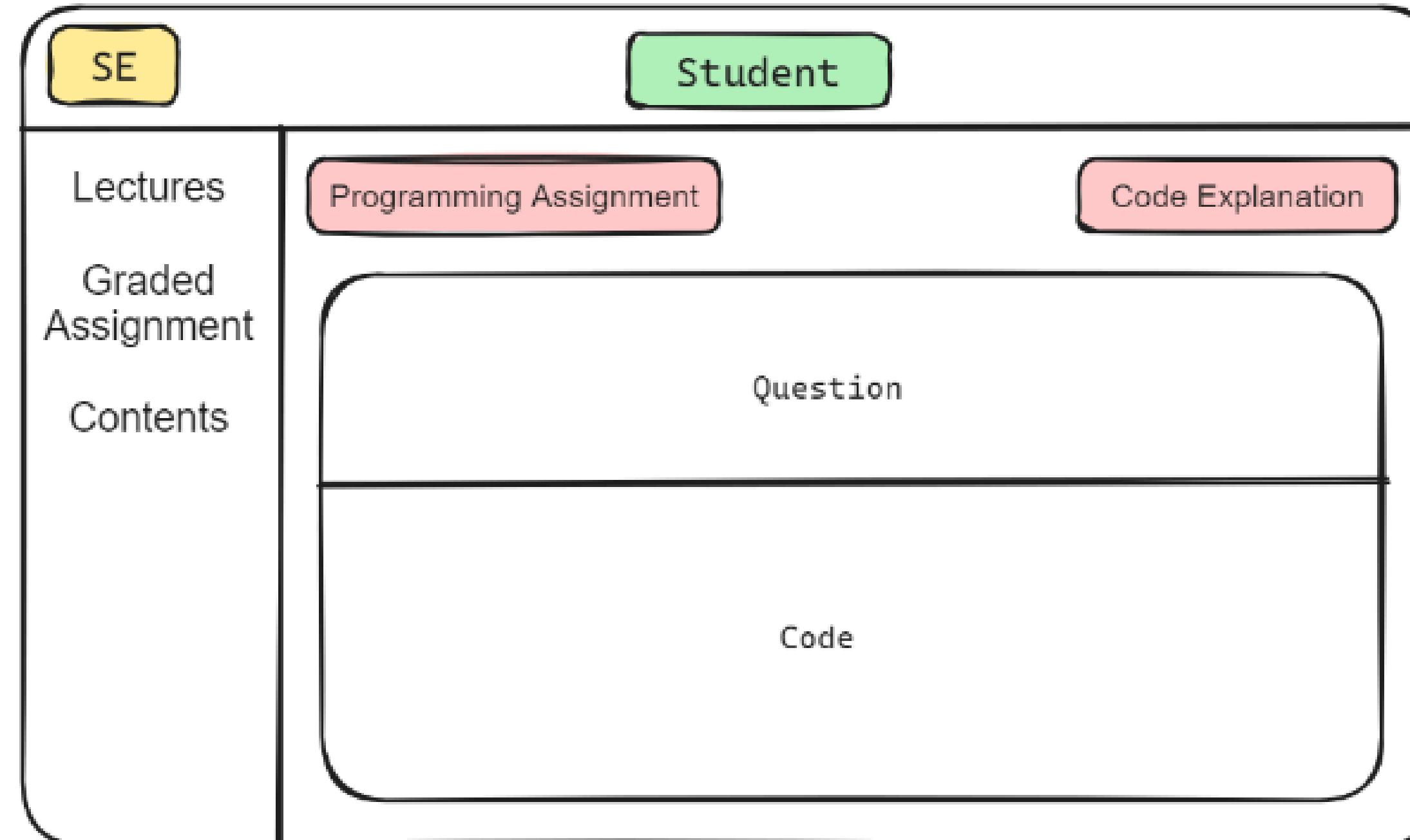
Have a doubt? Ask here!

Video

AI CHATBOT



PROGRAMMING ASSIGNMENT



COURSE INSTRUCTOR

SE Course Instructor

Lectures	Video	+ Add New Video
Graded Assignment		+ Add New PA
Contents		+ Add AQ
		Analyze Quiz

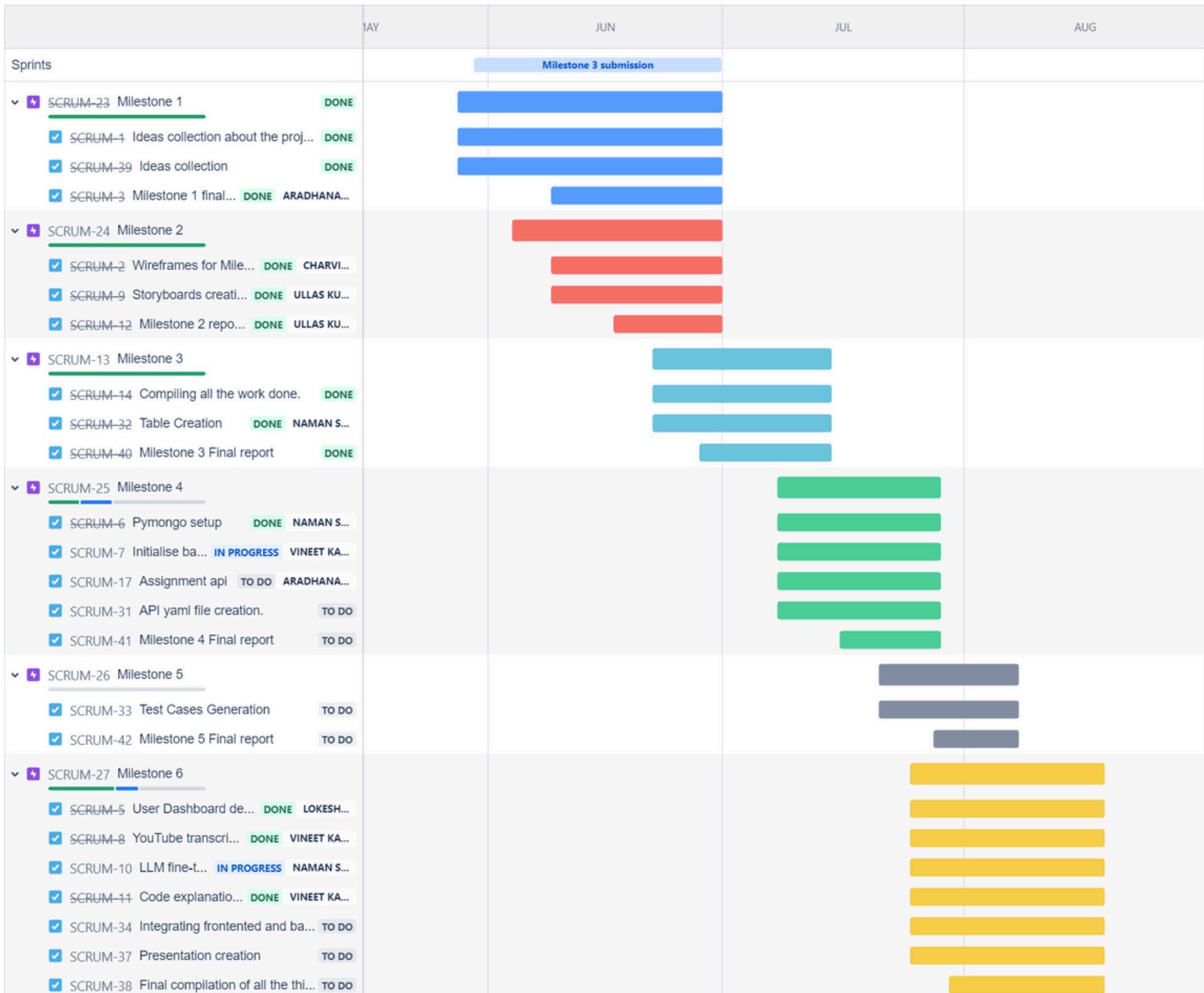


TASK DISTRIBUTION & PROJECT SCHEDULE

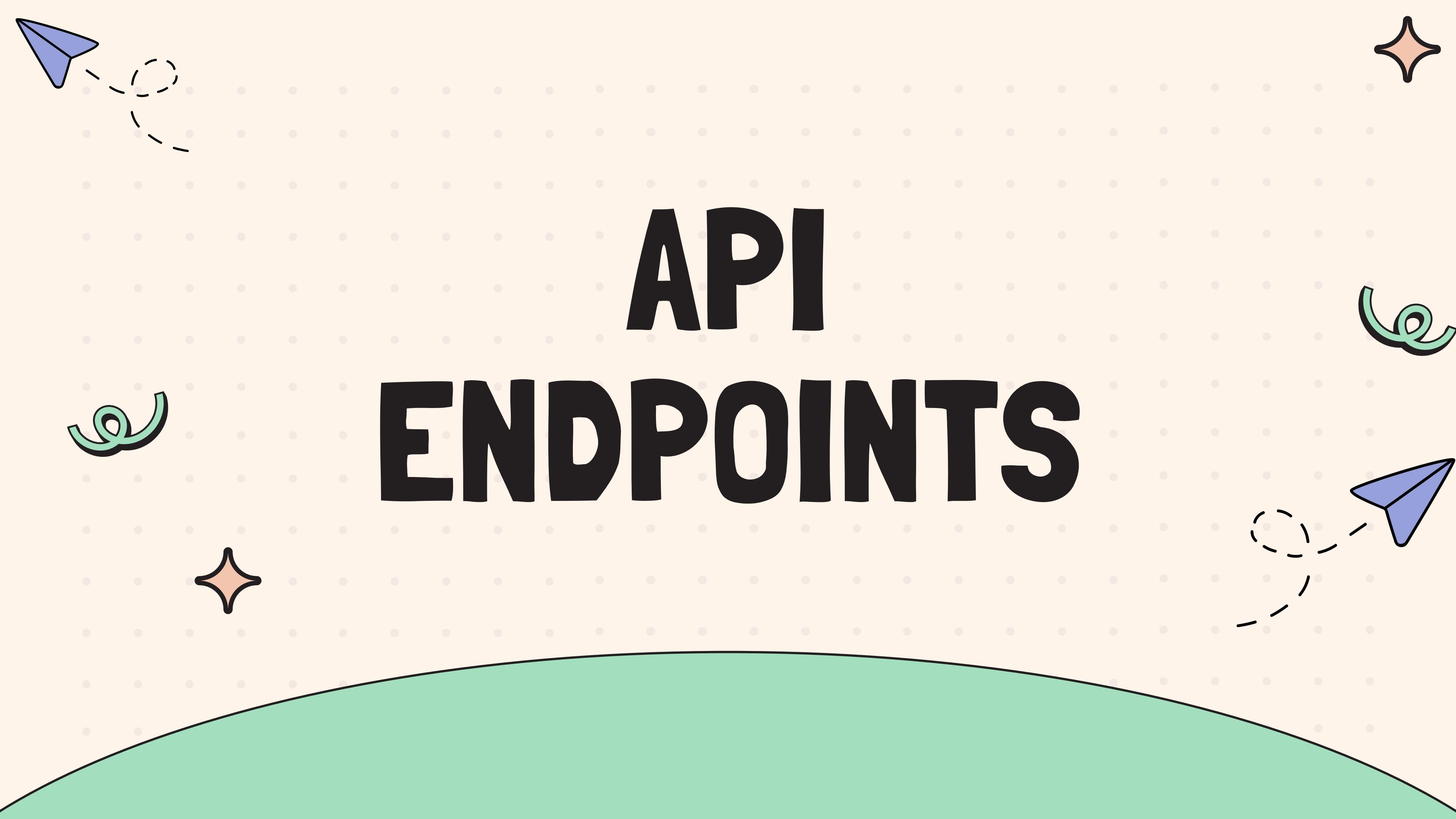
TASK DISTRIBUTION

S. No	Milestone	Sub-Tasks	Sprint	Assigned To
1	Identify User Requirements	Identify users	1	All
		User stories	1	All
		Report	1	Charvi Maini, Aradhana Anand
2	User Interfaces	Storyboard	2	Lokesh Kumar, Ullas kumar, Vineet Kalosiya
		Wireframes	2	Charvi Maini, Ravi Kumawat
		Report	2	Vineet Kalosiya, Ullas Kumar, Sajal Dhingra
3	Scheduling and Design	Project Scheduling	3	Ullas Kumar, Sajal Dhingra
		Components Design	3	Naman Sehwal, Lokesh Kumar, Ullas kumar, Ravi Kumawat
		Software Design	3	Charvi Maini, Lokesh Kumar
		Minutes of Meetings	3	Sajal Dhingra, Ullas Kumar
		Report	3	All
4	Development	API Design	4	Naman Sehwal
		API Description	4	Naman Sehwal, Aradhana Anand
		YAML File	4	Charvi Maini, Sajal Dhingra
5	Testing	Test Case Design	5	Sajal Dhingra, Aradhana Anand
		Unit Testing	5	All
		Report	5	All
6	Final Submission	Frontend Design	6	Lokesh Kumar, Ullas kumar, Ravi Kumawat
		Backend Implementation	6	Naman Sehwal, Vineet Kalosiya
		Report	7	All
		Presentation	7	All

GANTT CHART – PROJECT SCHEDULE



API ENDPOINTS



AUTHENTICATION

User Operations related to user authentication.



POST

/login User Login



COURSES

Courses Operations related to courses.

GET

/courses Retrieve all courses

POST

/course Create a new course

GET

/course/{course_id} Retrieve a course by ID

ASSIGNMENTS

Assignments Operations related to assignment management.



POST

/create_assignment Create a new assignment



GET

/get_course_assignments/{courseId} Get assignments for a course



GET

/get_assignment/{courseId}/{assignmentId} Get assignment details



PROGRAMMING ASSIGNMENTS

Programming Assignments Operations related to programming assignments.

POST

`/pa/create` Create programming assignment

GET

`/pa/{courseId}` Get programming assignments for a course

GET

`/pa/{courseId}/{assignmentId}` Get details of a specific programming assignment

GENAI APIs

Gen AI Operations related to General AI functionalities.



POST

[`/video_summary`](#) Get video summary



POST

[`/code_explanation`](#) Get code explanation



POST

[`/notes_generator`](#) Generate notes



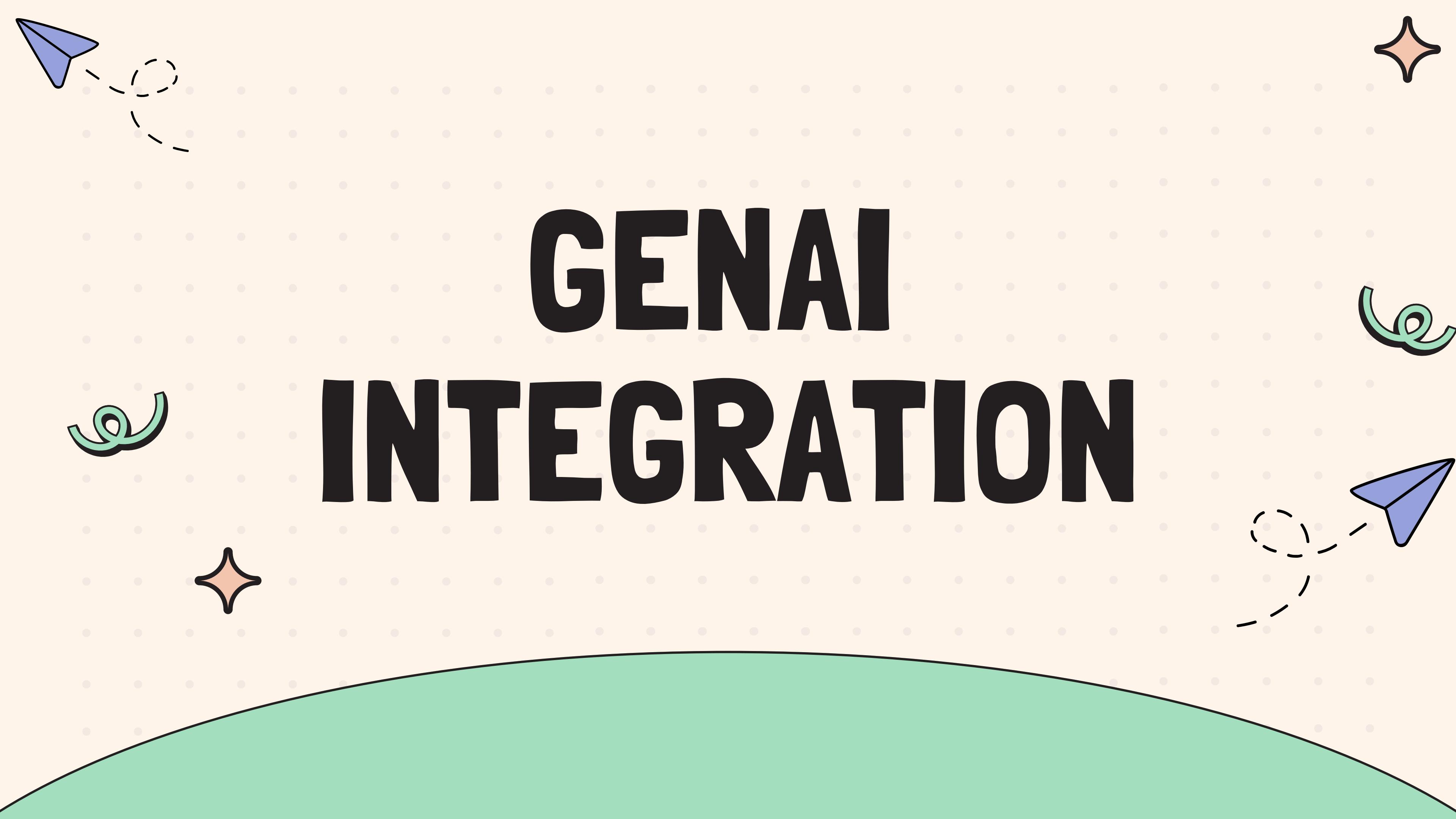
POST

[`/chatbot`](#) Chat with AI



GENAI

INTEGRATION



GENAI FEATURES



AI Notes
Generator



AI Chatbot



Code Review

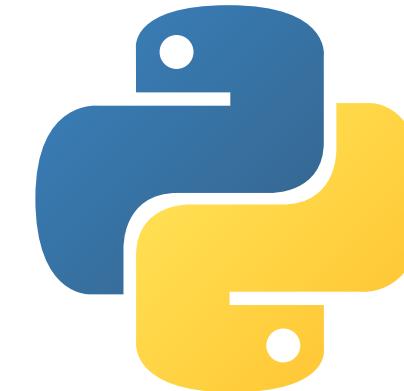


Video Summary

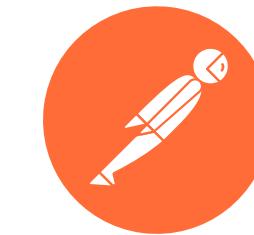
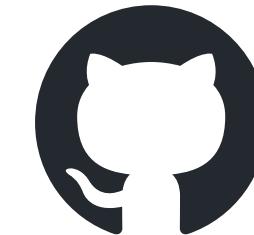
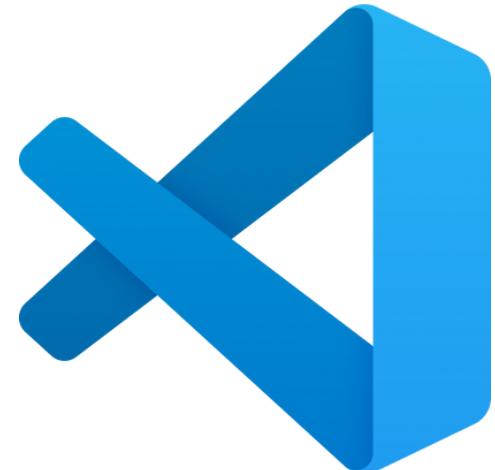
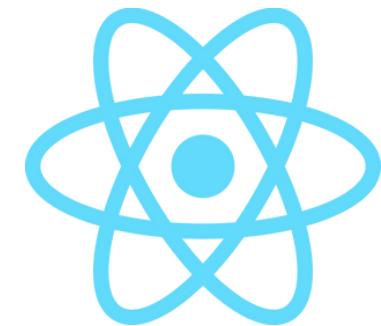
TOOLS & TECHNOLOGY USED

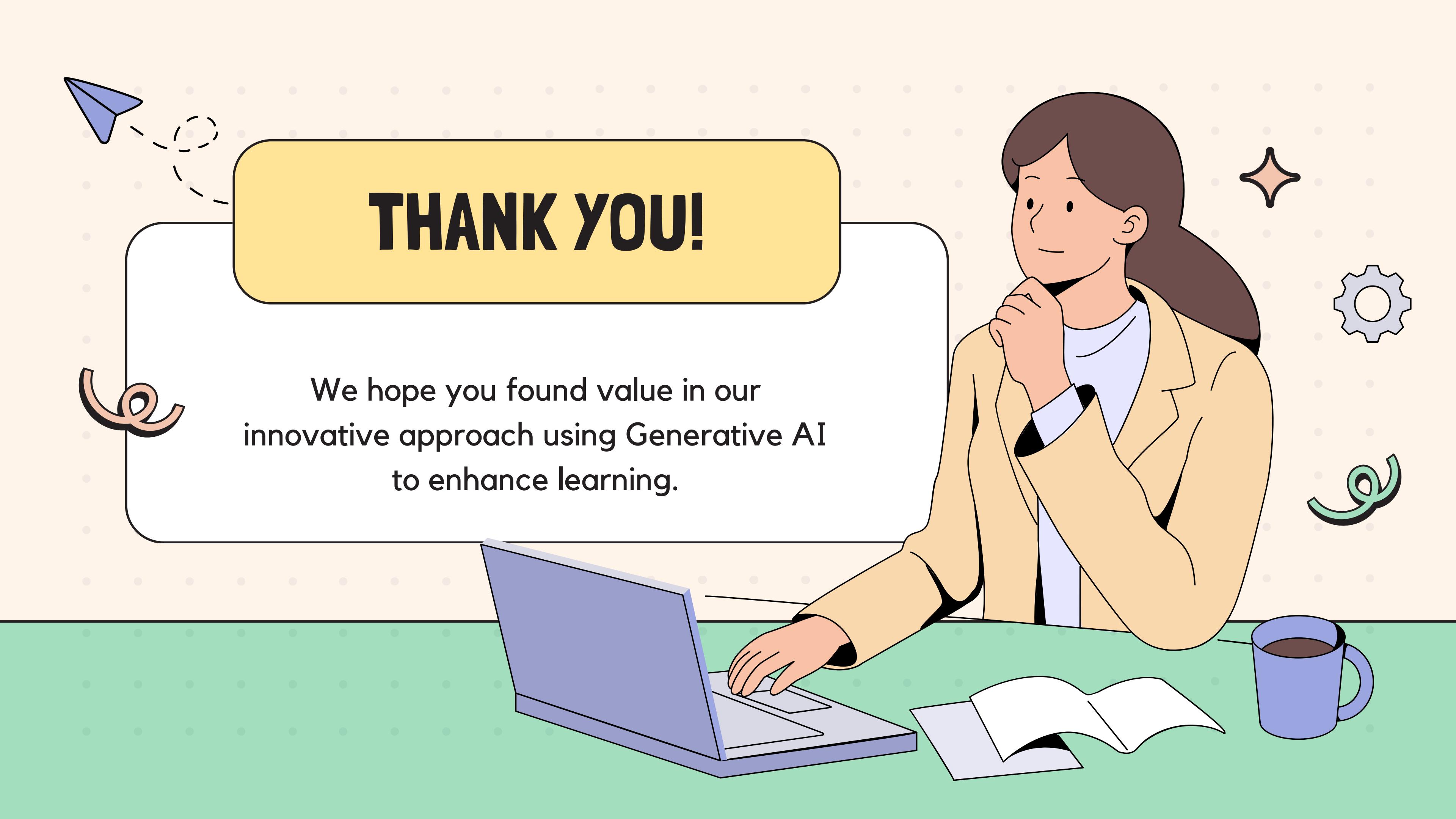


TOOLS & TECHNOLOGIES



Flask





THANK YOU!

We hope you found value in our
innovative approach using Generative AI
to enhance learning.