Minimum Viable Product (MVP)

Qwiz

41129 Software Innovation Studio Spring 2025

Group 6

MVP Feature Set

Feature List for project minimum requirements
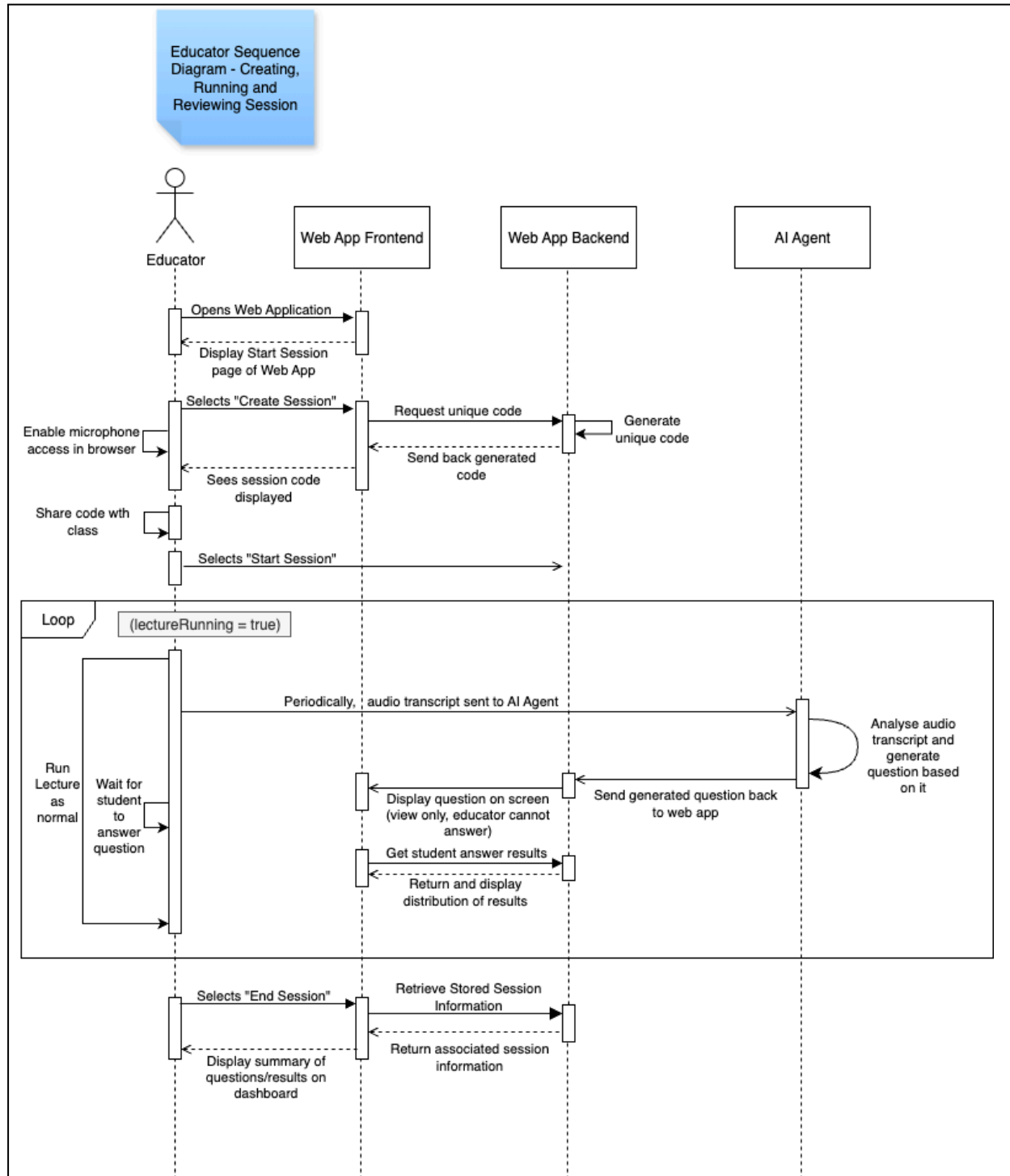
No.	Feature	Description
1	**Various Frontend User Interfaces (UI)**	A consistent front-facing user interface needs to be created for the project. It will consist of various views that will vary for different users of our product. ***Common Views*** ● **Home/Landing Page:** A central page where all users can either create a session/login (educators) & join a session (students) ● **Leaderboard Page:** A page that will show after the session is concluded by the Educator displaying which students achieved the highest rankings. ● **Active Session Page:** Will display the questions proposed to students to answer during the lecture. The educator will also be able to see the question but not answer it. After the allotted question answering time has passed, a graph displaying the correct answer/distribution of results is displayed to all users. ***Educators Views*** ● **Create Session Page:** A page that will have a unique code generated and viewable on this page, also where Educators will start their session too once themselves and students are ready ● **Dashboard/Summary Page:** A page that will provide Educators with a summary of the session including questions and the amount. This summary can be exported after the session. ***Student Views*** ● **Join Session Page:** A page where Students can type in a code to join the Educator's session as well as give themselves a name to go by during the session

2	**Creating a session**	An action done by an Educator. A session will involve generating a unique code for an Educator's lecture session which is given to Students to join from their view.
3	**Joining a session**	An action done by Students. Students are given a unique code by the Educator to input as well as a place to input their name (to differentiate between different students). After joining, students then have to wait for the Educator to start the session.
4	**Running a session**	*Educators* Educators are conducting and teaching their lecture as normal with the app listening to what is being said. Related to Feature 6. *Students* Students will be listening to the lecture as normal. Periodically, a question will appear on the session page for students to answer. Related to Feature 7.
5	**Summary of Session**	A feature just for Educators. This summary shows the Educator overall how students did in the quiz, displaying the questions that were asked of students and the distribution of answers (correct and incorrect). This gives educators an insight into how much of the content students are understanding. This can also be exported for the educator to view at a later time.
6	**Audio transcription through the use of an Artificial Intelligence (AI)**	Once an Educator starts a session, the AI for our project would begin listening to the Educator speak. Whilst it's listening, it is transcribing what it hears so that it can use the lecture content audio to generate questions. Related to Feature 7.
7	**Question generation through the use of an AI**	After listening to the educator and creating the audio transcript (Feature 6), the AI will then analyse this transcript to identify key aspects or points the educator has discussed during the lecture. A question is then generated based on what is important from the transcript. This question will be in the form of a multiple choice question with four potential answers that could be guessed. Questions are only generated periodically through the lecture, potentially at set intervals of time. Both students and educators will be able to view the

		question, however only students can submit answers to the questions whereas educators can only view the question. There will also be a time limit where students would need to answer the question before the time expires.
8	**Student scoring system & leaderboard**	Related to Feature 4 and 7. As students are given generated questions to answer, correct answers will contribute towards a score associated with each student. Incorrect or missing answers will not contribute points towards a student's score. The score a student currently has will be displayed on their screen during the session. At the end of a session, a leaderboard will be displayed. It will show which students scored the highest places.
9	**Responsive application**	The web application will need to be responsive and look good on smaller sized windows. This will allow students to have a split window setup if they want to take notes on the lecture at the same time as being able to see the generated questions as they appear.

User Flow Diagrams

Educator Flow Sequence Diagram - Create, Run and Summarise Session

Student Flow Diagram - joining and participating in a session

Student Sequence Diagram - if actively answering generated questions

Student → **Web App Frontend** → **Web App Backend** → **AI Agent**

Opens Web Application

Display Join Session page of Web App

Enter code from educator

Display Waiting for Session to Start page

Wait for educator to start session

Display Question page after Educator starts session

Loop (lectureRunning = true)

Periodically, analyse educator audio transcript and generate question based on it

Send generated question & answer back to web app

Display generated question to students and start time limit

Read, select an answer to the question and submit

Listen to Lecture

Press submit once selecting an answer

Wait for question answering time to expire

Get question answer results

Return and display distribution of results (graph)