

MICHIGAN STATE
UNIVERSITY

Beta Presentation

**Adaptive Assessment Generator for
Tech-Ops Training
The Capstone Experience**

Team United Airlines Training

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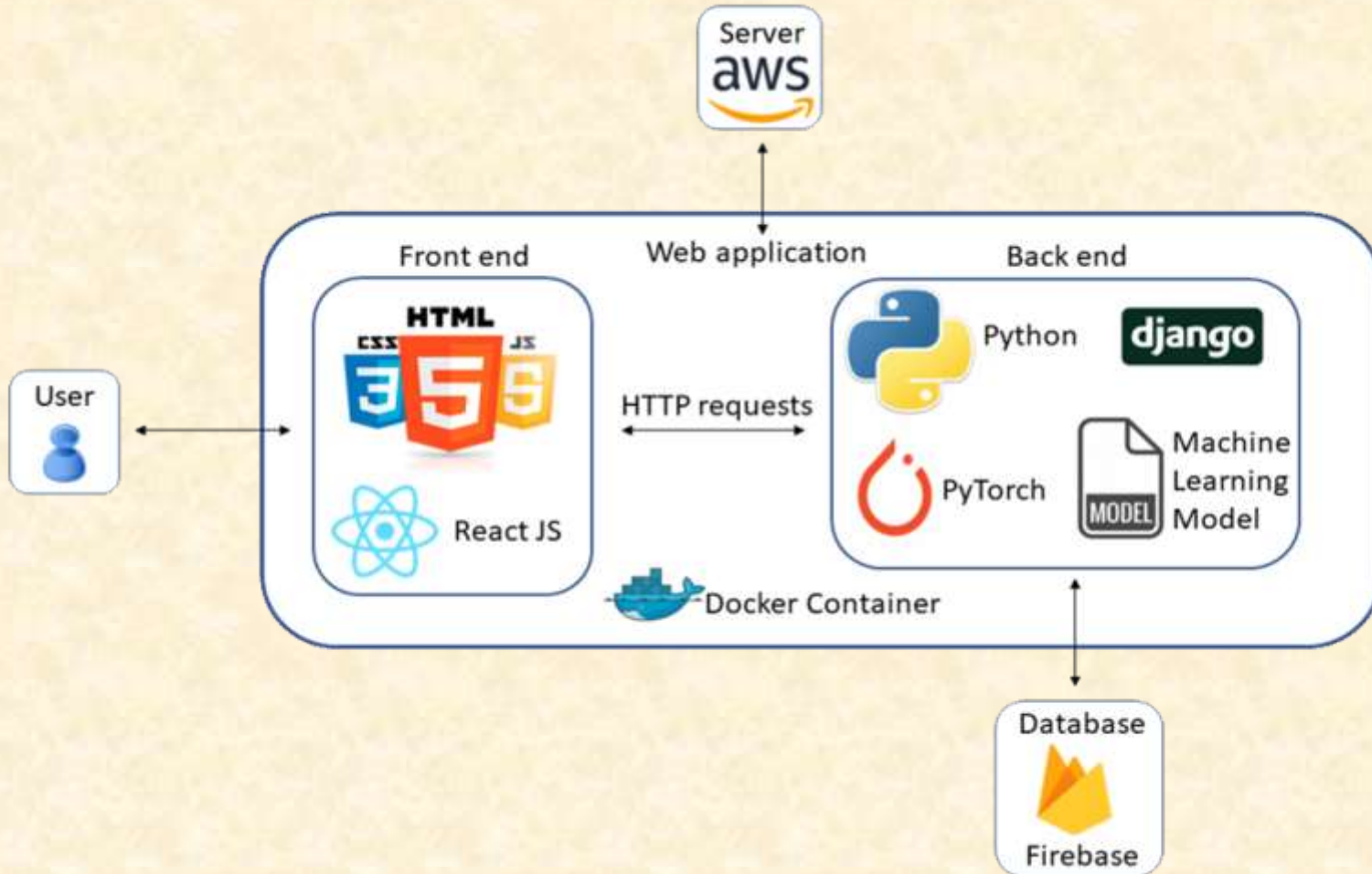
*From Students...
...to Professionals*

Project Overview

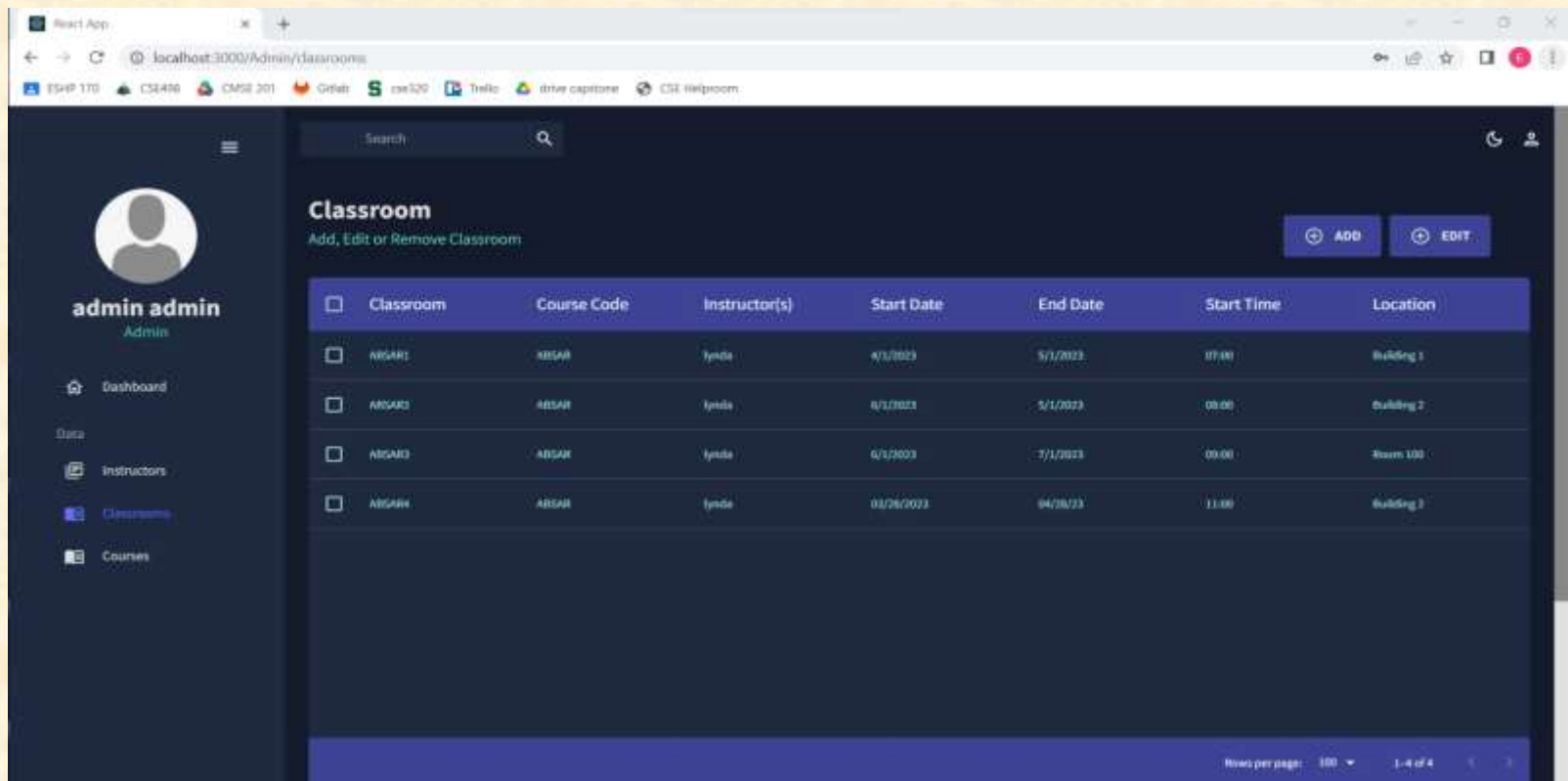
- Web application for adaptive training of United Airlines Training employees
- Seperate viewpoints for students, instructors and admins
- Students can view content and take quizzes
- Instructors can add content and quizzes
- Admin manages classrooms and assign instructors
- AI-generated and manual questions



System Architecture



Admin Classroom



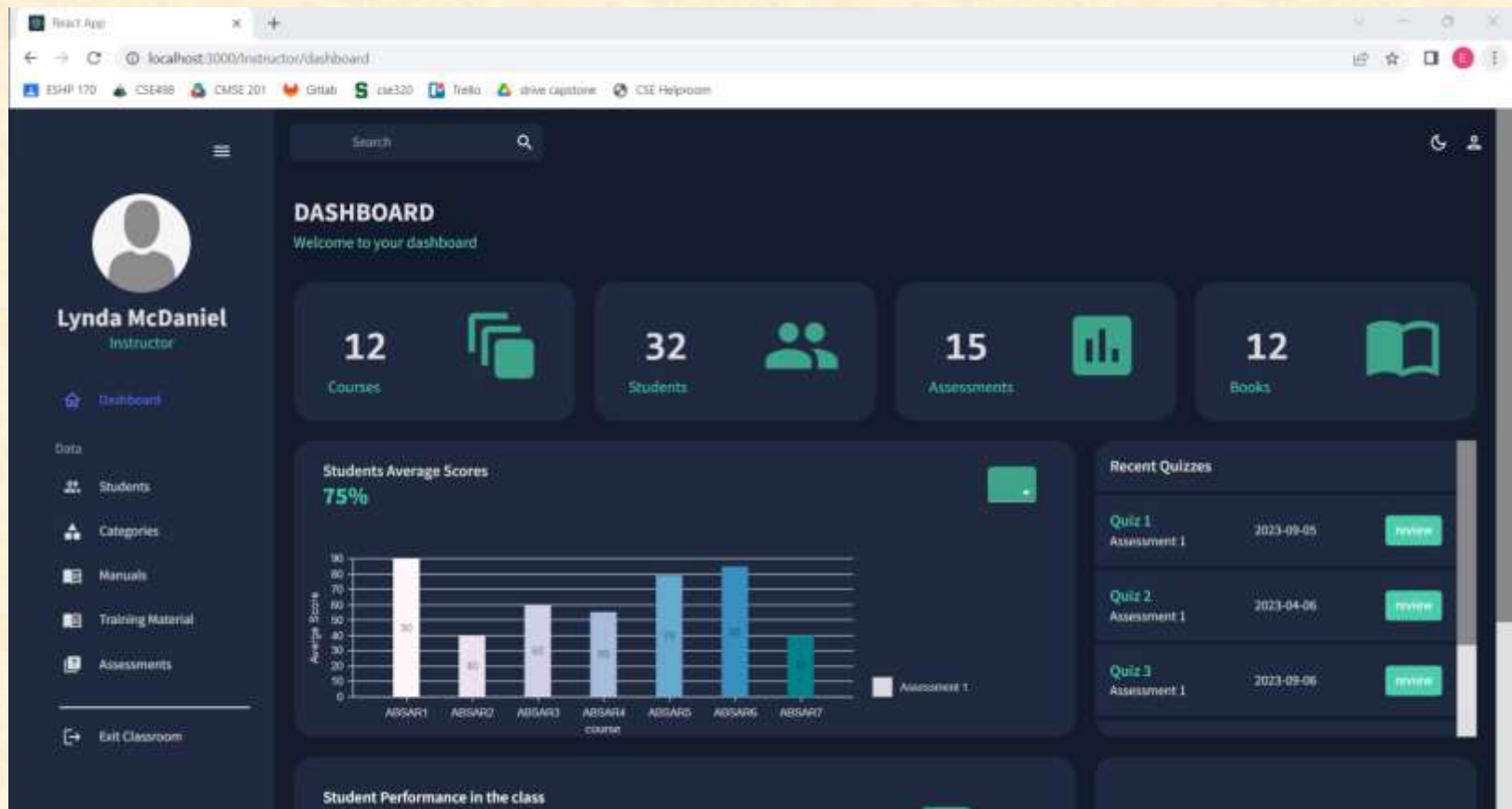
The screenshot displays a web application interface for managing classrooms. The browser address bar shows the URL `localhost:3000/Admin/classrooms`. The interface features a dark sidebar on the left with a user profile for `admin admin` and navigation links for `Dashboard`, `Instructors`, `Classrooms`, and `Courses`. The main content area is titled `Classroom` and includes a search bar, a user profile icon, and two buttons labeled `ADD` and `EDIT`. Below these elements is a table with the following columns: `Classroom`, `Course Code`, `Instructor(s)`, `Start Date`, `End Date`, `Start Time`, and `Location`. The table contains four rows of data:

Classroom	Course Code	Instructor(s)	Start Date	End Date	Start Time	Location	
<input type="checkbox"/>	ABGAR1	ABGAR	fynda	4/1/2023	5/1/2023	07:00	Building 1
<input type="checkbox"/>	ABGAR2	ABGAR	fynda	6/1/2023	5/1/2023	08:00	Building 2
<input type="checkbox"/>	ABGAR3	ABGAR	fynda	6/1/2023	7/1/2023	09:00	Room 100
<input type="checkbox"/>	ABGAR4	ABGAR	fynda	03/26/2023	04/08/23	11:00	Building 3

At the bottom right of the table, there is a pagination control showing `Rows per page: 100` and `1 - 4 of 4`.



Instructor Dashboard



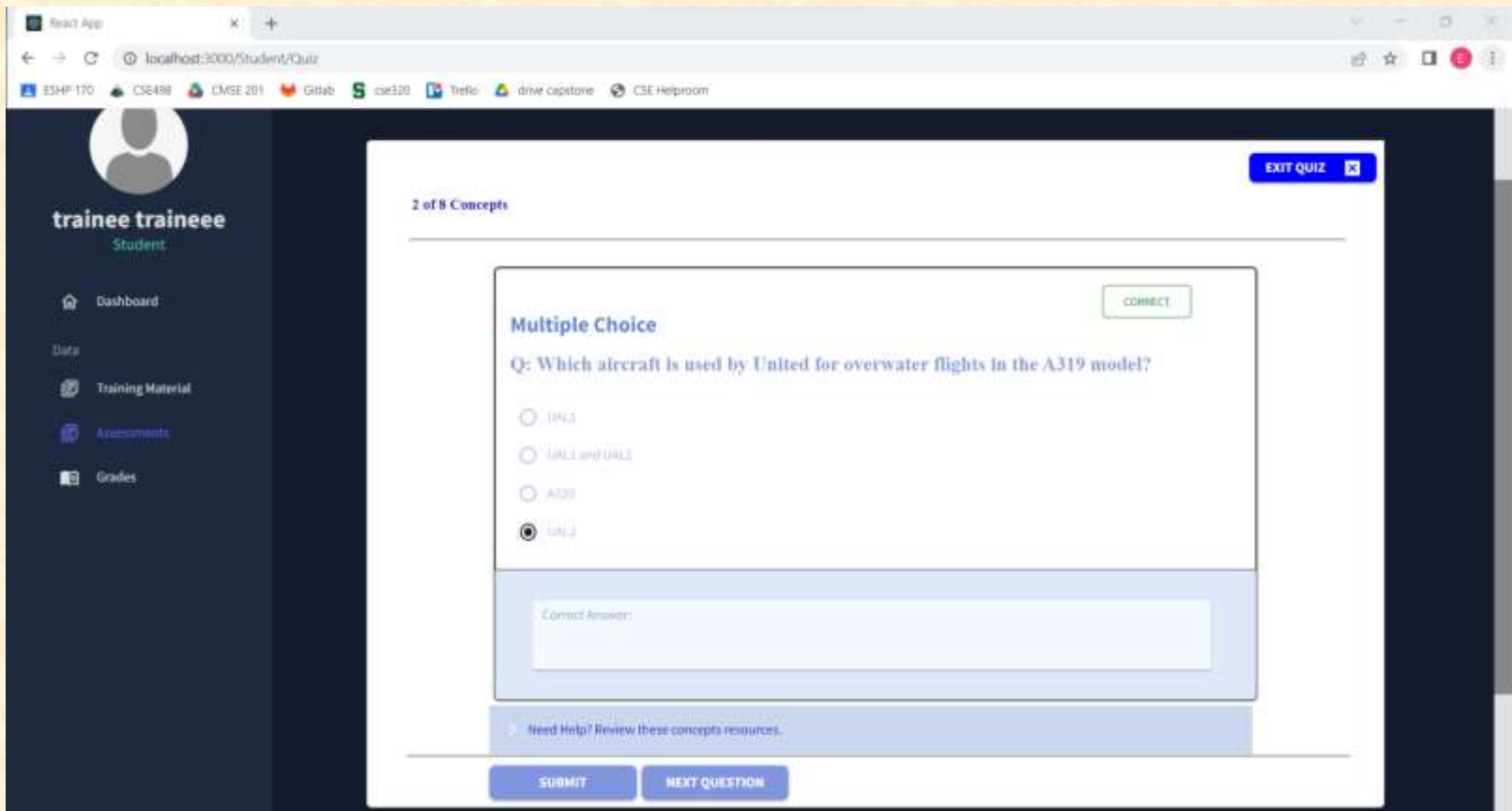
Generate Question Types

The screenshot displays a web application interface for a question bank. The browser address bar shows the URL `localhost:3000/instructor/assessments/questions-bank`. The page title is "Question Bank: ABSARABSAR1assessment1". A sidebar on the left identifies the user as "Lynda McDaniel, instructor" and lists navigation options: Dashboard, Data, Students, Categories, Manuals, Training Material, Assessments, and Exit Classroom. The main content area features a table with the following columns: Question, Question Type, AI Generated, Correct Answer, and Answer Choices. A modal dialog titled "Generate Questions using AI" is overlaid on the table, containing a text input field for "Enter the number of questions you'd like to generate for each question type" and three buttons: "Boolean Questions", "Multiple Choice ...", and "Short Answer Q...". The table contains several rows of question data, including questions about cockpit locations, seat configurations, and cabin seating.

Question	Question Type	AI Generated	Correct Answer	Answer Choices
<input type="checkbox"/> What is a cockpit?	multiple-choice	true	control seat	control seat, navigator, cabin
<input type="checkbox"/> What is the seating configuration for a 737?	multiple-choice	true	3-2-3	2-2-2, 3-3-3, 3-3-4
<input type="checkbox"/> What are the locations of the overhead bins?	multiple-choice	true	Galley/overhead	undefined, undefined, undefined
<input type="checkbox"/> Is it safe to access the overhead bins while the aircraft is in flight?	boolean	true	false	true, undefined, undefined
<input type="checkbox"/> Does the Q-Link 2 configuration have an all-galley seat?	true-false	true	True	False, undefined, undefined
<input type="checkbox"/> How many seats are in the first class cabin of an A320?	short-answer	true	8	undefined, undefined, undefined
<input type="checkbox"/> What is the maximum number of seats in the coach cabin of an A320?	multiple-choice	true	78	98, 108, 135
<input type="checkbox"/> What is the maximum number of seats in the A320's Cabin?	short-answer	true	98	undefined, undefined, undefined



Student Quiz Page



The screenshot shows a web browser window displaying a student quiz page. The browser's address bar shows the URL `localhost:3000/Student/Quiz`. The page features a dark blue sidebar on the left with a user profile for "trainee trainee" (Student) and navigation links for Dashboard, Data, Training Material, Assessments, and Grades. The main content area is white and displays "2 of 8 Concepts" at the top right, along with an "EXIT QUIZ" button. The quiz question is a multiple-choice question: "Q: Which aircraft is used by United for overwater flights in the A319 model?". The options are DAL1, DAL1 and DAL2, A320, and DAL2. A green "CORRECT" button is visible in the top right corner of the question box. Below the question, there is a "Correct Answer:" label and a text input field. At the bottom of the page, there are "SUBMIT" and "NEXT QUESTION" buttons, and a link for "Need Help? Review these concepts resources."



What's left to do?

Stretch Goals

- Multithreading/multiple API keys
- Individual question results
- Generate questions on specific topics
- Analysis of classroom results

Other Tasks

- Design changes for student and admin viewpoint
- More error checking for AI questions



Questions?

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