

Overview

For this coding challenge, you are to build out a simple web application using **React** and **Express**. Feel free to use either **JavaScript** or **TypeScript**, whichever you are most comfortable with.

Documents that will be provided to you include:

- **wireframe.pdf** that contains a wireframe with some examples of the UI (this is meant as reference only)
- **database.sql** as a reference for how the MySQL DB is setup
- **database-diagram.png** as a visual reference of how the MySQL DB is setup
- **database.config** that contains DB connection information to the remote DB
- **assets** folder that contains image assets

Database (MySQL)

- **Notes:**
 - Here are some additional clarifications on the Database schema
 - **University**
 - One University has several Courses
 - One University is linked to only one Country
 - **Course**
 - One Course belongs to one University
 - One Course is linked to only one Education Level
 - When displaying the Scholarships for the Course Card:
 - The Scholarship's university must match the Course's university
 - The Scholarship's education level must match the Course's education level
 - When calculating the **avg tuition fees**, you should calculate the average of all Courses related to the University

Frontend (React)

- **Requirements:**
 - Build a **Courses Page** that contains text at the top section
 - Build **search boxes** to filter the Course Cards
 - 1st search box should allow searching for both university and course names
 - 2nd search box should allow searching for education levels
 - 3rd search box should allow searching for country names
 - Build **Course Cards** that displays the Course information
 - Each course should only be displayed once (no duplicates, only one Card per Course)
 - For all **background images**, use: <https://picsum.photos/400/100>
 - For all **square images**, use: <https://picsum.photos/100/100>
 - **Restrictions:**
 - React **functional components**
 - **Raw CSS** only (.css file), no UI libraries (Bootstrap, Material UI, AntD, etc)
 - Pages should be **responsive from 320x568 to 1920x1080**
 - **Notes:**
 - Since this is a simple app for displaying only, Redux is not needed
 - You will determine how the pages will look like at different screen sizes
 - You have the freedom to change the styling to be different from the examples given, as long as the layout remains the same
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Backend (Express)

- **Requirements:**
 - Connect to the DB and retrieve data for the courses page
 - Remember to group scholarships properly to each Course
 - Allow search functionality for `university_name`, `course_name`, `level_name` and `country_name`
- **Restrictions:**
 - **Raw SQL** only, no ORMs or query builders (you can use **mysql2** package)
 - Prioritize **async / await** syntax over promise then / catch and callback syntax
- **Notes:**
 - Names in the wireframe map to column names in the DB
 - Names in the wireframe that do not exist on the DB should be calculated / derived
 - e.g., `avg_annual_tuition`