

Objective

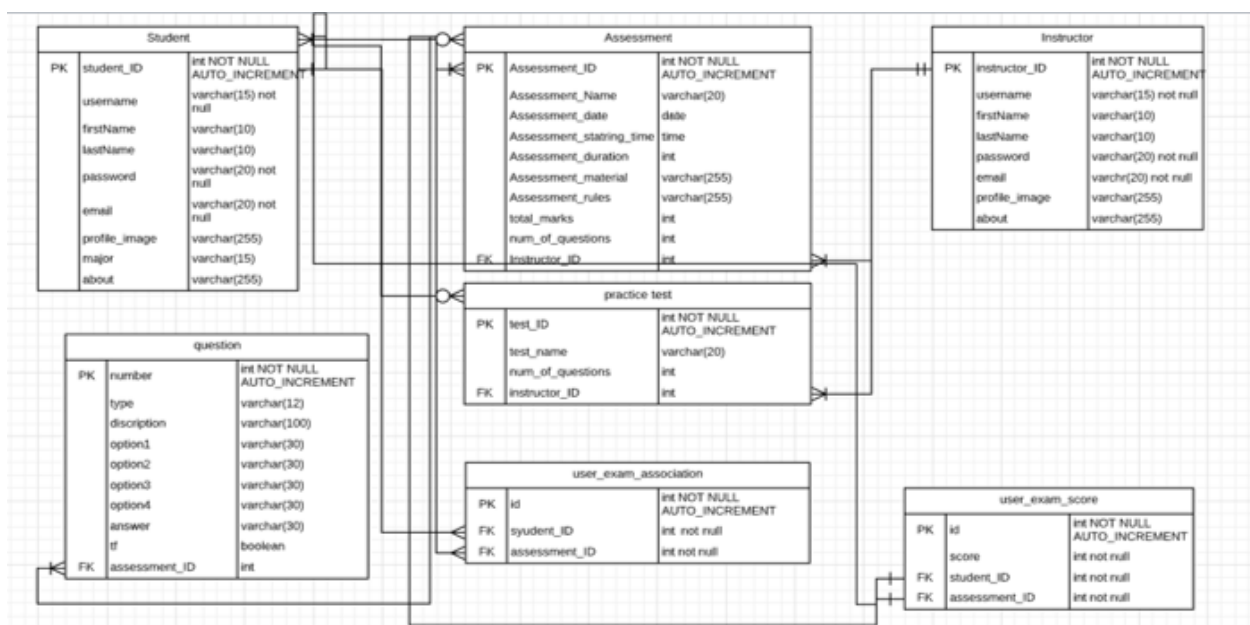
The objective of this phase is to provide a complete data processing model that allows a student to take, enroll, practice, and view their grades. The student can also view their upcoming exams in their Student Schedule. The instructor can create assessments and practice tests of different question type so test the student's knowledge.

Back-end Models and Tools

Database design

Entities, their attributes, and relationships were modelled using LucidChart. This schema was then converted to MariaDB compatible queries using LucidChart's export functionality.

Entity Relationship Diagram (ERD)



Development Environment

We used the Apache HTTP Server and the MariaDB RDBMS as part of the XAMPP (X-platform, Apache, MariaDB, PHP, Perl) stack as our development environment. We also collaborated with each other using the Git VCS and GitHub.

Changes in Front End Screens

My Exam Landing Page

Before

Upcoming Exams		
Major Name	Instructor Name	Scheduled Time
Physics 101 - Major 1	Dr. Elfy	11/11/2020, 3:45PM
Chemistry 101 - Major 2	Dr. Elfy	11/12/2020, 3:45PM
English 101 - Major 1	Dr. Elfy	11/11/2020, 2:00PM
SWE 363 - Major 1	Dr. Elfy	11/11/2020, 2:00PM

After

Upcoming Exams		
<button>Enroll In Exam</button>		
Major Name	Assessment Material	Scheduled Time
name	Example 10	2020-07-19 11:55:00

The user interface was changed to accommodate different data. New functionality added that allows user to enroll in Exams.

Create Test Landing Page

Before

Name of assessment

☐ Randomize questions

Date of assessment

Starting time

Browse...

Duration of assessment

List of questions:

Question	Type	points
What does SQL stands for	Short answer	10
What is the use of CSS	MCQ	5

After

Name of Assessment

Date of Assessment

Duration of Assessment

Syllabus

Rules

List of questions:

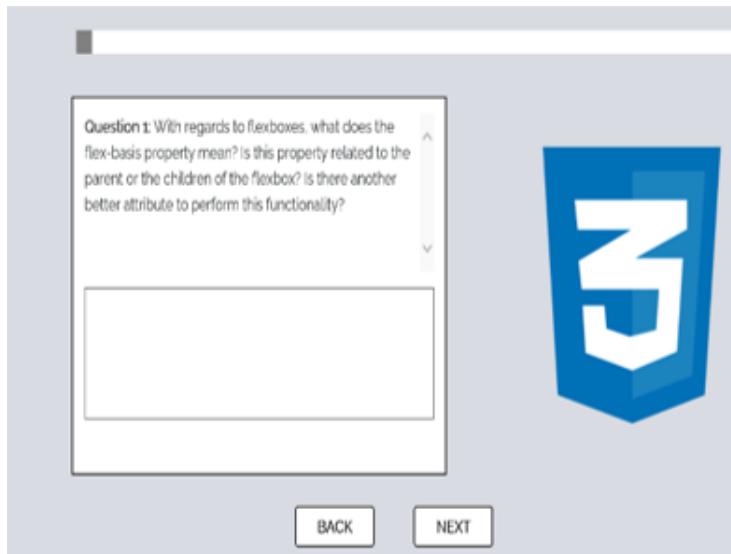
Number	Question	Type
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File input and Randomize questions were removed from the UI. The Starting Time field was merged with the Date of Assessment field to prevent a lot of unstructured data from

being passed around. Two new inputs were added to allow the instructor to add rules and syllabus of the assessment.

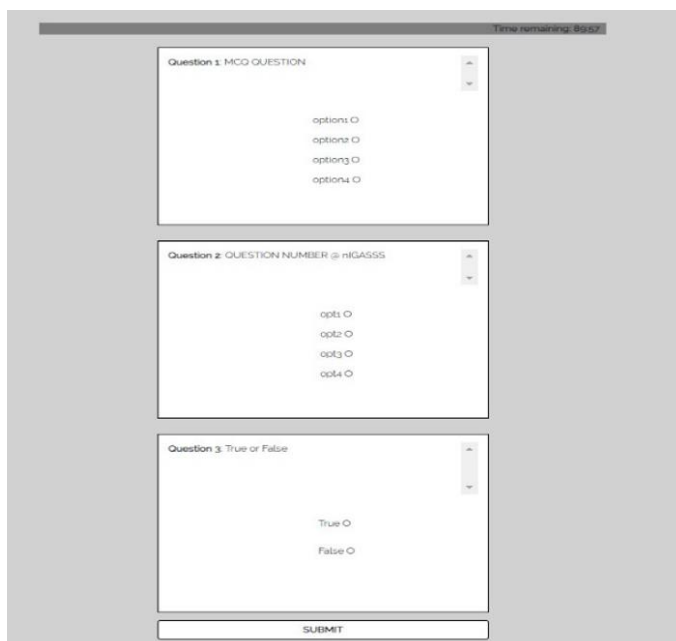
Exam Question Page

Before



The 'Before' interface shows a single question in a light blue container. The question text is: "Question 1: With regards to flexboxes, what does the flex-basis property mean? Is this property related to the parent or the children of the flexbox? Is there another better attribute to perform this functionality?". Below the text is a large, empty rectangular input box. To the right of the question box is a blue shield-shaped logo with a white number '3'. At the bottom of the container are two buttons: "BACK" and "NEXT".

After



The 'After' interface shows a list of three questions in a grey container. At the top right, it says "Time remaining: 8:00". The questions are:

- Question 1: MCQ QUESTION**
options:
☐ option1
☐ option2
☐ option3
☐ option4
- Question 2: QUESTION NUMBER @ nGASGS**
opt1
☐ opt1
☐ opt2
☐ opt3
☐ opt4
- Question 3: True or False**
☐ True
☐ False

At the bottom of the container is a "SUBMIT" button.

Instead of questions being showed one by one, we decided to show them all together.

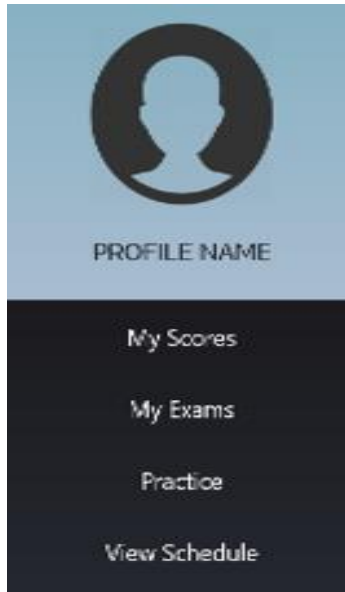
Account Page



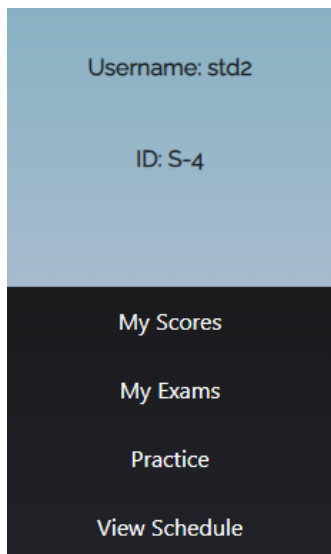
The account page was completely removed from the system. It held no purpose as we had not implemented the functionality of letting user's view other user's profiles.

Navigation Bar

Before



After



As the profile page was removed, there was no purpose of having a profile picture of the user. Hence, the profile picture was removed from the navigation bar.

View Scores Page

The View Scores page had to be removed as we could not implement the functionality to grade students in time.

Work Distribution

Omar Pervez Khan (201746350):

- Exam Question Page
- Exam Start Page
- My Exams Page
- Create Assessment Page
- Add Question Modal
- Create Practice Test Page
- Instructor Schedule Page
- Sign up Page
- Sign in Page

Hamed Alotibi (201730830):

- Student Practice Landing Page
- Student Schedule Page
- Student Detailed Practice Page
- Create Practice Test Page
- View Student Scores
- Add Question Modal

Abdulaziz Ismaeil (201685300):

- Sign up Page
- Sign in Page
- Instructor Schedule Page
- Student Schedule Page
- My Exams Page