

T3A2

Coder Academy Full Stack Web App Assignment

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Project Management Table

PROJECT MANAGEMENT TABLE

<u>Members</u>	<u>Strengths</u>	<u>Week 1</u>	<u>Week 2</u>	<u>Last few days</u>
Raph	React, Node	Make react front-end	Connect front-end to back-end	Front-end testing
Ben	MongoDB, Express	Design initial back-end routes	Make back-end more compatible	Back-end testing
Zak	CSS, Node	Assist with back-end	Add in topic data	CSS styling of front-end

Manual Testing

ScrollEd Manual Testing

Manual testing with the intention of determining whether the User Stories have been fulfilled.

User: Parent

Test Case: As a parent who's concerned about what their kids are doing online, I don't want to stop them from using technology, but I'm worried if the videos they're watching are appropriate for children. I also know they're curious and love to learn new things. I'm hoping they can use an app that has only educational videos, and that the app is fun enough to use so that they have the motivation to use it, rather than platforms with inappropriate content.

Status: Passed

Expected Result: The app should provide a selection of educational videos suitable for children. It should also have a user-friendly and engaging interface that motivates children to use it for learning.

Actual Result: During testing, it was observed that the app offers a variety of educational videos suitable for children. The user interface is child-friendly and engaging, with colourful visuals and easy navigation.

Explanation: The app meets the user's requirements by offering educational content and a user-friendly interface that encourages children to use it for learning. Therefore, the test case has passed.



Evidence

Content is colourful and engaging for children.

User: Coding Student

Test Case: As an aspiring coder, I want to feel motivated to become a better coder. However, studying coding is really hard, and I feel like I'm making no progress in my course. So, I want to have an app that has easy and entertaining coding content to watch, but gets progressively harder as I engage with it over time, so I can feel like I'm making progress with my coding knowledge.

Status: Passed

Expected Result: The app should provide a selection of short form coding content that is both easy to understand and entertaining. Additionally, as I engage with the content over time, it should gradually become more challenging to reflect my progress in coding knowledge.

Actual Result: During testing, it was observed that the app offers short coding related videos that starts with basic concepts and gradually increases in complexity as users engage with it over time.

This progression helps users feel like they are making progress in their coding knowledge, making the app motivating and effective.

Explanation: The app fulfills the user's requirements by offering a gradual increase in difficulty in coding content, making it an effective tool for improving coding knowledge. Therefore, the test case has passed.

Evidence:



As can be seen above, the Coding content begins with simple content on level 1 and then on level 2 the content becomes slightly more advanced.

User: Secondary School Student

Test Case: As a high school student, I want to get some benefit from my screen time. I find myself spending hours scrolling through short videos but feeling like I've wasted the afternoon. Because I'm a student, I want to keep learning new things and do it during the time when I'm not being productive. So, I want to have a feature where I can be tested on the knowledge of the content I just watched, and be tested frequently so I remember it.

Status: Passed

Expected Result: The app should include a feature that allows me to be tested on the content I've watched, ensuring I retain the knowledge. These tests should be frequent and tailored to the content I've consumed.

Actual Result: During testing, it was observed that the app provides a feature that allows users to take quizzes every few videos and test the knowledge they've learned.

Explanation: The app meets the user's requirements by offering frequent testing on the content watched, making screen time more productive. Therefore, the test case has passed.

Evidence:

These images also illustrate that the website can be used on mobile devices.



Screenshot 1

Loading data...

Screenshot 2

Welcome to Scroll.Ed!

Would you like to login or signup? Login ▾

Enter your username:

Enter your password:

Submit

Screenshot 3

Welcome to Scroll.Ed!

Would you like to login or signup? Signup ▾

Enter your username: newUser

Enter your password: newPass

Submit

Screenshot 4 & 5

...2-frontend-azm4-6mbobk88m-ausraf720.vercel.app says
Signup successful as newUser. Logging in now!

OK

Welcome to Scroll.Ed!

Would you like to login or signup? Signup ▾

Enter your username:

Enter your password:

Submit

...2-frontend-azm4-6mbobk88m-ausraf720.vercel.app says
Login succesful

OK

Welcome to Scroll.Ed!

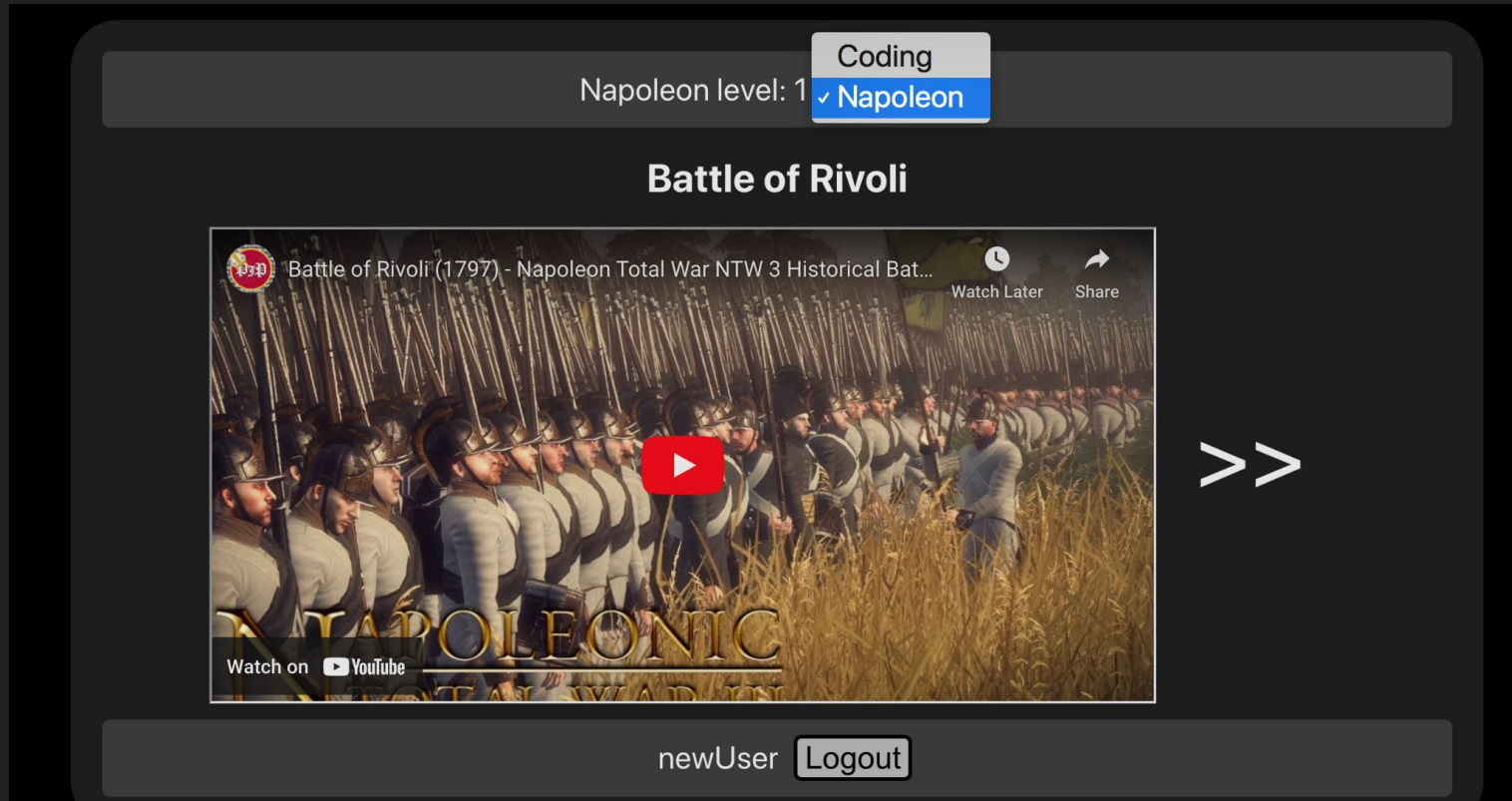
Would you like to login or signup? Signup ▾

Enter your username:

Enter your password:

Submit

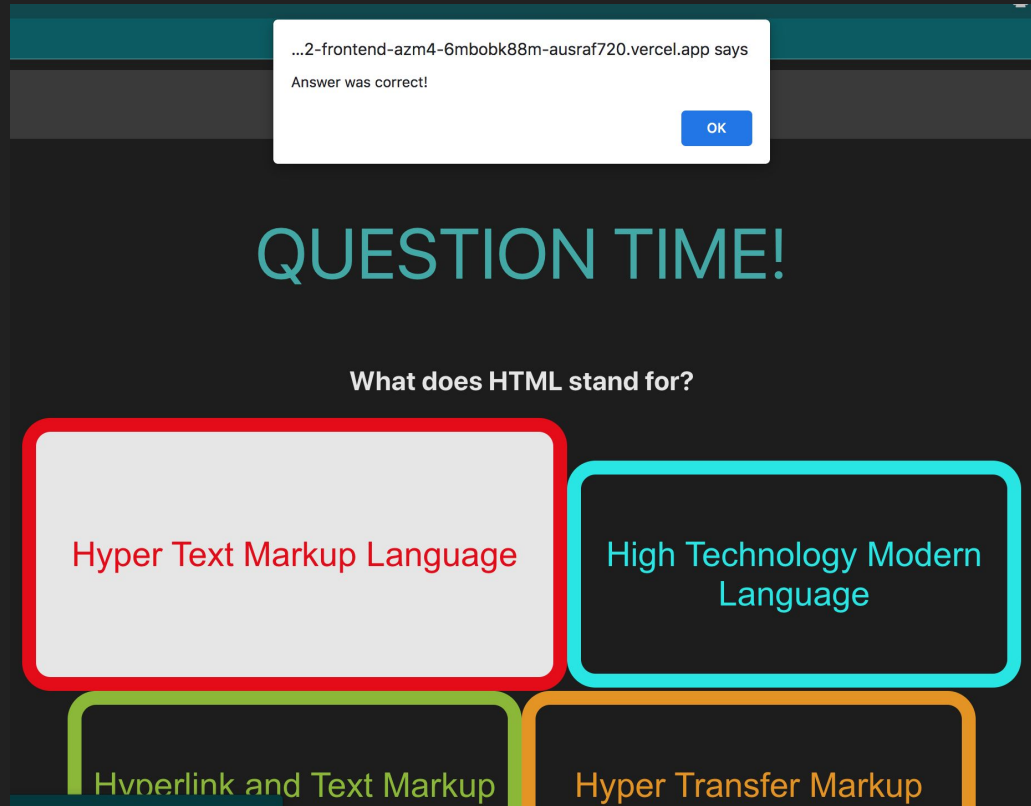
Screenshot 6



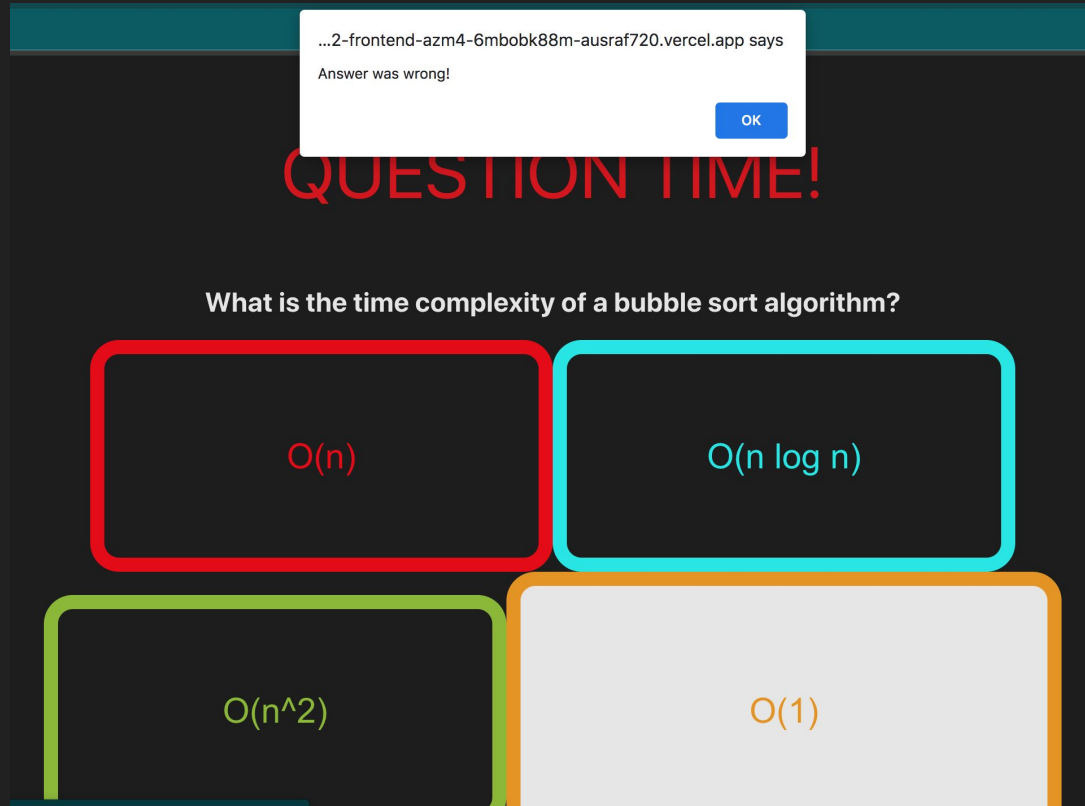
Screenshot 7



Screenshot 8



Screenshot 9



Purpose

The purpose of this project is to make an app that combines the addictiveness of short-form content with education. Youths of modern times spend lots of time scrolling through short-form videos on platforms such as Tik Tok and Youtube Shorts. During this time, they're not productive at all, effectively wasting up to hours of their day not accomplishing anything due to the content being so addictive.

The app will still have the same short-form content, but it will only be educational and also have a mix of videos with some multiple-choice questions. These questions that show up from time to time will encourage the user to remember facts about the content they just watched, as they will be about the topics of those videos. If users can get questions right a lot for a particular topic, they can 'level' up for that topic, get more difficult videos and related questions, and be able to upgrade their account.

Justification

Because this app still only has short-form content, it should still remain addictive, but using it won't be a complete waste of time as its users will be encouraged to remember facts to get the occasional multiple-choice question correct. They'll be motivated to do so as if they can get questions correct, they'll progress to more difficult videos from that same topic, but also get potential prizes for getting to higher topic difficulties such as being able to customise their profile. Thus, users will be able to walk away from using this app after long periods of time having memorised some facts and useful information, and not having completely wasted their time.

Functionality

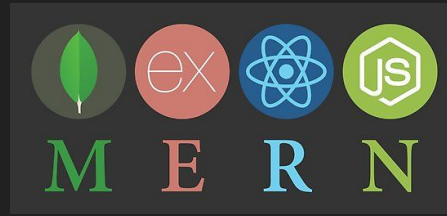
This app will mostly be a platform for short-form content like the above two mentioned, so its main function will be to have a constant stream of short videos that a user will be able to scroll through, much in the same way that can be done on Tik Tok and Youtube Shorts. As mentioned previously, it will only have educational videos. Each video will be part of a topic, such as geography, Python coding, history of the industrial revolution, etc.

After every 5 videos, with each video coming from any topic, a single multiple choice question pops up. Users only get one attempt at this question, and it will be about a topic from one of the past 5 videos. If users manage to get enough right answers for a given topic, for instance get the last 4 out of the 5 questions correct for a given topic, then their 'level' for that topic will increase. As an example, if in a day they go through 5 multiple-choice questions about flags of different countries, and manage to correctly identify 4 flags correctly, they will go from 'Level 1' to 'Level 2' on geography. Now the videos and related questions will be more difficult, this time asking about capital cities of various countries.

Target audience

The target will be kids and younger adults who have access to technology, many of whom often find themselves spending up to hours scrolling through short-form content while not being productive at all. As this is the group that tends to stay hooked on short form content for a long time, it only seems natural that they should also stay hooked to this particular app as well.

Tech stack



This software will feature the MERN stack, and also utilise links to Youtube shorts (for testing purposes).

MongoDB will be used to store both data on users, their points/statistics, data on all the videos that will show up in the app, and also questions for each video topic. The videos for this demonstration will be educational videos from Youtube shorts from a variety of Youtube channels that provide free and public educational videos.

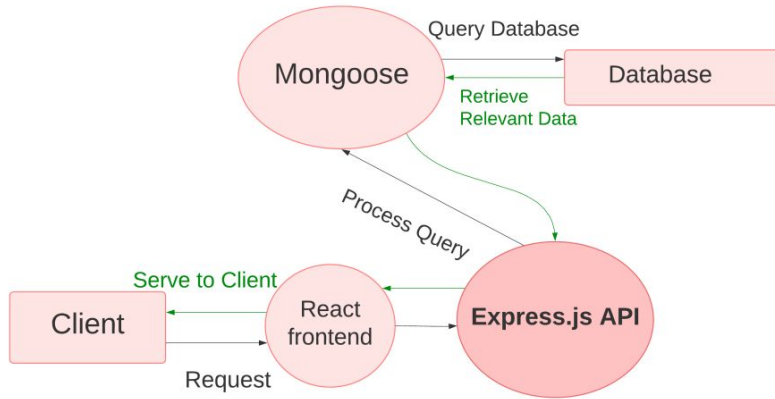
Express will be used to obtain data from the database to be given to the front-end of the app. Likewise, it will also be used to update data in the MongoDB database. Mongoose will also be important for providing schemas for the database.

React will be used to display the videos to the user, and also the multiple choice questions based on the data collected and calculations made, as well as the sign-in/sign-up pages. React will then be able to pass information from the user when they answer the multiple choice questions.

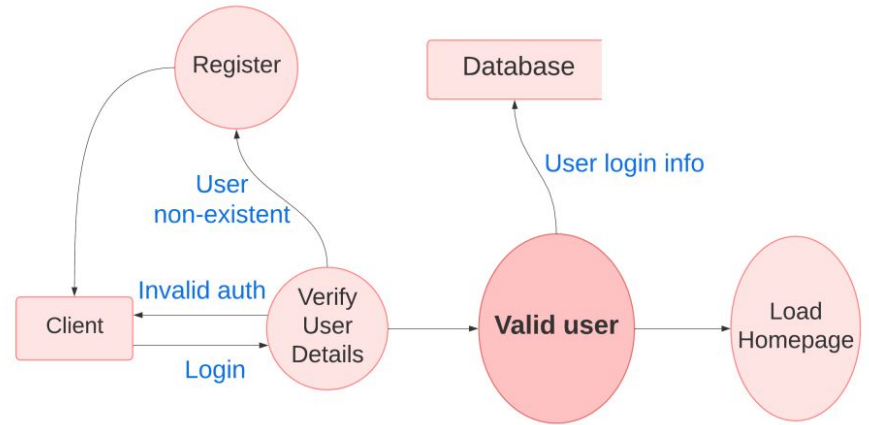
Node will be essential for doing calculations regarding each user, and also randomly picking out videos as well as questions for the videos. It will be used to determine what videos from what topics should be displayed, based on the questions the user was able to get correct.

Dataflow diagrams

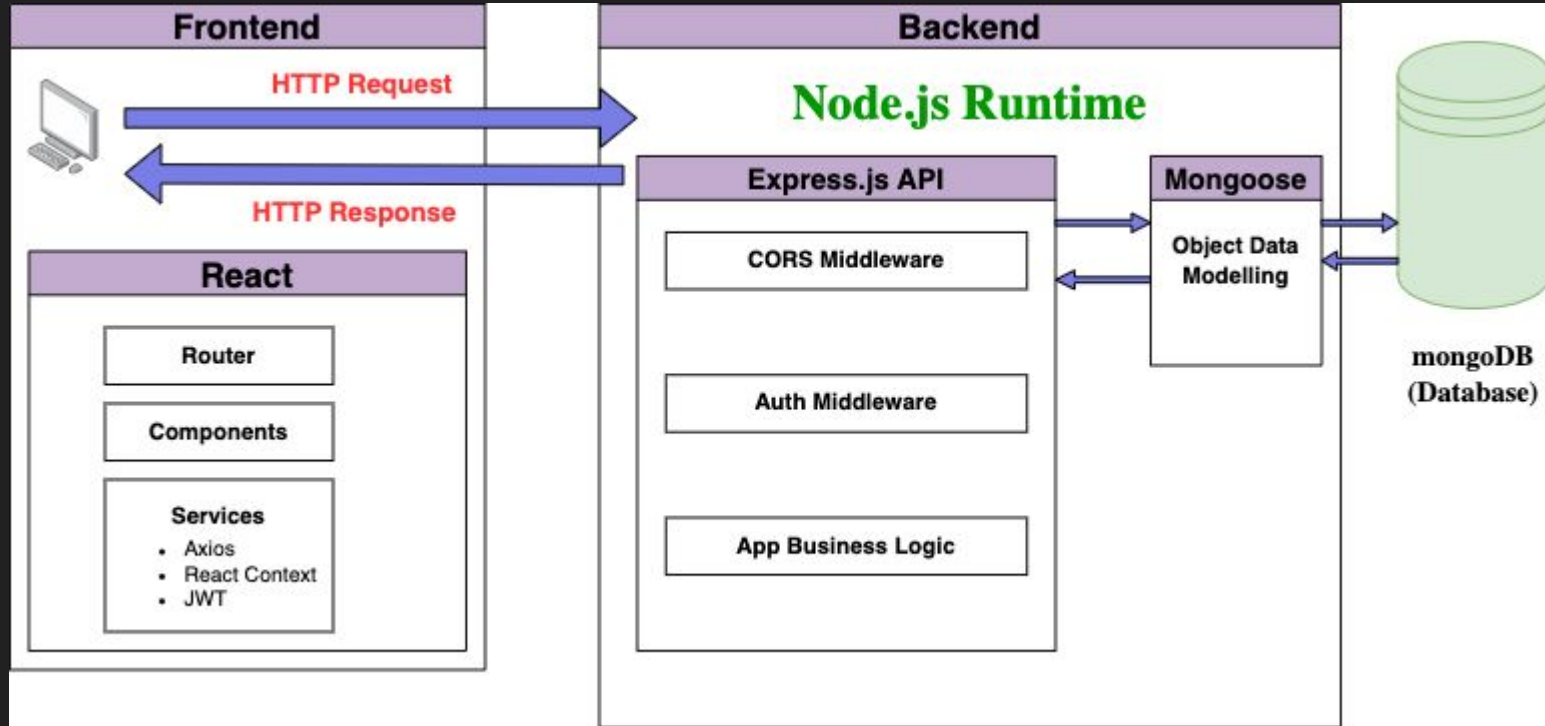
Searching & Serving Videos and Questions



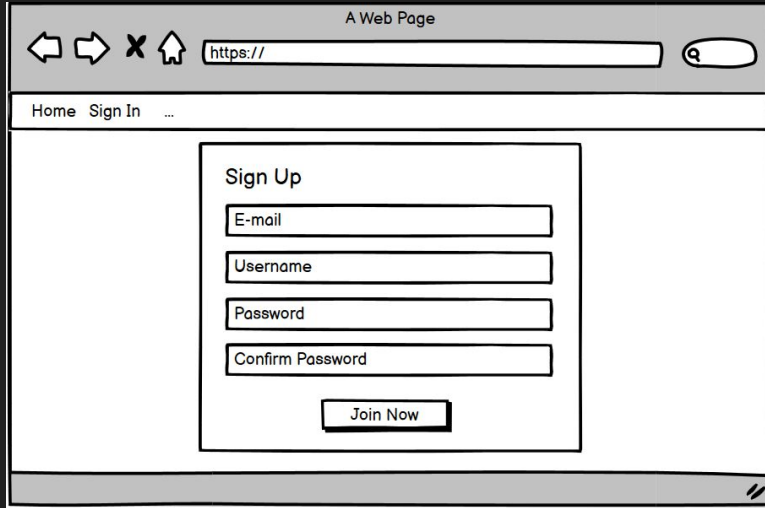
User Authentication



Application architecture diagram

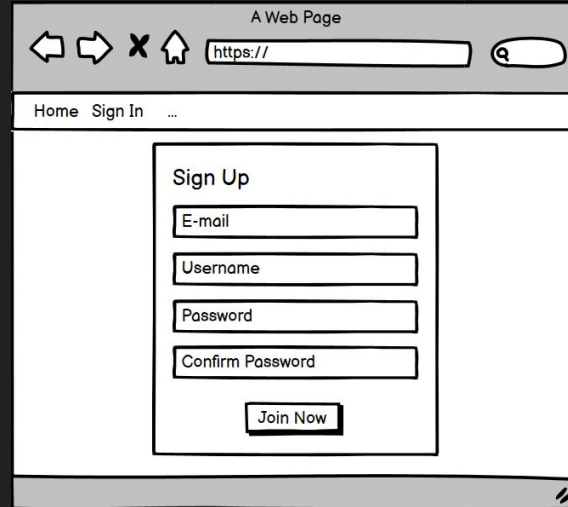


Sign-up page wireframes



A desktop browser window titled "A Web Page" with a navigation bar containing "Home", "Sign In", and a menu icon. The main content area features a "Sign Up" form with four input fields: "E-mail", "Username", "Password", and "Confirm Password", followed by a "Join Now" button.

Desktop



A tablet browser window titled "A Web Page" with a navigation bar containing "Home", "Sign In", and a menu icon. The main content area features a "Sign Up" form with four input fields: "E-mail", "Username", "Password", and "Confirm Password", followed by a "Join Now" button.

Tablet



A mobile phone browser window titled "A Web Page" with a navigation bar containing "Home", "Sign In", and a menu icon. The main content area features a "Sign Up" form with four input fields: "E-mail", "Username", "Password", and "Confirm Password", followed by a "Join Now" button.

Mobile

Sign-in page wireframes

A desktop browser window titled "A Web Page" with a navigation bar containing "Home", "Sign In", and "...". The main content area features a "Sign In" form with an "E-mail" input field, a "Password" input field, a "Forgot Password?" link, and two buttons: "Sign In" and "Sign Up".

Desktop

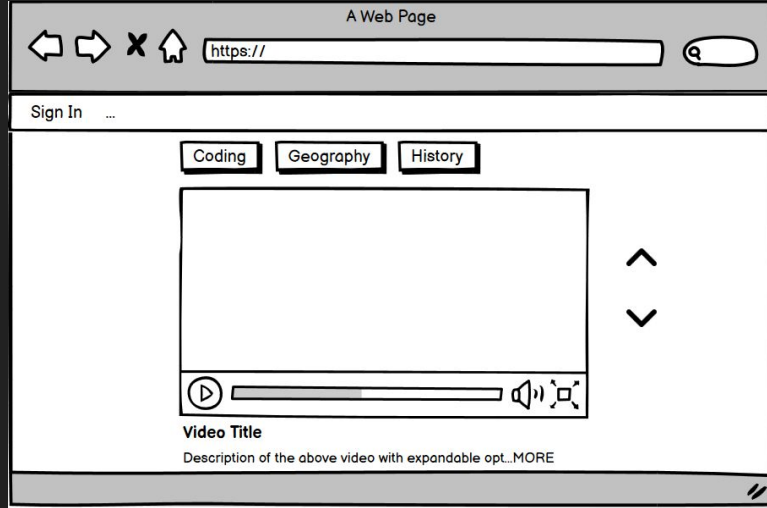
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Tablet

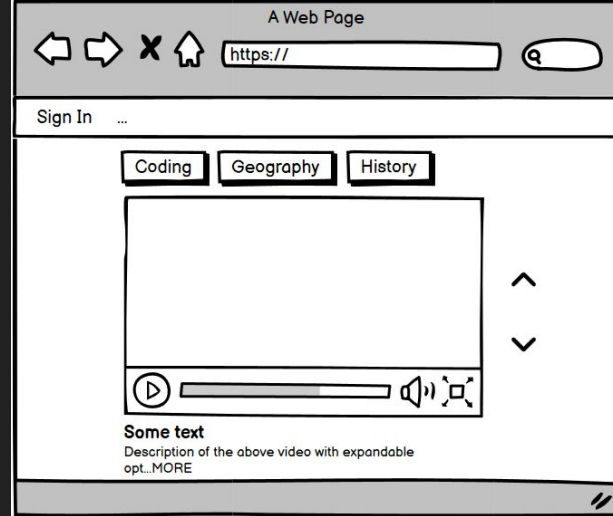
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Mobile

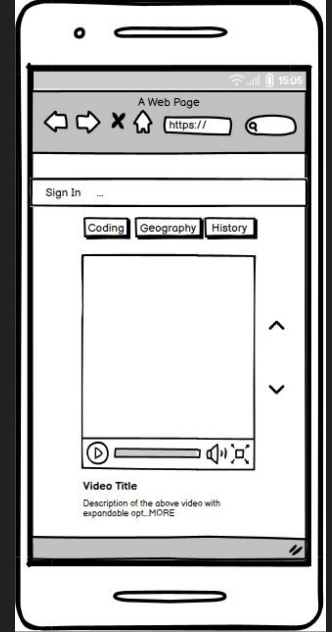
Main video page wireframes



Desktop

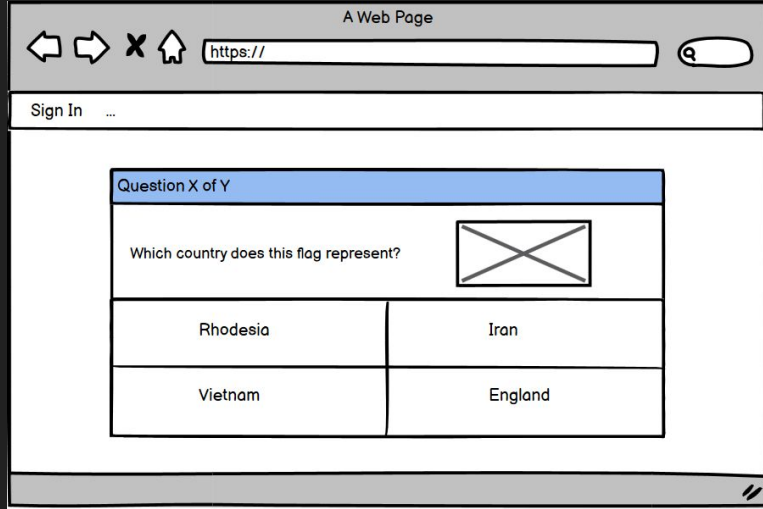


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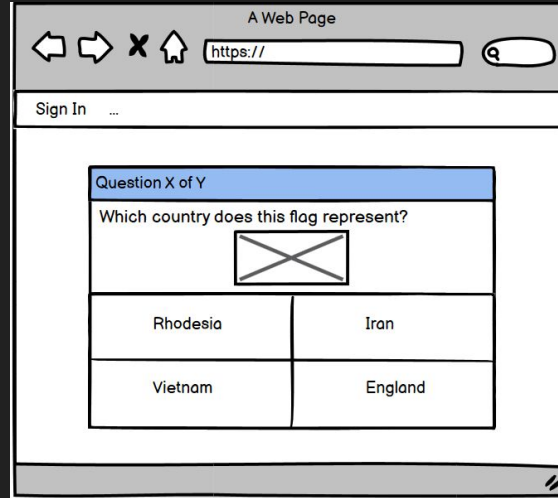


Mobile

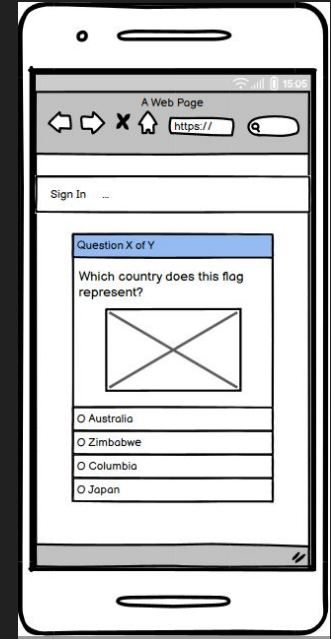
Question page wireframes



Desktop



Tablet



Mobile

User stories

User 1

Title	Priority	Time
Parent	High	2 days

As a parent who's concerned about what their kids are doing online, I don't want to stop them from using technology completely, but I'm worried if the videos they're watching are appropriate for children. I also know they're curious and love to learn new things. I'm hoping they can use an app that has only educational videos, and that the app is fun enough to use so that they have motivation to use this educational app, rather than other platforms with disturbing content.

User 2

Title	Priority	Time
High School student	High	3 days

As a high school student, I want to get some benefit from my screen time. I find myself spending hours scrolling through short videos, but feeling like I've wasted the afternoon. Because I'm a student though, I want to keep learning new things, and do it during the time when I'm not being productive. So, I want to have a feature where I can be tested on the knowledge of the content I just watched, and be tested frequently so I remember it.

User 3

Title	Priority	Time
Coder student	High	3 days

As an aspiring coder, I want to feel motivated to become a better coder. However, studying coding is really hard, and I feel like I'm making no progress in my course. So, I want to have an app that has easy and entertaining coding content to watch, but gets progressively harder as I engage with it over time, so I can feel like I'm making progress with my coding knowledge.