

# CCT College Dublin

## Assessment Cover Page

*To be provided separately as a word doc for students to include with every submission*

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<b>Module Title:</b>	Client-Side Programming
<b>Assessment Title:</b>	CA2: ÉirQuiz
<b>Lecturer Name:</b>	Sam Weiss
<b>Student Full Name:</b>	Douglas Vinicius Dierings
<b>Student Number:</b>	2022322
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<b>Date of Submission:</b>	Tuesday 09 <sup>th</sup> May 2023

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### Declaration

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5/14/2023

# CA2: ÉirQuiz

Client-Side Programming

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Douglas Vinicius Dierings  
CCT COLLEGE

## Framework and Library Research

Frameworks and libraries for JavaScript are essential resources for web developers. To save time and effort, they offer simple prewritten code to integrate into projects. Building complex applications becomes easier with frameworks like React, Angular, and Vue, while jQuery libraries simplify routine tasks like DOM manipulation. Making the right framework or library selection can significantly increase a developer's productivity and result in better web user experiences.

In this report, I will compare two web development frameworks, React and Angular.

### **React:**

React is a JavaScript library created by Facebook in 2011 that has grown in popularity because of its ease of use and adaptability. React supports the use of reusable components and focuses on creating user interfaces, making it simpler to maintain large codebases. Developers can describe how the user interface should look at any time using React's declarative approach, and React will update the DOM by those instructions.

A virtual DOM, which is a compressed version of the real DOM, is used by React. As a result, React can efficiently update only the UI elements that have changed rather than rewrite the entire interface. A variety of third-party libraries are available for React, including Redux for state management, React Router for client-side routing, and Jest for testing. Some well-known React functions are `componentDidMount`, which is called after the component has mounted and is used to fetch data or start a timer, and `setState`, which modifies the component's state.

### **Angular:**

Google created the Angular framework, which launched in 2010, but its support ended in 2022. Angular is a feature-rich framework made to assist programmers in creating complex applications. For creating complicated applications, Angular offers a number of tools and services, including dependency injection and form validation. Angular uses TypeScript, a superset of JavaScript that is statically typed and gives JavaScript features like interfaces, classes, and enums.

Angular's web development framework uses modules, components, and services to organise code and promote reuse. It has a development server for local testing, and a CLI tool for creating components, services, modules, and more. Common functions used in Angular include `ngOnInit`, when a component is initialised, and `ngOnChanges` when the input properties of a component change.

### **Recommendation:**

After comparing React and Angular, I would recommend that we use React to develop the ÉirQuiz web application. React is an excellent choice for creating small to medium-sized applications due to its simplicity and flexibility, and its component-based architecture makes code reuse and maintenance simple. Also, React renders UI updates more quickly, like the timer. Although Angular offers a larger selection of tools and services, it might be unnecessary for a simple application like ÉirQuiz. Furthermore, there are more third-party libraries and a larger community for React, making it simpler to find solutions to problems that are frequently encountered.

## Reference

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