

### **TASK**

# Capstone Project - Full Stack with React and Express

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## Introduction

# WELCOME TO THE FULL STACK APP WITH REACT AND EXPRESS CAPSTONE PROJECT!

Great job on making it to this point. In this Capstone Project, you will build a full-stack web application using React and Express that interfaces with the **iTunes Search API**. The application should allow users to search for content within the iTunes Store and Apple Books Store and save a list of their favourites. This project will showcase your skills in both front- and back-end development, API integration, and basic documentation.

# **Instructions**

This project involves creating an app that needs modules to run. These modules are located in a folder called 'node\_modules', which is created when you run the command 'npx create-react-app my-app-name' or similar. Please note that this folder contains hundreds of files which, if you're working directly from Dropbox, have the potential to slow down Dropbox sync and possibly your computer.

As a result, please follow this process when creating/running such apps:

- Create the app *on your local machine* (outside of Dropbox) by following the instructions in the task.
- When you're ready to have a reviewer review the app, please *delete the node\_modules folder*.
- Compress the folder and upload it to Dropbox. Your reviewer will, in turn, decompress the folder, install the necessary modules and run the app from their local machine.

# **Capstone Project**

Please consult the official documentation of the <u>iTunes Search API: Overview</u> to learn more about the iTunes Search API.

Carefully follow the instructions and ensure that your web application fulfils the following criteria:

#### Front-end:

- Create an attractive and user-friendly interface using React components.
- Implement a search input where users can enter a search term and also select the type of media they want to search for (e.g. movie, podcast, music, audiobook, short film, TV show, software, ebook, or all).
- Implement a favourites list where users can add and remove items. The list of favourite content does not need to be remembered when the user exits your web application.
- All output results should be attractively displayed.

#### Back-end:

- Use Node.js with the Express framework to create the server to serve your React front-end and handle API requests.
- Implement a route that communicates with the iTunes Search API to fetch music data based on user queries. Retrieve album information including album name, artist name, album cover image, and release date.
- Pass the API endpoints data to the front-end as needed to display results to the user.
- Use JWT to authorise API requests and secure your API.

#### Take Note:

- You do not have to authenticate users.
- You do not have to create a database for this application.
- No information about the users of your application, their favourites list, nor their history activity needs to be stored by your application after the user leaves the app.

#### **Documentation:**

- Create a **README.md** file that includes a description of your application, its purpose, and key features.
- Provide clear instructions on how a user can install and run your application locally.
- README files are compiled in Markdown, a lightweight markup language commonly used for project documentation. Markdown uses plain text with a special syntax allowing you to format elements such as headers, lists, links, and images. To create a README file, open Visual Studio Code or any preferred code editor, compose your content using **Markdown** syntax, and then save the file with a .md extension.
- **Optional**: Create wireframes using **draw.io** to demonstrate how the user interface of your application will work. Export the wireframes as a PDF and save it in your Dropbox folder as **wireframes.pdf**.

#### **Guidelines:**

- The file structure of the project should be well-organised and easy to understand and use.
- Your code should be well documented with appropriate comments. The
  code should also be easy to read, adhering to <u>Google's JavaScript Style</u>
  <u>Guide</u> about indentation, meaningful variables, component names, etc.
- You should ensure that your application has been appropriately tested and
  is free from errors or bugs. It's recommended to try using unit testing to
  help with this process.
- A code reviewer should be able to launch your application by typing 'npm start' from the command line interface.

#### **OPTIONAL**

- Deploy your application on Render and add the link to your application in the README.md file of your project.
- Please note that you can only deploy static apps, hosted on GitHub, to Render. In order to deploy a dynamic application, like this capstone project app, you require a paid Render membership.





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