

Project: **OnlineTestApp.com**

Developer: Siddharth Basu

- **Project details:**

Online test application is aiming to digitise a product which is an online quiz system capable of conducting a quiz online for the user. The application is segregated into three main modules:

- a) **Quiz module:** The user is first shown different options for the available quizzes to attempt. The quizzes are of different domains and each has a set number of questions. Upon clicking on any particular quiz, the user is displayed a question on that domain which he needs to answer.
- b) **Result:** The application in addition to conducting the quiz, also gives a score to the user according to the answers received to the questions. Each question has only one single answer. The score computed is out of the total questions in that domain (currently 5 questions per domain).
- c) **Review and Assessment:** On the main assessment page of the application there is a question wise analysis of the quiz. Each question is marked correct or wrong based on the answers received by the user. If the question is answered wrong, then the right answer is marked in green and the user's wrong answer in red.

- **Github Link:**

<https://github.com/siddharth-basu98/OnlineQuizApplication.com>

- **Backend API JSON requests served through JSON Server npm package.** The json-server is running on **port 3000 (default)**.
- **The React server is to run at port 4000 (or any other port).** The npm start script as of now is `"PORT=4000 react-scripts start"`.
******For @Windows change npm start to `"set PORT=4000 && react-scripts start"`**

Some key concepts used in the Application

- **React states and classful components**
- **React Props** and functional components
- **JSON server for API endpoints (mock backend development)**
- React component **lifecycle methods**
- **Bootstrap and CSS** for styling
- **ES6** JavaScript features
- **React Router**
- **Concurrently** for automating the npm start command

How to run the app (automated via concurrently module)

Step 1:

If using HTTPS, run the following command on the terminal to clone the Online Test App made with React and JSON server,

<https://github.com/siddharth-basu98/OnlineQuizApplication.com.git>, otherwise if using SSH, <git@github.com:siddharth-basu98/OnlineQuizApplication.com.git>

Step 2: (Activating APIs through JSON Server)

Using any IDE of choice, open the cloned project in the workspace. Run the command “**npm install**” to install all the modules and dependencies of the application. Following which the **Json server and React development server** can both be started using the simple command “**npm run dev**”. A screenshot of **package.json** is shown below as to why this happens.

```

    "web-vitals": "^0.2.4"
  },
  > Debug
  "scripts": {
    "start": "PORT=4000 react-scripts start",
    "json-server": "json-server --watch backend_json_server/db.json",
    "dev" : "concurrently \"npm start\" \"npm run json-server\"",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": [

```

Just running this command starts both the **React server (Port 4000)** and the **Json server (default port 3000)**.

How to run the app (without concurrently module)

Step 1:

If using HTTPS, run the following command on the terminal to clone the Online Test App made with React and JSON server,

<https://github.com/siddharth-basu98/OnlineQuizApplication.com.git>, otherwise if using SSH, <git@github.com:siddharth-basu98/OnlineQuizApplication.com.git>

Step 2: (Activating APIs through JSON Server)

Using any IDE of choice, open the cloned project in the workspace. Run the command “**npm install**” to install all the modules and dependencies of the application. After doing that run “**cd backend_json_server**” and then type in the terminal “**npm json-server --watch db.json**”. This starts the backend server which **starts listening to port 3000** where the react app sends its request to. You can directly run “**npm json-server --watch backend_json_server/db.json**” directly.

```
ified custom words) in
siddharth@siddharths-MacBook-Air ~/Desktop/Assessment/Phase-5.2/online_test_app
master • ? json-server --watch backend_json_server/db.json
✓ 1374 20:54:39

\{^_^\}/ hi!

Loading backend_json_server/db.json
Done

Resources
http://localhost:3000/question

Home
http://localhost:3000

Type s + enter at any time to create a snapshot of the database
Watching...
```

Step 3: (Starting the React Server)

On the root directory of the application, just run the command “**npm install**” and then “**npm start**”, it automatically starts the react development server on **port 4000** which is written in the start script of the package.json file.

```
TERMINAL  ...  3: node
siddharth@siddharths-MacBook-Air ~/Desktop/Assessment/Phase-5.2/online_test_app
master • ? npm start
✓ 1372 20:57:0

> online_test_app@0.1.0 start /Users/siddharth/Desktop/Assessment/Phase-5.2/online_test_app
> PORT=4000 react-scripts start
```

```
182
TERMINAL  PROBLEMS  OUTPUT  DEBUG CONSOLE  2: node
Starting the development server...

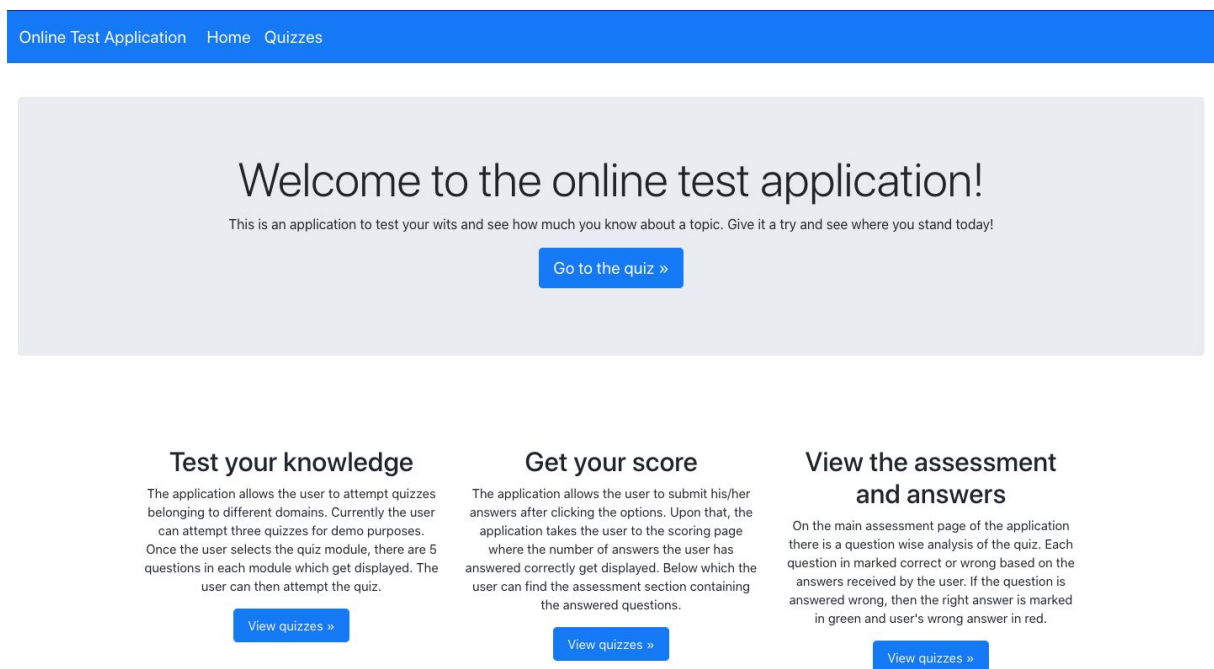
Browserslist: caniuse-lite is outdated. Please run next command `npm update`
[]
```

Step 4:

Enjoy all the functionalities of the app from here on.

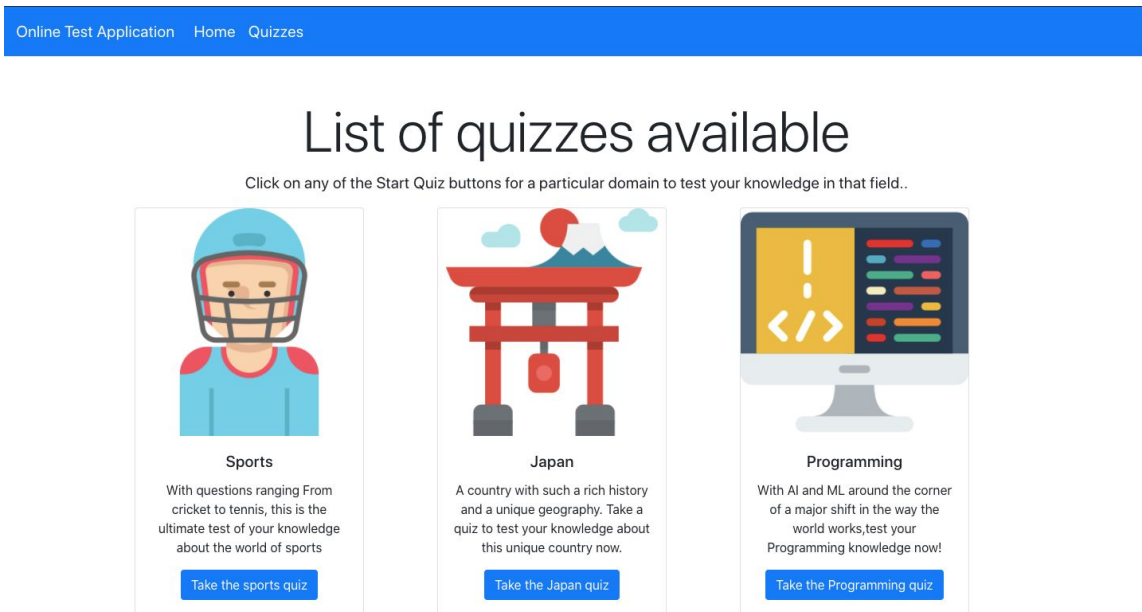
Major Functionalities

1) Home Page (“/”)



The header has a bootstrap **jumbotron** showing the name of the application and a “**go to the quiz**” which when clicked directly takes the user to the available quizzes page.

2) Available quiz domain page. (“/quiz”)



This page shows the options for the domains of the quizzes available. Currently the application has quizzes for three domains for demo purposes, namely Sports, Japan and Programming. Upon clicking any of the quiz domains a list of questions is displayed for the user to answer.

3) Show Quiz

Questions

Click on the option you think is correct. Once you do the selected option is shown in blue color.
Finally after attending all the questions click the submit button to get **your score**.

Question 1	
In Football, which team has won the UEFA Champions League the most number of times?	
Real Madrid	FC Barcelona
Manchester United	Bayern Munich

Question 2	
Which F1 driver has the record for winning the most number of races in F1 history?	
Michael Schumacher	Ayrton Senna
Lewis Hamilton	David Coulthard

Question 3	
In tennis, what piece of fruit is found at the top of the men's Wimbledon trophy?	
Strawberry	Pineapple

The show quiz section displays a list of questions to the user. The key functionalities of this page are as follows,

- Upon selecting an option, **the option is highlighted in blue to indicate the selection.**
- The user can deselect a selected option and select any other as many number of times.
- User once has attempted the quiz needs to click the **submit button** to view the results and a full assessment of the quiz.

Questions

Click on the option you think is correct. Once you do the selected option is shown in blue color.
Finally after attending all the questions click the submit button to get **your score**.

Question 1

In Football, which team has won the UEFA Champions League the most number of times?

Real Madrid

FC Barcelona

Manchester United

Bayern Munich

Question 2

Which F1 driver has the record for winning the most number of races in F1 history?

Michael Schumacher

Ayrton Senna

Lewis Hamilton

David Coulthard

Question 3

In tennis, what piece of fruit is found at the top of the men's Wimbledon trophy?

Strawberry

Pineapple

The submit answers button is at the bottom to view the results along with a go back to all quizzes option.

Apple

Custard Apple

Question 4

What does the Olympic Flame symbolize?

zeal to play sports

Challenge

Continuity

Integrity

Question 5

For which of the following games / sports the term Ring is not used for ground/space?

Boxing

Ice Hockey

Gymnastics

Baseball

Submit answers

Go back to all quizzes

3) Result and Assessment page.

Review and Assessment

You scored 2/5

Here is the review of your answers. The answers you attempted and got wrong are marked in red and the correct option in green.

Question 1 - (Correct)

In Football, which team has won the UEFA Champions League the most number of times?

Real Madrid

FC Barcelona

Manchester United

Bayern Munich

Question 2 - (Wrong)

Which F1 driver has the record for winning the most number of races in F1 history?

Michael Schumacher

Ayrton Senna

Lewis Hamilton

David Coulthard

Question 3 - (Wrong)

The results and assessment page is the one which displays the marks received by the user based on the answers given. The key functionalities of this page are as follows,

- **Displays the final total marks** based on the users answers.
- Provides a **per question wise analysis** on whether each answer is right or wrong.
- If the answer is right then the **option selected is highlighted in green** as the real answer and the users answer is the same.
- If the answer is wrong then the option selected by the user which is the **wrong answer is shown in red and the actual correct answer is shown in green.**
- Each question has a dynamic text appearing on top to indicate right or wrong.
- There is a take another quiz option at the bottom which redirects the user to the available quizzes page.