



Soccer Score

Project Engineering

Year 4

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Bachelor of Engineering (Honours) in Software and
Electronic Engineering

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Declaration

This project is presented in partial fulfilment of the requirements for the degree of Bachelor of Engineering (Honours) in Software and Electronic Engineering at Galway-Mayo Institute of Technology.

This project is my own work, except where otherwise accredited. Where the work of others has been used or incorporated during this project, this is acknowledged and referenced.

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1 Summary

SoccerScore is a website designed using react to have all the relevant information regarding the English premier league. SoccerScore consists of four pages. A home page that contains a welcome and information message and a league table. The second page is a fixtures/results page. This page contains fixtures and results for the current 2021/2022 premier league season. The third page is a stats page. This page contains stats within the league including the top ten players who have the most assists, the top ten goal scorers and the top ten players with the most yellow and red cards this season. The fourth page is a profile page that allows the user to login to their account or create an account if they don't already have one and follow their favorite team. The page will then show them fixtures, results, and squad list of the team the user chose to follow when creating their account. The reasoning for this project was due to my interest in the premier league and football. I wanted to have a site that was easy to use and follow, that contained useful information regarding the premier league and removed extra information that other football website contain that makes the sites complicated and confusing. Through the cloud computing module, we worked with react and so I decided that I would use react to design and build my website. I used mongo DB atlas to store profile information for each user such as their account login information and their favorite team.

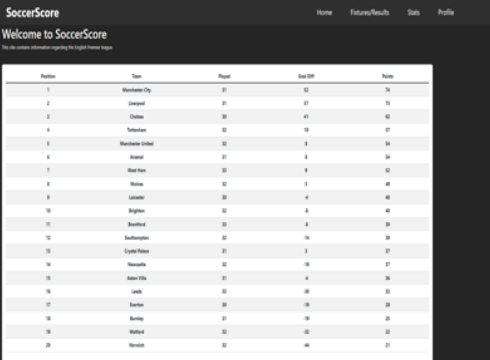
2 Poster

SoccerScore
 Brian Williams, G00368681
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 Mentors: Niall O'Keeffe



Introduction

- SoccerScore is a football website that contains all useful information regarding the English premier league and is easy to use and follow.
- The motivation for this project was to create a website that was not full of unwanted and unnecessary information that the user might not want or need.

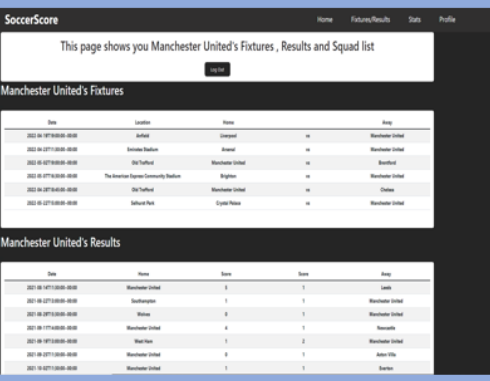


Conclusion

- The Home page of SoccerScore displays a welcome message and a live table of the current English premier league standings.
- The Fixtures and Results page displays the fixtures and results for the English premier league for the 2021/22 season.
- The stats page displays the leagues top 10 scorers and the leagues top 10 assists. It also displays the top 10 players with the most yellow and red card for this season.
- The profile page has a login feature to allow the user to login into their account and display fixtures and results for their favorite team. It also shows them a squad list for that team. If the user does not already have an account, there is a signup feature that allows them to create their login and choose a favorite team.

Software Used

- The frontend of the website was designed and created by using react, JavaScript and CSS. Using API's, I pulled data required for the league table, fixture and results and stats.
- The backend of the website works with mongo DB atlas to store and fetch the account information for the users to login and sign-up. The backend also fetches the user's favorite team to display information on the favorites page.



Project Poster

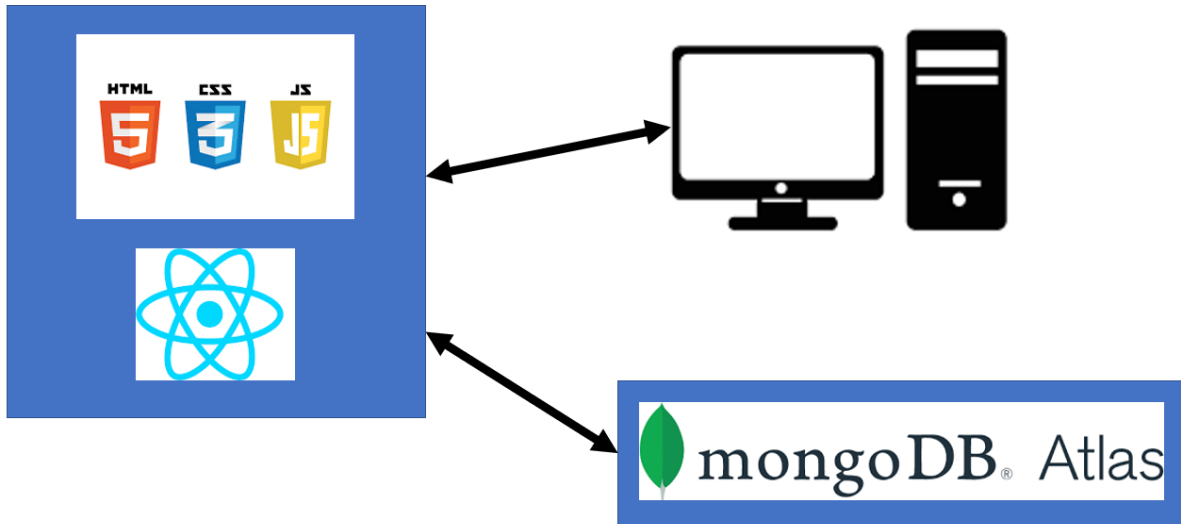
3 Introduction

SoccerScore is a football website designed to provide the user with relevant information regarding the English premier league and is easy to use and follow. The main motivation for this website was to create a website that was easy to use and is not full of unwanted and unnecessary information that the user might not want or need to know. SoccerScore consists of 4 pages that show the user the English premier leagues fixtures, results, standings, and some stats regarding the players. This report contains my architecture diagram for the project, my project plan, and details on the software I used.

4 Background

The reasoning for this project was due to my interest in the English premier league. The season runs from August to May and each of the 20 teams play each other twice one game at home and one game away, 38 fixtures in total. The premier league website [2] has lots of information regarding the league including the league standings, fixtures, and results for this season. The site in my opinion is useful but full of information that a user might not require. The sites sign in feature allows you to create an account for their fantasy game. You can follow your favourite team, but it does not filter any of the fixtures or results you will have to do that manually through the filtering system. For my website I wanted to change this profile feature to filter the information provide to be just about your favourite team. Personally, I am interested in the player stats due to using the premier league fantasy football. I like to know who scores and assists the most in games and who receives the most yellow and red cards. The premier league site has stats to view but you must access this from the more section and go to stats. I thought something like this is useful information to some users and felt it should be easier to access. Therefore, for my website I wanted to have a stats page that contained useful and relevant information that a user might require and make that page easy to access. Another site I use for fixtures and stats is SofaScore [3]. SofaScore displays information on leagues all over the world and has stats for each league. I also find it very useful for when I want to look at other leagues but for my website I wanted to focus on the English premier league.

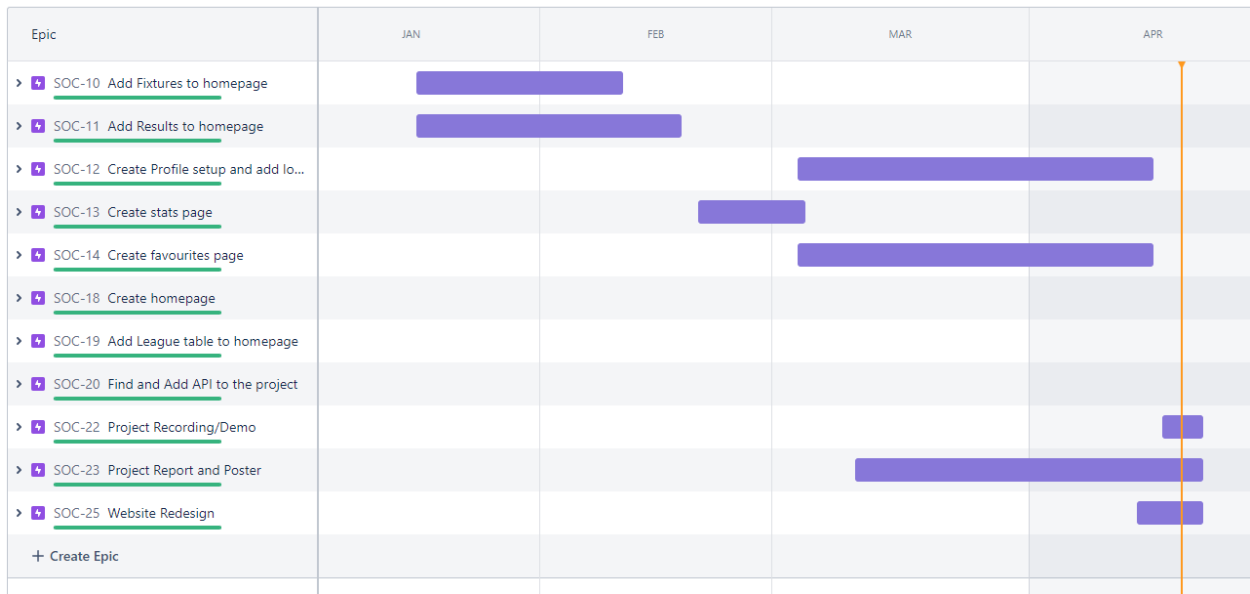
5 Project Architecture



Architecture Diagram

6 Project Plan

The image bellow is my project roadmap that was created in mid-January to help me plan out what parts of my project would be completed first and how long each part should take. I used Jira project planner to create this plan as it is easy to use and has everything I needed. Jira also has a project board that allows you to create tasks and put them under three different headings to-do, in-progress and done. You can create tasks that go under to-do and simply drag the tasks under each heading.



Project Roadmap

7 Software Used

7.1 Frontend

For this project I split the project into two a frontend and a backend. The frontend of the website was designed and created by using react, JavaScript and CSS. Using API's, I pulled data required for the league table, fixture and results and stats. The API site I used was API-Football. I decided to use this after looking at multiple APIs as this one had all the data I required for this project, and it was easy to understand due to the documentation provided [1]. There is also a feature that allows you to test the fetches to make sure they work.

```
const [ standings, setStandings ] = useState([ ]);

//get premier league standings from the API
useEffect ( () => {
  fetch("https://v3.football.api-sports.io/standings?league=39&season=2021", {
    "method": "GET",
    "headers": {
      "x-rapidapi-host": "v3.football.api-sports.io",
      "x-rapidapi-key": "170391d552ed0dfe7af81eedc820e370"
    }
  })
  .then(response => response.json().then(async (data) =>{
    var table = await data['response'][ '0' ][ 'league' ][ 'standings' ][ '0' ];
    console.log(table);
    let list = [ ];
    for ( let row in table ){
      list.push({
        rank: table[row].rank,
        team: table[row].team.name,
        points: table[row].points,
        goalsDiff: table[row].goalsDiff,
        played: table[row].all.played
      })
    }
    setStandings(list);
  }))
  .catch(err => {
    console.log(err);
  })
}, [ ]);
```

Sample Frontend code

7.2 Backend

The backend of the website works with mongo DB Atlas to store and fetch the account information for the users to login and sign-up. The backend also fetches the user's favorite team to display information on the favorites page. Once the user has created an account to backend will send the users username, password, and favorite team to the mongo database. When the user is on the login page the backend fetches all information from the database so that the users provided information can be confirmed when logging in. Once the login is successful the user will be redirected to the favorites page and their favorite team is fetched from the database and shown in the favorites page.

```
router.post("/addNewUser", async (req, res) => {
  const newuser = new User(req.body);
  newuser.save()
    .then((result) => {
      console.log(result);
      res.status(200).json({message: "User added." });
    })
    .catch((err) => {
      console.log(err);
      res.status(500).json({ message: err });
    });
});

router.get("/getUserInfo", function (req, res) {
  User.find()
    .then((result) => {
      console.log(result);
      res.status(200).json(result);
    })
    .catch((err) => {
      console.log(err);
      res.status(500).json({ message: err });
    });
});
```

Sample Backend code

8 Conclusion

- The Home page of SoccerScore displays a welcome message and a live table of the current English premier league standings.
- The Fixtures and Results page displays the fixtures and results for the English premier league for the 2021/22 season.
- The stats page displays the league's top 10 scorers and the league's top 10 assists. It also displays the top 10 players with the most yellow and red card for this season.
- The profile page has a login feature to allow the user to login into their account and display fixtures and results for their favorite team. It also shows them a squad list for that team. If the user does not already have an account, there is a signup feature that allows them to create their login and choose a favorite team.

9 References

- [1] <https://www.api-football.com/documentation-v3#section/Authentication>
- [2] <https://www.premierleague.com/>
- [3] <https://www.sofascore.com/tournament/football/england/premier-league/17>