X00092816

Technical Architecture

Stephen Drohan

1 – Use Cases

Title	Choose league
Primary Actor	User
Scope	System
Level	User goal
Story	The application will display a drop down box with the available leagues to view. When the user picks a league and hits submit they will be brought to the league's page.

Title	Choose team
Primary Actor	User
Scope	System
Level	User goal
Story	The application will display a drop down box with the available teams in a chosen league. The user will choose a team, hit submit, and will be brought to the team page.

Title	Choose year
Primary Actor	User
Scope	System
Level	User goal
Story	The application will display a drop down box with the available years in a chosen league. The user will choose a year, hit submit, and will be brought to a page with the league information of the year in particular.

Title	Search
Primary Actor	User
Scope	System
Level	Summary
Story	The user will be able to search for a league or a team by inputting the respective name in a search box. This will return a match to their search query or no results if the search query holds the wrong information.

Title	Choose graphic
Primary Actor	User
Scope	System
Level	User goal
Story	The application will display a drop down box with the available tables or graphs that can be used with the data they have chosen to view.

2 - Technical Architecture

2.1 – Software Components

For the project, I will be using Azure to host the web application and I will be making use of the database it has to offer. With the database, I plan to use SQL which is integrated into the Azure platform.

D3 will be the component used to create the graphs and tables from the given data.

The data that will be used with D3 will be obtained by using the web scraper "import.io". This scraper will allow me to extract the relevant data from a website and save it to either a CSV file or a JSON file.

2.2 – Platform Libraries

I will be building the web application with C# and ASP.NET which I have great experience in as I did my third year project solely in this manner and have also completed a module as part of my college course on the same topic.

For the database, I will be using the integrated database in Azure which uses SQL. I have done a couple of modules on databases through my college course and used SQL in my third year project.

2.3 – Distribution and Deployment

The web application that I build will be deployed through cloud services.

The cloud service I will be using is Azure which will integrate nicely with C# and ASP.NET through Visual Studio as they are both Microsoft products.

The database will also be hosted by Azure. The data for the graphs and tables will be parsed into a table and extracted when needed for a page.

2.4 - Risks

The main risk to my project is that the data when stored in the database through Azure loses its form causing the graphs and tables to become obsolete as the data would be compromised.

Other small risks are that the data that I will scrape from the web may be incomplete or incorrect. If the data is incomplete from the scraper, I may have to manually add in the missing fields. If the data is incorrect I may have to find a more reputable source.

Another risk is that the data from the web scraper, when stored in the database, won't be able to be retrieved when the page is called.

3 - Prototype

3.1 – Prototype Deliverable for Week 8

- Chose League
- Chose Team
- Chose Year

3.2 - Prototype Deliverable for Week 11

- Search
- Choose Graphic

My testing strategy will start out by testing the data in different graphs and tables through basic HTML pages to show that the data is formatted correctly and that the chosen graph works with the data. I will also test the database by first adding small amounts of test data and running that data to see if I get the desired results.