Distributed Software Development – 2012/13

HoopStats Web Application – User Manual

1. Contents

1. Introduction

Our web application is based on a flexible query building system, where users can choose the data that they are is interested in, impose conditions on the data and get the desired results in forms of tables and visualizations.

The main page is divided into three parts (tabs) – Player Flexible Querying (for regular seasons and playoffs), Team Flexible Querying and Coach Flexible Querying, each with specific data for players, teams and coaches. Each part has a query builder with data specific columns and conditions. Usage instructions for each part will be explained in detail in the chapters below.

2. Installation

To install HoopStats Web Application, users must have access to the web application files published from Visual Studio. Users must also have a server machine where they can deploy the website, with IIS (Internet Information Services) installed. The procedure includes adding a new website to the IIS. Steps are as follows:

1. Login to the server where you want to deploy the server.
2. Open Internet Information Servies Manager.
3. Expand the server icon in the left menu, and right-click on the site folder.
4. Choose Add web site.
5. Enter the neccesary information: site name, application pool (.NET 4.0), physical path with website files, binding, etc.
6. Click the Start button on the right menu to start the website.

3. Flexible Querying

3.1. Query building

Query builder is the main screen that allows the users to perform searches. It consists of two main parts:

- Select result properties
- Select conditions for the search

In result properties, users can select the propetries (columns) they are interested in by dragging them to the corresponding empty space on the left or by clicking on the small pin on each property.

After that, users can impose conditions by inputing the value in the desired condition box (number for numerical conditions, a player name for a player name condition), and selecting a desired (in)equality:

- ET as Equal To
- LT as Less Than
- GT as Greater Than

and finally, select the condition by dragging it to the corresponding empty space on the left or by clicking the small pin on the condition.

After the users have selected properties and conditions, they can click the Execute button to execute the search. After the search has been executed, a results screen is shown.

3.2. Player – Seasons advanced search

Seasons advanced search contains data about player regular seasons and playoffs, and as stated in the introduction, allows the users to select the player data they are interested in, impose conditions on the data and get results in form of tables and visualizations.

To start the Season advanced search, from the main menu users will choose Players, then click on Seasons advanced search.

After users have selected properties and conditions like described in the chapter 2.1, users can click the Execute button to execute the search. After the search has been executed, a results screen is shown. It consists of three tabs:

• Tabular data
• Visualization Regular Seasons
• Visualization PlayOff

In tabular data tab, we have two main tables, one for regular seasons and one for player playoffs. Visualization tabs will be described in more detail in chapter 4.

If the users click on the year value in the year column in the regular seasons table, they will get a table with all the games in which the player played that year and their statistics, which they can visualize as well.

If users click on the player first or last name in the regular seasons table, he will get player details for all regular seasons, including basic player info, career info and a table with player regular season details (with all possible columns). In this table users can click on the year of the season, it will show the game statistics like in the regular season table. If the users click on the team name, it will show them team details page with team basic info (including team logo), and team seasons table with seasons details for that team (with all possible columns). This table can also be visualized, as described in chapter 4.

In the playoffs table on the main results page, users can click on the player name, which will show them player details for playoffs, including basic player info, player career info and a table with player playoff details (with all possible columns). In this table users can click on the year or team links the same way like in regular season player details.

3.3. Player – Games advanced search

Games advanced search contains data about the games in which player participated, and allows the users to select the player data they are interested in, impose conditions on the data and get results in form of a table.

To start the Games advanced search, from the main menu users will choose Players, then click on Games advanced search.

After the users have selected properties and conditions like described in the chapter 2.1, users can click the Execute button to execute the search. After the search has been executed, a results screen is shown in form of a table with all the games in which player participated, including the columns users selected in the query.

3.4. Teams advanced search

Teams advanced search contains data about teams, and allows the users to select the team data they are interested in, impose conditions on the data and get results in form of a table.

To start the Team advanced search, from the main menu users will choose Teams.

After users have selected properties and conditions like described in the chapter 2.1, users can click the Execute button to execute the search. After the search has been executed, a results screen is shown in form of a table with team name column, year column, and the columns users selected in the query.

Users can click the team name im the team name column, it will show them team details page with team basic info (including team logo), and team seasons table with seasons details for that team (with all possible columns). This table can also be visualized, as described in chapter 4.

3.5. Coaches advanced search

Coaches advanced search contains data about coaches, and allows the users to select the coach data they are interested in, impose conditions on the data and get results in form of tables and visualizations.

To start the Coach advanced search, from the main menu users will choose Coaches.

After users have selected properties and conditions like described in the chapter 2.1, users can click the Execute button to execute the search. After the search has been executed, a results screen is shown in form of a table with year column, first and last name columns, and the columns users have selected in the query.

If the users click on the coach first or last name in the coach seasons table, they will get coach details, including basic coach info, career info and a table with all coach seasons (with all possible columns). This table can also be visualized, as described in chapter 4.

If users click on the team name, it will show them team details page with team basic info (including team logo), and team seasons table with seasons details for that team (with all possible columns). This table can also be visualized, as described in chapter 4.

4. Visualization

In visualization tabs for the tables, users can visualize the table data in three types of graphs:

- Line chart
- Pie chart
- Column chart

First, users select the column which they want to visualize. Then, they select which of the graphs listed above they want to display. After clicking "Draw graphs" button, the graphs are displayed. The graphs contain selected property value in relation to time (year). Most tables mentioned above are visualizable in the same way.

5. General tips

Each table with large number of results has paging system below it, displaying current number of page and total number of pages, with Next and Previous navigation hyperlinks.

Each table is sortable by clicking the column header of the desired columns. Users can switch between ascending and descending order by clicking the column header again.

Users can modify each query by clicking the "Modify Query" link on top of the results page.