

Project 2

In this project, you will learn to use MongoDB as an example of a document-oriented NOSQL system, and see how data is stored and queried in such a system. You will also learn about the difference between storing data in a flat (relational) format versus in a document (complex object) format.

The input to your program will be several data files in flat relational format for the Soccer World Cup 2014 database. The schema diagram for this database is in the following:

COUNTRY

<u>Country_Name</u>	Capital	Population	No_of_Worldcup_won	Manager
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PLAYERS

<u>Player_id</u>	Name	Fname	Lname	DOB	Country	Height	Club	Position	Caps_for_country	Is_captain
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MATCH_RESULTS

<u>Match_id</u>	Date	Start_time	Team1	Team2	Team1_score	Team2_score	Stadium	Host_city
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PLAYER_CARD

<u>Player_id</u>	No_of_Yellow_cards	No_of_Red_cards
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PLAYER_ASSISTS_GOALS

<u>Player_id</u>	No_of_Matches	Goals	Assists	Minutes_Played
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World_cup_History

<u>Year</u>	Host	Winner
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You will need to design two document (complex object) schemas corresponding to this data:

1. The COUNTRY document will include the following data: Cname, Capital, Population, Manager (of the national score team), and a list of the players {players: Lname, Fname, Height, DOB, is_Captain, Position, no_Yellow_cards, no_Red_cards, no_Goals, no_Assists}, plus a list of World Cup won history{Year, Host}.
2. The STADIUM document will include the following data: Stadium, city, and a list of the matches of the stadium {Match: Team1, Team2, Team1Score, Team2Score, Date}

We will have data files for the Players, Player_Cards, Player_Assists_Goals, Match_results Country, and Worldcup_History tables posted on the Web site in relational (flat file) format.

Your tasks for the project are as follows:

Perform complex MongoDB queries to retrieve some of the stored documents.