1. Main purpose for this project

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| Fig. 1 |

I am planning to write a program that can show the user daily NBA games box score, such like the format in Fig. 1.

In addition, users can use other command in terminal to see other information such as players in each team and players' statistics.

2. The two data sources I will use are:

<1> NBA.com website

<2> A website called All Sports which enable user to get access to NBA game scores through API.

3. The data format I will get from data sources are HTML and JSON.

4. What technique I will use (Second level)

<1> Scraping data that comes in HTML or XML form using BeautifulSoup

Use Postgres to demo tables in terminal

<2> Accessing a REST API or a new endpoint of a RESTful API that we have not included in any course (lecture or section) meeting or assignment

<3> Use a relational database / script that interacts with a database for data processing somewhere within the project

5. My program’s output (Third level)

<1> A clear visualization of data such as using HTML page and/or an HTML page served in a Flask application

Or

<2> A PostgreSQL database that includes at least two tables, such like

| \_\_\_\_\_\_\_\_ |\_1Q\_|\_2Q\_|\_3Q\_|\_4Q\_|\_Total\_|

|\_Warriors\_|\_10\_|\_20\_|\_\_\_\_|\_\_\_\_|\_\_\_\_\_\_\_|

|\_Raptors\_\_|\_15\_|\_15\_|\_\_\_\_|\_\_\_\_|\_\_\_\_\_\_\_|

<3> An interactive project such as when user typing command "show" in terminal. The web browser will pop out and demonstrate the box score today. Or if user have install PostgreSQL, then it will show the box score table in terminal.

6. 2 Data structures (class, function)

<1> Classes:

1. Game, which has attributes like teams who play the game, the scores for each

quarter, the total score, and has \_\_str\_\_() method.

1. Player which has attributes like name, average score, assists, rebounds per game, and

has \_\_str\_\_() method.

<2> Functions:

1. get\_players\_for\_the\_team(), where input takes the team's name. It will return a list

of Players of that team.

1. get\_wins\_and\_loses\_to\_date(), where input takes the team's name. It will return a

string like 15-2. The team wins 15 games and loses 2 games.

7. Tests for my program

<1> Is the returned string correct when I try to print out object of Game and Player?

<2> Does function get\_players\_for\_the\_team() return a list of Players?

<3> Does the string function get\_wins\_and\_loses\_to\_date() return can be split('-') into two numbers?