

1. Main purpose for this project

ARENA STATS		Pacers					
Arena: Talking Stick Resort Phoenix, AZ Attendance: 13038 Duration: 2:4		109					
SCORING		104					
Lead Changes: 10 Times Tied: 12							
-inactive		Suns					
OFFICIALS			1st	2nd	3rd	4th	FINAL
		Pacers	26	35	20	28	109
		Suns	26	28	23	27	104

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:

- Game, which has attributes like teams who play the game, the scores for each quarter, the total score, and has `__str__()` method.
- Player which has attributes like name, average score, assists, rebounds per game, and has `__str__()` method.

<2> Functions:

- `get_players_for_the_team()`, where input takes the team's name. It will return a list of Players of that team.
- `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?