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Dr. Kevin Ryan

CS-110-A

13 December 2020

def fantasy():

For about as long as I can remember, every year my friends and I play in a fantasy football league together. It is a tradition we all look forward to, and will hopefully continue until the distant future. So when it came to picking a topic, and in the midst of our fantasy playoffs at that, I could think of nothing more perfect than a tool that I could use to perhaps elevate my game, a game, for that matter, that is entirely centered around numbers.

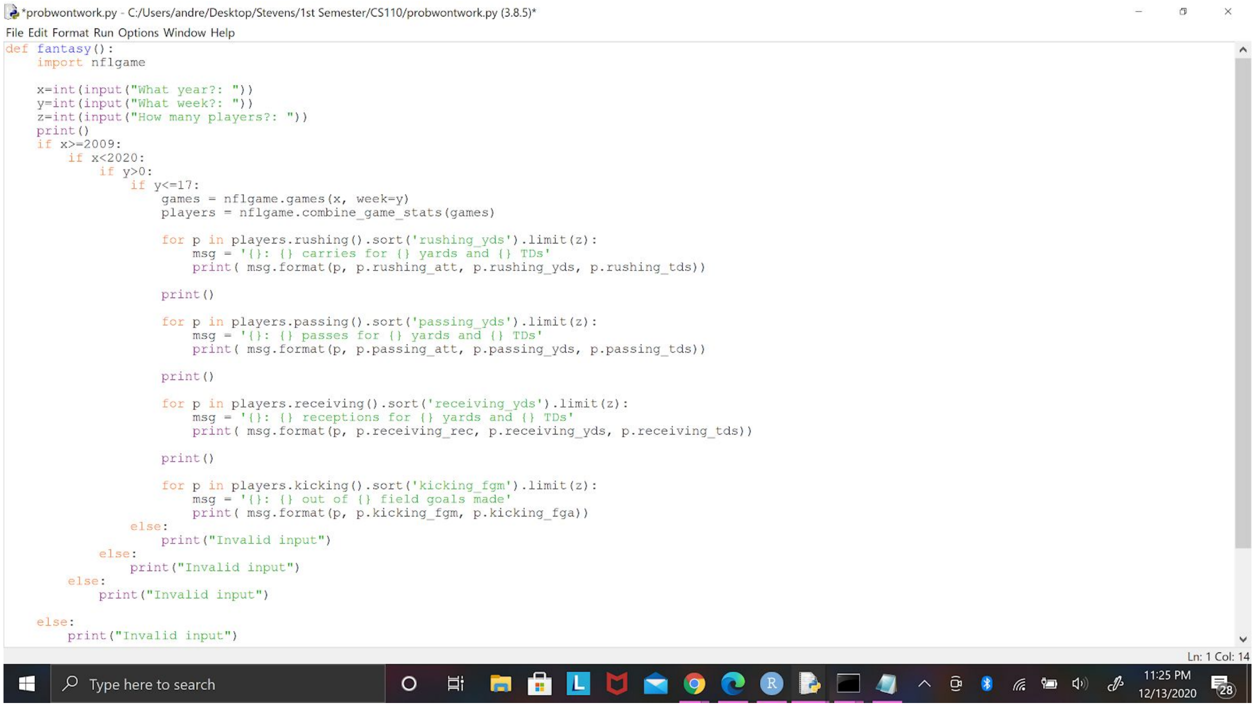
Fantasy football is all about numbers and statistics. These numbers and statistics are made available to the public through platforms such as ESPN and Yahoo. But what happens to all this data when the season ends? Well, before I started this project, I thought that it would disappear and be gone forever. After lots of diligent research I discovered an API that had all of this data, and better yet, it was all for free. What my program essentially does is, extracts the most important data from the API and presents it to the user in a clear and concise manner. The first step in this process from the users point of view is a prompt that asks the user is to input whatever year they are interested in retrieving data from, this is limited to every year including and after 2009. It then prompts the user to input the specific week the user is interested in, this is limited to the regular season, so the first 17 weeks. Finally, it prompts the user to specify exactly how many players at each position they want data from. After this is completed, and all the values are satisfactory, the program runs and outputs all of the most important data given those variables in said clear and concise manner.

The Target audience for my program consists of anyone who plays fantasy football and has access to the internet. The program is simple yet effective so that anyone could use it. It also provides valuable data for anyone that is trying to gain an edge on their opponents. Information and data is crucial for fantasy football managers. The more someone knows, the more accurate a prediction they can make about how a player might perform, and the better chance they have at winning, and perhaps at making a little money.

I used numerous techniques and tools to code this program. The first tool I used was an API from which I was able to draw the data from, I then used the import function to use the API in my program. I used variables like x, y, and z that I had the user assign a value to using input statements. I used functions such as sort and format. I used if else statements. I used print statements to not only return information to the user but as a means of separating lines so that the user had a better understanding of the data being presented.

Luckily there was really only one challenge that arose while making this program. Unluckily, it was a big challenge. Before starting this program, I was completely unfamiliar with API's. I kinda had an idea what they did, I had never used one before. The process of trying to use an API was incredibly arduous, it was harder than actually coding my program, and took much more time. Tasks such as downloading pip, and using the command prompt were all very foreign to me. Then trying to learn how to utilize the api was a struggle in and of itself. Luckily the api had documentation to help programmers such as myself. But it was an incredibly stressful ordeal nonetheless. I do however have a better understanding of how to install and utilize an API which is awesome.

This program is only in the beginning stages of where I want to take it. Now that I have the perfect api from which to draw data from, and a solid understanding of how to use it, I almost feel as though the hard work is behind me. I have a vision for this program. For years I have searched for historical data to better guide my fantasy decisions. I want to make a program that can help managers such as myself, make more informed decisions. I want to create a program that allows for the user to ask for any information, say a team's record on the road against a certain team, very specific data, that a user can access through a very simplistic and user friendly interface. As far as i know there is no such program/website in existence, and it would be awesome and also very helpful if I could design and make it.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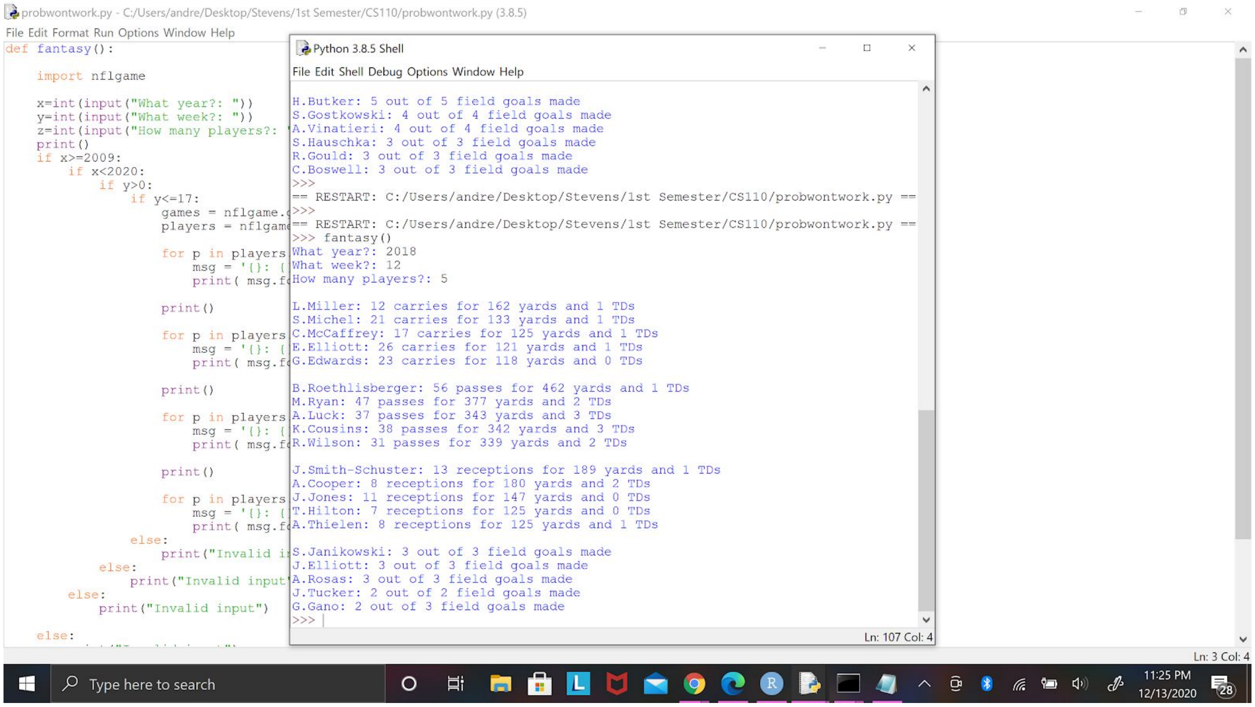
```python
def fantasy():
    import nflgame

    x=int(input("What year?: "))
    y=int(input("What week?: "))
    z=int(input("How many players?: "))
    print()
    if x>=2009:
        if x<2020:
            if y>0:
                if y<=17:
                    games = nflgame.games(x, week=y)
                    players = nflgame.combine_game_stats(games)

                    for p in players.rushing().sort('rushing_yds').limit(z):
                        msg = '{}: {} carries for {} yards and {} TDs'
                        print( msg.format(p, p.rushing_att, p.rushing_yds, p.rushing_tds))

                    print()

                    for p in players.passing().sort('passing_yds').limit(z):
                        msg = '{}: {} passes for {} yards and {} TDs'
                        print( msg.format(p, p.passing_att, p.passing_yds, p.passing_tds))

                    print()

                    for p in players.receiving().sort('receiving_yds').limit(z):
                        msg = '{}: {} receptions for {} yards and {} TDs'
                        print( msg.format(p, p.receiving_rec, p.receiving_yds, p.receiving_tds))

                    print()

                    for p in players.kicking().sort('kicking_fgm').limit(z):
                        msg = '{}: {} out of {} field goals made'
                        print( msg.format(p, p.kicking_fgm, p.kicking_fga))
                else:
                    print("Invalid input")
            else:
                print("Invalid input")
        else:
            print("Invalid input")

    else:
        print("Invalid input")
```



probwontwork.py - C:/Users/andre/Desktop/Stevens/1st Semester/CS110/probwontwork.py (3.8.5)
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Python 3.8.5 Shell
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12/13/2020
28

```
def fantasy():

    import nflgame

    x=int(input("What year?: "))
    y=int(input("What week?: "))
    z=int(input("How many players?: '
    print()
    if x>=2009:
        if x<2020:
            if y>0:
                if y<=17:
                    games = nflgame.
                    players = nflgame

                    for p in players
                        msg = '{}: {
                        print( msg.f

                    print()

                    for p in players
                        msg = '{}: {
                        print( msg.f

                    print()

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                        print( msg.f
                else:
                    print("Invalid i
            else:
                print("Invalid input'
        else:
            print("Invalid input")

    else:
```

```
H.Butker: 5 out of 5 field goals made
S.Gostkowski: 4 out of 4 field goals made
A.Vinatieri: 4 out of 4 field goals made
S.Hauschka: 3 out of 3 field goals made
R.Gould: 3 out of 3 field goals made
C.Boswell: 3 out of 3 field goals made
>>>
== RESTART: C:/Users/andre/Desktop/Stevens/1st Semester/CS110/probwontwork.py ==
>>>
== RESTART: C:/Users/andre/Desktop/Stevens/1st Semester/CS110/probwontwork.py ==
>>> fantasy()
What year?: 2018
What week?: 12
How many players?: 5

L.Miller: 12 carries for 162 yards and 1 TDs
S.Michel: 21 carries for 133 yards and 1 TDs
C.McCaffrey: 17 carries for 125 yards and 1 TDs
E.Elliott: 26 carries for 121 yards and 1 TDs
G.Edwards: 23 carries for 118 yards and 0 TDs

B.Roethlisberger: 56 passes for 462 yards and 1 TDs
M.Ryan: 47 passes for 377 yards and 2 TDs
A.Luck: 37 passes for 343 yards and 3 TDs
K.Cousins: 38 passes for 342 yards and 3 TDs
R.Wilson: 31 passes for 339 yards and 2 TDs

J.Smith-Schuster: 13 receptions for 189 yards and 1 TDs
A.Cooper: 8 receptions for 180 yards and 2 TDs
J.Jones: 11 receptions for 147 yards and 0 TDs
T.Hilton: 7 receptions for 125 yards and 0 TDs
A.Thielen: 8 receptions for 125 yards and 1 TDs

S.Janikowski: 3 out of 3 field goals made
J.Elliott: 3 out of 3 field goals made
A.Rosas: 3 out of 3 field goals made
J.Tucker: 2 out of 2 field goals made
G.Gano: 2 out of 3 field goals made
>>>
```