Python Project 08 Olympics Analysis

Assignment Overview

- Dictionaries
- Lists and tuples

Assignment Background

The Olympics happen every 2 years alternating between the summer and winter, where athletes from all over the world come to compete in a variety of sports and events. For this project, you will create a program that will analyze Olympics data over the years about athlete and country information. We'll be going through the athletes_events.csv file to compare the best athletes in each sport and the top countries for specific sports. Afterwards, we're going to plot the count of medals over the years for a specific country.

Project Specifications

You must implement the following functions:

a) **`open_file()`:** This function prompts the user for the file name as input. It will try to open the file and return the file pointer. If the file is not found, the function must continue asking the user for a file name until the file can be opened and returned.

b) **`get_athlete_stats( <file pointer>)`:** This function takes in the file pointer as input and skips over the header line. It will iterate through each line in the file and build a dictionary from the data.

- Each column in line is separated by commas (since the file is a comma-separated values file).
- `name, gender, age, height, weight and country_code` (column NOC) must be found.
- Because of some entries you need to

```
import csv  # at the top of your program
# in this function
reader = csv.reader(fp)  # the name "reader" on the left can be any name
next(reader,None)  # skips one header line, repeat if more header lines
for line_list in reader:   # reader returns a list
```

- For each line in the file, you need to read the following:

```
name = line_list[1]
gender = line_list[2]
age = int(line_list[3])
height = int(line_list[4])
weight = int(line_list[5])
country_code = line_list[7]
```

- All variables must be not null (cannot have '`NA`' as its value) so ignore any lines without all valid values. (Hint: try-except is one way to do this. Also, "continue" is your friend.)
- `age, height` and `weight` must be able to be converted to integers.
- The dictionary will have the athlete `name` as its key and a list of tuples as its value.

- An athlete can be in the Olympics multiple times and in multiple events so there are multiple entries for athletes, resulting in multiple tuples in lists.
- This function will return the dictionary created.
- A tuple in the list will have (`gender, age, height, weight, country_code`) as its content.

c) **`get_country_stats(<file pointer>, <output from get_athlete_stats()>):`** This function is similar to the get_athlete_stats(fp) function in that it will take in the file pointer and the output from get_athlete_stats() (a dictionary) as input and read each line except the header line.

- For each line, the columns must be stripped and separated by the commas (use csv.reader)
- The athlete `name, team name, country code, year, sport, event` and `medal` variables must be found and stripped.
- For each line in the file, you need to read the following:

```
name = line_list[1]  # athlete's name
team_name = line_list[6]
country_code = line_list[7]
year = int(line_list[9])
sport = line_list[12].lower()
event = line_list[13].lower()
medal = line_list[14].lower()
```

- The `sport, event` and `medal` variables must be changed to all lowercase.
- All variables we collect must not be null (cannot have '`NA`' as its value), so ignore any lines without all valid values. . (Hint: try-except is one way to do this. Also, "continue" is your friend.)
- The `year` must be able to be converted to an integer.
- The athlete `name` must be able to be found in the output from `get_athlete_stats()` , i.e. check that the name is a key in the dictionary. (Hint: use "in".)
- The dictionary that will be output from this function, will have the `country_code` as its *key* and a *list of tuples* as its *values*.
- This function will return the dictionary.
- A tuple in the list consists of `(name,team_name,year,sport,event,medal).`

d) **`display_best_athletes_per_sport(<output from get_athlete_stats>,<output from get_country_stats>, <set>):`**

- This function has 3 inputs: The dictionaries from `get_athlete_stats()` and `get_country_stats()` as well as a set of all available sports. Nothing will be returned.
- It will need to <u>create a dictionary</u> with the <u>available sports as its keys</u> and a dictionary as its value.
- Within the inner dictionary, the athlete name will be used as its key and the number of medals (integer) will be its value.
  Key = Sport, Value = {<Athlete>: <number of medals in sport>}
- The function will loop through the dictionary from `get_country_stats()` to find the athlete, sport and medal. Note that when you want to add an athlete for a *new* sport you need to first create an empty dictionary for that sport before you can add an athlete to it.
- The type of medal (gold, silver, bronze) is not relevant for our new dictionary, they will all be treated as 1 medal.
- After going through the `get_country_stats()` dictionary, we want to display a table of:
  - sport,
  - best athlete,

- code of the country associated with the athlete, and
- number of medals the athlete has in the sport.

- The table will be sorted by sport. Dictionaries, just like lists, are not always sorted. One way to sort a dictionary is by having a sorted list of keys. To get the list of keys on a dictionary, use the dictionary `keys()` method.
- To find the best athlete, look into sorting the dictionary value for each sport to find the largest medal count and the athlete associated with it.
- The country-athlete association can be found in both the athlete and country dictionaries.
- There are two header lines. The formatting strings are:
  `"{:^50s}"` and `"{:<25s}{:25s}{:10s}{:10s}"`
- The formatting string for entries in the table is
  `"{:25.20s}{:25.20s}{:10s}{:10d}"`

  At the end of the table, the average age, height and weight for the **best** athletes (i.e. the ones displayed in the table) must be calculated and displayed. Draw a line between the table and the averages using: `print('-'*50)`
- Within the dictionary from `get_athlete_stats(),` each athlete's `age, height and weight` can be found.
- Since an athlete can be in the Olympics multiple times at different ages, heights and weights, find the average age, weight and height for an athlete and use the averages to find the overall averages for all the athletes.
  For example, if Max was in the Olympics at age 20, 24, 28, his average age will be 24 and that number will be used in the calculation of the overall average age for all the athletes.
- The formatting string for all the values is `"{:5.1f}"`

e) **`display_top_countries_by_sport(<output from get_country_stats()>, <string>)`** : This function will display the top countries by sports:
- It takes as input the dictionary from `get_country_stats()` and a sport (string).
- This function will go through the tuples in the country dictionary and associate medal counts with a team_name in some collection (list, tuple, dictionary, set – you choose).
- If the sport value in the tuple matches the sport parameter, it will keep track of the number of gold, silver and bronze medals each team_name has won in that sport.
- Your collection of medal counts should keep track of the team name (the "team name" is usually, but no always, the country name so use that, not country code, i.e. index 1 of the tuple) and the number of each kind of medal.
- Note that you get to build the collection as you wish.
- After building the collection for the selected sport, a table will display each country and the number of each kind of medals won sorted by gold, silver then bronze medals (look into using `lambda` or `itemgetter` functions when sorting dictionaries to sort by more than one variable). That is, if two countries have the same number of gold, then the one with the most silver medals will be listed first. Similar for bronze. If a country has no medals in the specified sport, nothing should be printed.
- Nothing will be returned by this function.
- There are two header lines. The formatting strings are:
  `"{:^50s}"` and `"{:<20s}{:10s}{:10s}{:10s}"`
- The first header should print the sports name in Title case.
- The formatting string for entries in the table is
  `"{:<20.20s}{:<10d}{:<10d}{:<10d}"`

f) **prepare_plot(<list>) :** This function prepares the data to be plotted *for one country*.

- It takes as input a list of tuples which is the value from the get_country_stats() indexed for a specific country. That is, in the main() you will have selected a particular country and pass its value (a list) to this function, e.g. if the dictionary returned from get_country_stats() is simply named D, your call to this function will be prepare_plot(D[country]) for a country (string) specified by the user (of course, D would be a poor choice for a name for that dictionary).
- The function should return 4 lists:
  - a list of years, Years
  - a list of number of gold medals per year, Gold
  - a list of number of silver medals per year, Silver
  - a list of number of bronze medals per year, Bronze
- The lists with the number of medals per year should correspond to the years in the year list. For example, if the first value in the year list is 1944, then the first value in the gold medal list should be the number of gold medals won in 1944. Important, the Years list (and, of course, the corresponding medals) must be sorted by year with increasing values of year.
- The function should return a tuple of these lists: (year_list, gold_list, silver_list, bronze_list)
- Hint: An easy way to gather this information is to go through the list of tuples passed as a parameter and build a dictionary of lists that have year as a key and the value as a list of number of medals [gold,silver,bronze].

g) **plot_country_medals_per_year(<list of years>, <list of number of gold medals per year>, <list of number of silver medals per year>, <list of number of bronze medals per year>, <team name>):** This function has been provided for your convenience. It will plot the number of medals won over the years for the specified country. If the value returned by prepare_lot is named "data", then the first four arguments will be as follows

```
plot_country_medals_per_year(data[0], data[1], data[2], data[3], team)
```

h) **main():** This is the main function.

- The program should start by opening the file and getting the stats for both the athletes and countries. Since the file pointer will be at the end of the file after calling one of the stats functions, use <file pointer name>.seek(0) to reset the pointer.
- A *set* of available sports should be created for use in the display_best_athletes_per_sport() function. Which of your two dictionaries has sports in it?
- After displaying the best athletes in each sport, the user should be asked for a sport. If the user enters 'q' or 'Q', then the program will terminate.
- If the sport they selected is one of the available sports (remember that sports are lower case):
  - The top countries by that sport should be displayed.
  - Then, the user should be asked if they want to plot data: if they say 'y' or 'Y', they should be prompted for a country_code.
  - If the country_code is valid (i.e. in the country dictionary), the plot data should be prepared using the country dictionary and the country input as its index and then plotted. Reprompt until a valid country_code is input.

- The program will stop once the user inputs `‘q’ or ‘Q’` as the input at the sport prompt.

Sample Output

Function get_athlete_stats()

Input: read athlete_events_tiny.csv

Output:

```
{'Imen  Zaabar':  [('F',  13,  155,  44,  'TUN')],  'Juhamatti  Tapio  Aaltonen':
[('M', 28, 184, 85, 'FIN')], 'Paavo Johannes Aaltonen': [('M', 28, 175, 64,
'FIN'), ('M', 28, 175, 64, 'FIN'), ('M', 28, 175, 64, 'FIN'), ('M', 28, 175, 64,
'FIN'), ('M', 32, 175, 64, 'FIN')], 'Kjetil Andr Aamodt': [('M', 20, 176, 85,
'NOR'), ('M', 20, 176, 85, 'NOR'), ('M', 22, 176, 85, 'NOR'), ('M', 22, 176, 85,
'NOR'), ('M', 22, 176, 85, 'NOR'), ('M', 30, 176, 85, 'NOR'), ('M', 30, 176, 85,
'NOR'), ('M', 34, 176, 85, 'NOR')], 'Pepijn Aardewijn': [('M', 26, 189, 72,
'NED')],  'Ann  Kristin  Aarnes':  [('F',  23,  182,  64,  'NOR')]}
```

Function get_country_stats()

Input: reads athlete_events_tiny.csv

```
Ath = {'Juhamatti Tapio Aaltonen': [('M', 28, 184, 85, 'FIN')], 'Paavo Johannes
Aaltonen': [('M', 28, 175, 64, 'FIN'), ('M', 28, 175, 64, 'FIN'), ('M', 28,
175, 64, 'FIN'), ('M', 28, 175, 64, 'FIN'), ('M', 32, 175, 64, 'FIN')], 'Kjetil
Andr Aamodt': [('M', 20, 176, 85, 'NOR'), ('M', 20, 176, 85, 'NOR'), ('M', 22,
176, 85, 'NOR'), ('M', 22, 176, 85, 'NOR'), ('M', 22, 176, 85, 'NOR'), ('M',
30, 176, 85, 'NOR'), ('M', 30, 176, 85, 'NOR'), ('M', 34, 176, 85, 'NOR')],
'Pepijn Aardewijn': [('M', 26, 189, 72, 'NED')], 'Ann Kristin Aarnes': [('F',
23, 182, 64, 'NOR')]}
```

Returns:

```
{'FIN': [('Juhamatti Tapio Aaltonen', 'Finland', 2014, 'ice hockey', "ice hockey
men's ice hockey", 'bronze'), ('Paavo Johannes Aaltonen', 'Finland', 1948,
'gymnastics', "gymnastics men's individual all-around", 'bronze'), ('Paavo
Johannes Aaltonen', 'Finland', 1948, 'gymnastics', "gymnastics men's team all-
around", 'gold'), ('Paavo Johannes Aaltonen', 'Finland', 1948, 'gymnastics',
"gymnastics men's horse vault", 'gold'), ('Paavo Johannes Aaltonen', 'Finland',
1948, 'gymnastics', "gymnastics men's pommelled horse", 'gold'), ('Paavo
Johannes Aaltonen', 'Finland', 1952, 'gymnastics', "gymnastics men's team all-
around", 'bronze')], 'NOR': [('Kjetil Andr Aamodt', 'Norway', 1992, 'alpine
skiing', "alpine skiing men's super g", 'gold'), ('Kjetil Andr Aamodt',
'Norway', 1992, 'alpine skiing', "alpine skiing men's giant slalom", 'bronze'),
('Kjetil Andr Aamodt', 'Norway', 1994, 'alpine skiing', "alpine skiing men's
downhill", 'silver'), ('Kjetil Andr Aamodt', 'Norway', 1994, 'alpine skiing',
"alpine skiing men's super g", 'bronze'), ('Kjetil Andr Aamodt', 'Norway', 1994,
'alpine skiing', "alpine skiing men's combined", 'silver'), ('Kjetil Andr
Aamodt', 'Norway', 2002, 'alpine skiing', "alpine skiing men's super g",
'gold'), ('Kjetil Andr Aamodt', 'Norway', 2002, 'alpine skiing', "alpine skiing
men's combined", 'gold'), ('Kjetil Andr Aamodt', 'Norway', 2006, 'alpine
skiing', "alpine skiing men's super g", 'gold'), ('Ann Kristin Aarnes',
'Norway', 1996, 'football', "football women's football", 'bronze')], 'NED':
[('Pepijn Aardewijn', 'Netherlands', 1996, 'rowing', "rowing men's lightweight
double sculls", 'silver')]}
```

Function Prepare_plot()

Input:

```
[('Juhamatti Tapio Aaltonen',
  'Finland',
  2014,
  'ice hockey',
  "ice hockey men's ice hockey",
  'bronze'),
 ('Paavo Johannes Aaltonen',
  'Finland',
  1948,
  'gymnastics',
  "gymnastics men's individual all-around",
  'bronze'),
 ('Paavo Johannes Aaltonen',
  'Finland',
  1948,
  'gymnastics',
  "gymnastics men's team all-around",
  'gold'),
 ('Paavo Johannes Aaltonen',
  'Finland',
  1948,
  'gymnastics',
  "gymnastics men's horse vault",
  'gold'),
 ('Paavo Johannes Aaltonen',
  'Finland',
  1948,
  'gymnastics',
  "gymnastics men's pommelled horse",
  'gold'),
 ('Paavo Johannes Aaltonen',
  'Finland',
  1952,
  'gymnastics',
  "gymnastics men's team all-around",
  'bronze')]
```

Returns:

([2014, 1948, 1952], [0, 3, 0], [0, 0, 0], [1, 1, 1])

Test Case #1

```
Input a file name: athlete_event
File not found.
Input a file name: athlete_Event
File not found.
Input a file name: athlete_events_tiny.csv

             Best Athletes Per Sport

Sport                    Athlete Name             Country   Medals
alpine skiing            Kjetil Andr Aamodt       NOR       8
football                 Ann Kristin Aarnes       NOR       1
gymnastics               Paavo Johannes Aalto     FIN       5
ice hockey               Juhamatti Tapio Aalt     FIN       1
rowing                   Pepijn Aardewijn         NED       1
--------------------------------------------------

Average Age of Best Athletes:  26.2 yr
Average Height of Best Athletes: 181.2 cm
Average Weight of Best Athletes:  74.0 kg

Please enter a sport: 
Invalid input. Please enter another sport: swimm
Invalid input. Please enter another sport: alpine skiing

 Countries And Amount Of Medals In Alpine Skiing

Country/Team         Gold       Silver     Bronze
Norway               4          2          2
Do you want to plot (y/n): n

Please enter a sport: q
```

Test Case # 2

```
Input a file name: athlete_events_20xx.csv

Best Athletes Per Sport

Sport                    Athlete Name             Country   Medals
alpine skiing            Samuel Bode Miller       USA       6
archery                  Ki Bo-Bae                KOR       4
athletics                Allyson Michelle Fel     USA       9
badminton                Gao Ling                 CHN       4
baseball                 Pedro Luis Lazo Igle     CUB       3
basketball               Carmelo Kyan Anthony     USA       4
beach volleyball         Kerri Lee Walsh Jenn     USA       4
biathlon                 Ole Einar Bjrndalen      NOR       11
bobsleigh                Kevin Kuske              GER       5
boxing                   Zou Shiming              CHN       3
canoeing                 Katalin Kovcs            HUN       8
cross country skiing     Marit Bjrgen             NOR       10
curling                  Torger Nergrd            NOR       2
cycling                  Bradley Marc Wiggins     GBR       8
diving                   Wu Minxia                CHN       7
equestrianism            Isabelle Regina Wert     GER       6
fencing                  Maria Valentina Vezz     ITA       7
figure skating           Yevgeny Viktorovich      RUS       4
football                 Christie Patricia Pe     USA       4
freestyle skiing         Kari Traa                NOR       2
golf                     Matthew Gregory "Mat     USA       1
gymnastics               Aliya Farkhatovna Mu     RUS       7
handball                 Marit Malm Frafjord      NOR       3
hockey                   Luciana Paula "Lucha     ARG       4
ice hockey               Julie Wu Chu             USA       4
judo                     Teddy Pierre-Marie R     FRA       3
luge                     Armin Zggeler            ITA       4
modern pentathlon        Andrey Sergeyevich M     RUS       2
nordic combined          Felix Gottwald           AUT       7
rhythmic gymnastics      Anastasiya Ilyinichn     RUS       2
rowing                   Georgeta Damian-Andr     ROU       6
rugby sevens             Brittany "Britt" Ben     CAN       1
sailing                  Charles Benedict "Be     GBR       4
shooting                 Jin Jong-O               KOR       6
short track speed sk     Apolo Anton Ohno         USA       8
skeleton                 Aleksandr Vladimirov     RUS       2
ski jumping              Matti Antero Hautamk     FIN       4
snowboarding             Kelly Clark              USA       3
softball                 Laura Kay Berg           USA       3
speed skating            Irene Karlijn "Ireen     NED       8
swimming                 Michael Fred Phelps      USA       28
synchronized swimmin     Anastasiya Semyonovn     RUS       5
table tennis             Wang Hao                 CHN       5
taekwondo                Steven Lopez             USA       3
tennis                   Venus Ebony Starr Wi     USA       5
trampolining             Karen Cockburn (-Tur     CAN       3
triathlon                Simon St. Quentin Wh     CAN       2
volleyball               Sergey Yuryevich Tet     RUS       4
water polo               Heather Petri            USA       4
weightlifting            Eko Yuli Irawan          INA       3
```

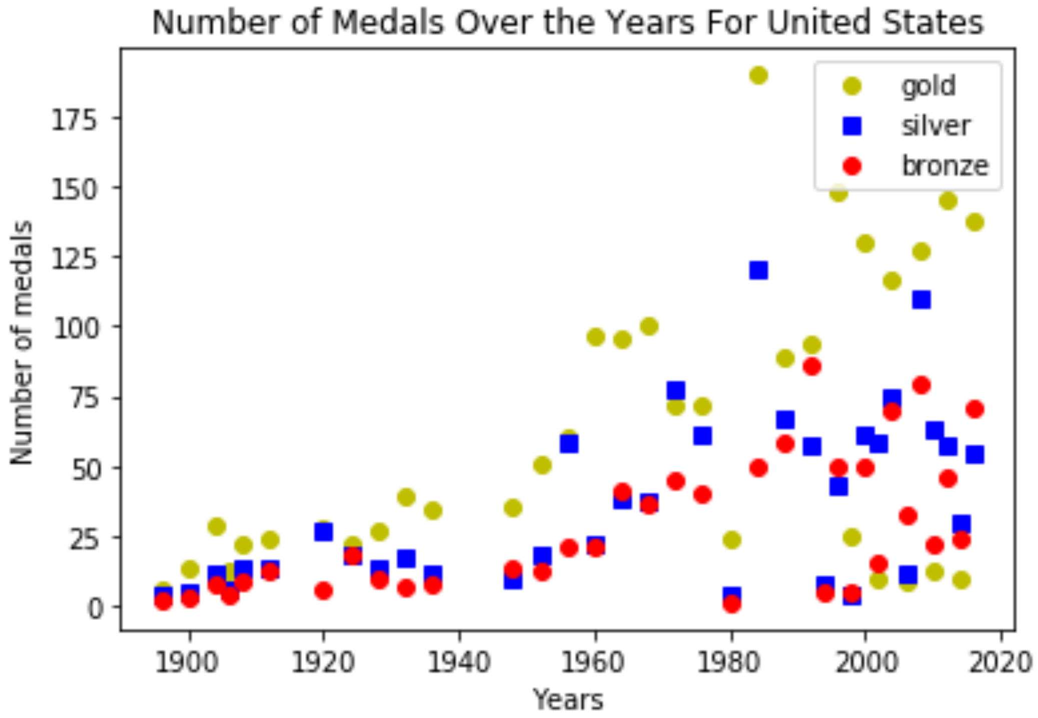
```
wrestling                Kaori Icho               JPN       4
--------------------------------------------------

Average Age of Best Athletes:  27.7 yr
Average Height of Best Athletes: 177.3 cm
Average Weight of Best Athletes:  72.9 kg

Please enter a sport: swimming

    Countries And Amount Of Medals In Swimming

Country/Team         Gold       Silver     Bronze
United States        186        91         60
Australia            65         82         48
Netherlands          18         17         13
France               11         23         13
China                8          16         17
Japan                7          11         35
Hungary              6          6          4
South Africa         6          6          2
Italy                5          4          11
Ukraine              4          2          1
Great Britain        3          15         6
Romania              3          1          2
Germany              2          6          24
Zimbabwe             2          4          1
Sweden               2          3          7
Tunisia              2          0          1
Russia               1          11         12
South Korea          1          3          0
Canada               1          2          17
Spain                1          2          2
Poland               1          2          0
Brazil               1          1          7
Denmark              1          0          5
Kazakhstan           1          0          0
Lithuania            1          0          0
Singapore            1          0          0
Austria              0          2          1
Belarus              0          2          1
Slovakia             0          2          0
Norway               0          1          1
Slovenia             0          1          0
Croatia              0          1          0
Greece               0          1          0
Serbia               0          1          0
Belgium              0          1          0
Costa Rica           0          0          2
Argentina            0          0          1
Trinidad and Tobago  0          0          1
Do you want to plot (y/n): n

Please enter a sport: gYmnasTics

   Countries And Amount Of Medals In Gymnastics

Country/Team         Gold       Silver     Bronze
```

```
China                36         6          19
United States        19         34         16
Romania              19         6          17
Japan                13         13         3
Russia               7          29         26
Ukraine              2          7          3
Great Britain        2          2          11
Spain                2          1          1
Greece               2          1          0
Netherlands          2          0          0
North Korea          2          0          0
Hungary              2          0          0
Germany              1          4          2
France               1          3          2
South Korea          1          3          2
Brazil               1          2          1
Latvia               1          1          0
Italy                1          0          2
Poland               1          0          1
Canada               1          0          0
Bulgaria             0          1          3
Croatia              0          1          0
Switzerland          0          0          1
Uzbekistan           0          0          1
Do you want to plot (y/n): n

Please enter a sport: WATER POLO

   Countries And Amount Of Medals In Water Polo

Country/Team         Gold       Silver     Bronze
Hungary              39         0          0
United States        25         39         12
Italy                13         26         13
Croatia              13         13         0
Australia            13         0          26
Serbia               13         0          26
Netherlands          12         0          0
Greece               0          13         0
Russia               0          12         39
Serbia and Montenegr 0          12         13
Spain                0          12         0
Do you want to plot (y/n): n

Please enter a sport: q
```

Test Case # 3

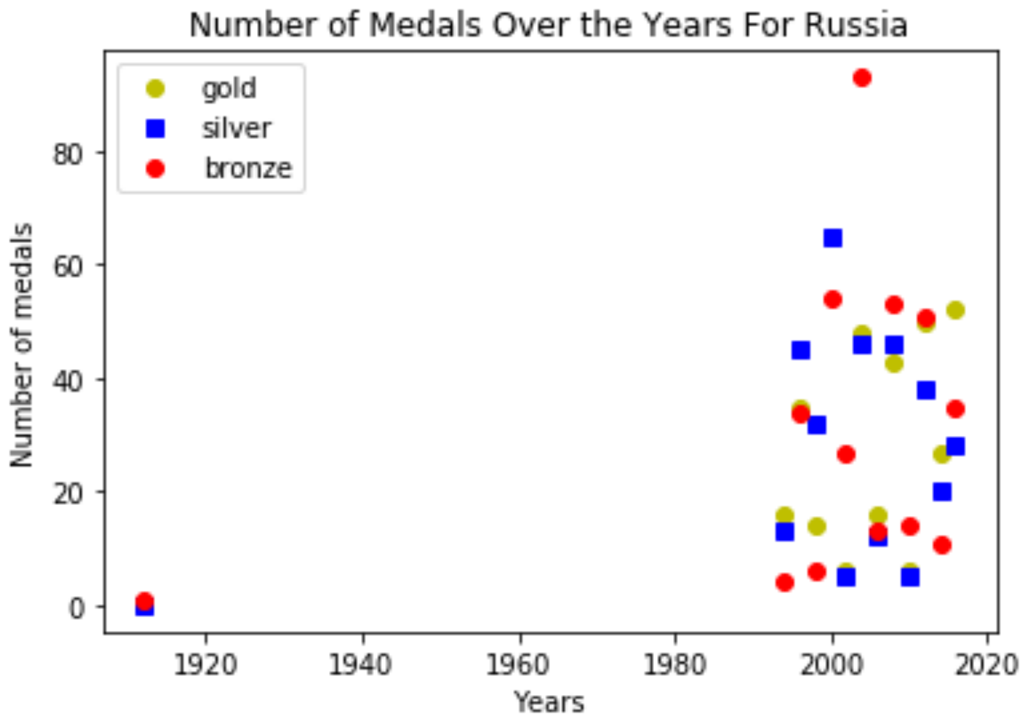
```
Input a file name: athlete_events.csv

Best Athletes Per Sport

Sport                    Athlete Name             Country   Medals
alpine skiing            Kjetil Andr Aamodt       NOR       8
archery                  Kim Su-Nyeong            KOR       6
art competitions         Georges Dubois           SUI       1
athletics                Paavo Johannes Nurmi     FIN       12
badminton                Gao Ling                 CHN       4
baseball                 Pedro Luis Lazo Igle     CUB       4
basketball               Teresa Edwards           USA       5
beach volleyball         Kerri Lee Walsh Jenn     USA       4
biathlon                 Ole Einar Bjrndalen      NOR       13
bobsleigh                Bogdan Musiol            GER       7
boxing                   Arnold Petrus Maria      NED       3
canoeing                 Birgit Fischer-Schmi     GER       12
cross country skiing     Marit Bjrgen             NOR       10
curling                  Torger Nergrd            NOR       2
cycling                  Bradley Marc Wiggins     GBR       8
diving                   Dmitry Ivanovich Sau     RUS       8
equestrianism            Isabelle Regina Wert     GER       10
fencing                  Aladr Gerevich (-Ger     HUN       10
figure skating           Yevgeny Viktorovich      RUS       4
football                 Christie Patricia Pe     USA       4
freestyle skiing         Kari Traa                NOR       3
golf                     Matthew Gregory "Mat     USA       1
gymnastics               Larysa Semenivna Lat     URS       18
handball                 Andrey Ivanovich Lav     RUS       4
hockey                   Teun Floris de Nooij     NED       4
ice hockey               Jayna Hefford            CAN       5
judo                     Ryoko Tamura-Tani        JPN       5
lacrosse                 William Lawrie "Bill     CAN       1
luge                     Armin Zggeler            ITA       6
modern pentathlon        Pavel Serafimovich L     URS       7
nordic combined          Felix Gottwald           AUT       7
polo                     Enrique Padilla          MEX       1
rhythmic gymnastics      Elisa Blanchi            ITA       2
rowing                   Elisabeta Oleniuc-Li     ROU       8
rugby                    Adolphe Ren Bousquet     FRA       2
rugby sevens             Nicole Elise Beck        AUS       1
sailing                  Charles Benedict "Be     GBR       5
shooting                 Kimberly Susan "Kim"     USA       6
short track speed sk     Yang Yang                CHN       10
skeleton                 Aleksandr Vladimirov     RUS       2
ski jumping              Matti Ensio Nyknen (     FIN       5
snowboarding             Kelly Clark              USA       3
softball                 Laura Kay Berg           USA       4
speed skating            Claudia Pechstein        GER       9
swimming                 Michael Fred Phelps      USA       28
synchronized swimmin     Anastasiya Semyonovn     RUS       5
table tennis             Wang Hao                 CHN       5
taekwondo                Steven Lopez             USA       3
```

```
tennis                   Venus Ebony Starr Wi     USA       5
trampolining             Karen Cockburn (-Tur     CAN       3
triathlon                Simon St. Quentin Wh     CAN       2
tug-of-war               Eric Otto Valdemar L     SWE       1
volleyball               Samuele Papi             ITA       4
water polo               Dezs Gyarmati            HUN       5
weightlifting            Ronny Weller             GER       4
wrestling                Wilfried Dietrich        FRG       5
--------------------------------------------------

Average Age of Best Athletes:  27.7 yr
Average Height of Best Athletes: 176.7 cm
Average Weight of Best Athletes:  74.3 kg


Please enter a sport: badminton

   Countries And Amount Of Medals In Badminton

Country/Team         Gold       Silver     Bronze
China-1              12         4          6
China                8          7          9
China-2              8          2          8
Indonesia            6          3          3
Indonesia-1          4          6          3
South Korea-1        4          4          8
South Korea-2        2          2          2
Japan                2          0          1
Denmark              1          5          2
Spain                1          0          0
Malaysia             0          7          1
South Korea          0          3          0
Japan-1              0          2          0
Great Britain-1      0          2          0
Malaysia-1           0          2          0
India                0          1          1
Netherlands          0          1          0
Russia               0          0          2
Great Britain-2      0          0          2
Denmark-2            0          0          2
Denmark-1            0          0          2
Malaysia-2           0          0          2
Great Britain        0          0          1

Do you want to plot (y/n): y

Please enter a country code: USA
```



```
Please enter a sport: cycling

    Countries And Amount Of Medals In Cycling

Country/Team         Gold       Silver     Bronze
Great Britain        47         24         25
France               33         27         18
Italy                33         19         14
Germany              30         23         20
Soviet Union         29         8          16
Australia            21         28         27
Netherlands          18         12         12
West Germany         11         9          8
United States        9          24         13
East Germany         9          20         4
Denmark              8          11         17
Switzerland          5          11         5
Russia               5          9          10
Spain                5          6          8
Belgium              3          5          7
Sweden               2          7          8
China                2          4          3
Colombia             2          1          3
Czechoslovakia       2          0          8
Norway               2          0          2
Latvia               2          0          1
Argentina            2          0          0
Canada               1          5          13
New Zealand          1          5          12
Kazakhstan           1          1          0
Czech Republic       1          1          0
Estonia              1          0          0
```

```
Poland                0          18         5
Ukraine               0          4          2
Japan                 0          3          3
Mexico                0          1          1
Cuba                  0          1          0
Uruguay               0          1          0
Portugal              0          1          0
Belarus               0          0          1
Lithuania             0          0          1
Jamaica               0          0          1
Malaysia              0          0          1
Venezuela             0          0          1
Hong Kong             0          0          1

Do you want to plot (y/n): y

Please enter a country code: RUS
```



```
Please enter a sport: q
```