# Activity: Basic Exploration

## Introduction

In this activity you will practice using exploration methods on a data set containing games of online chess*. This activity includes some or all of the following, not necessarily in this order:

- Viewing the data
- Finding the mean
- Finding the median
- Standard deviation
- Aggregations
- Grouping

*The data set is from Kaggle (https://www.kaggle.com/datasets/mysarahmadbhat/online-chess-games).

## Note

This data set is larger than those used in previous activities. Please run the cell below which uses the `info()` method to get a sense of the data before you begin.

In [ ]:
```
import pandas as pd

df = pd.read_csv('chess_games.csv')
df.info()
```

#### Question 1

Create two `DataFrame` objects called `first_three` and `last_three` and assign the first and last three rows of the data set to them, respectively.

In [ ]:
```
# Your code here

# your code here
```

In [ ]:
```
# Question 1 Grading Checks

assert first_three.shape == (3, 17), 'Make sure that you chose only the fir
st three rows.'
assert last_three.shape == (3, 17), 'Make sure that you chose only the last
three rows.'
```

### Question 2

Create two new `DataFrame` objects called `white_lower_rating` and `white_higher_rating` that are assigned the rows of data where the white player's rating is less than 1200 and greater than or equal to 1800, respectively.

In [ ]:
```
# Your code here

# your code here
```

In [ ]:
```
# Question 2 Grading Checks

assert isinstance(white_lower_rating, pd.DataFrame), 'Make sure that you ar
e creating a DataFrame object called white_lower_rating.'
assert isinstance(white_higher_rating, pd.DataFrame), 'Make sure that you a
re creating a DataFrame object called white_higher_rating.'
```

### Question 3

Using the `black_rating` column, create a `DataFrame` object called `top_10_percent_black` which is assigned the top 10% of black players by rating. That is, the only rows of where the `black_rating` is higher than 90% of all the `black_rating` values.

In [ ]:
```
# Your code here

# your code here
```

In [ ]:
```
# Question 3 Grading Checks

assert top_10_percent_black.shape == (2011, 17), 'Make sure that you are se
lecting the top 10% of black players by rating. Hint: Try using a condition
al statement to check which black_rating values are in the top 10%.'
```