7/11/2021 create\_reports

### Setup

```
import pandas as pd
from pathlib import Path
from matplotlib import pyplot as plt
from IPython.display import display, HTML

In [2]:
locations = {
    'staging':Path.cwd().joinpath('staging'),
        'analysis':Path.cwd().joinpath('analysis'),
        'reports':Path.cwd().joinpath('reports')
}
```

#### **Functions**

```
def count_resignations(series):
    return series.isna().sum()
```

### **Load Tables**

```
In [4]:
          games = pd.read_csv(locations['staging'].joinpath('games.csv'), index_col=0)
          views = list(locations['analysis'].glob('*.csv'))
          analysis_views={}
          for view in views:
              analysis_views[view.stem] = pd.read_csv(view, index_col=0)
In [5]:
          analysis_views['game_scores'].head()
Out[5]:
            game_id
                      seat players scores
                                          place
           7472433
                                    325.0
                                            3.0
                    orange
                             micah
           7472433
                     purple
                              david
                                     177.0
                                            4.0
           7472433
                     green
                                    357.0
                                            2.0
                               xan
            7472433
                             teddy
                                     380.0
                                             1.0
            7472434 orange
                             teddy
                                     267.0
                                            1.0
```

# Reports

# player performance

```
In [28]: data_source = analysis_views['game_scores']
```

7/11/2021 create\_reports

```
player_list = data_source['players'].unique().tolist()
game_count = data_source['game_id'].nunique()

for focus_player in player_list:
    filtered_data = data_source.loc[data_source['players']==focus_player]
    overall = filtered_data.groupby('seat').agg({'game_id':'count', 'scores':['m
        overall.columns = ['count', 'max culture', 'mean culture', 'median culture',
        place_counts = filtered_data.groupby('seat')['place'].value_counts().unstack
        place_counts.columns=['1st', '2nd', '3rd', '4th']
        overall.index = pd.CategoricalIndex(overall.index, ['orange', 'purple', 'green

        player_counts = overall.sort_index().join(place_counts)
        print(focus_player)
        display(player_counts)
```

micah

micah									
	count	max culture	mean culture	median culture	resignations	1st	2nd	3rd	4th
seat									
orange	14	325.0	185.571429	177.0	0	3	2	6	3
purple	13	370.0	196.909091	188.0	2	5	2	2	2
green	15	352.0	190.538462	167.0	2	2	3	5	3
grey	11	204.0	126.500000	131.0	1	1	1	4	4
david									
	count	max culture	mean culture	median culture	resignations	1st	2nd	3rd	4th
seat									
orange	11	344.0	219.090909	197.0	0	5.0	5.0	1.0	0.0
purple	14	297.0	188.285714	194.0	0	8.0	2.0	1.0	3.0
green	12	342.0	203.083333	192.5	0	2.0	6.0	3.0	1.0
grey	16	320.0	197.785714	183.5	2	4.0	3.0	5.0	2.0
xan									
xan	count	max culture	mean culture	median culture	resignations	1st	2nd	3rd	4th
xan seat	count	max culture	mean culture	median culture	resignations	1st	2nd	3rd	4th
	count	max culture	mean culture 197.647059	median culture	resignations	<b>1st</b> 7	<b>2nd</b> 4	<b>3rd</b>	4th
seat									
seat	17	375.0	197.647059	196.0	0	7	4	3	3
seat orange purple	17 14	375.0 354.0	197.647059 198.923077	196.0 199.0	0	7 2	4 3	3 4	3
seat orange purple green	17 14 11	375.0 354.0 357.0	197.647059 198.923077 182.909091	196.0 199.0 165.0	0 1 0	7 2 2	4 3 3	3 4 3	3 4 3
seat orange purple green grey	17 14 11 11	375.0 354.0 357.0 238.0	197.647059 198.923077 182.909091 179.818182	196.0 199.0 165.0	0 1 0	7 2 2 3	4 3 3 3	3 4 3 2	3 4 3 3
seat orange purple green grey	17 14 11 11	375.0 354.0 357.0 238.0	197.647059 198.923077 182.909091 179.818182	196.0 199.0 165.0 176.0	0 1 0	7 2 2 3	4 3 3 3	3 4 3 2	3 4 3 3
seat orange purple green grey teddy	17 14 11 11	375.0 354.0 357.0 238.0	197.647059 198.923077 182.909091 179.818182	196.0 199.0 165.0 176.0	0 1 0	7 2 2 3	4 3 3 3	3 4 3 2	3 4 3 3
seat orange purple green grey teddy seat	17 14 11 11 count	375.0 354.0 357.0 238.0 max culture	197.647059 198.923077 182.909091 179.818182 mean culture	196.0 199.0 165.0 176.0 median culture	0 1 0 0 resignations	7 2 2 3	4 3 3 3 <b>2nd</b>	3 4 3 2 <b>3rd</b>	3 4 3 3 4th
seat orange purple green grey teddy seat orange	17 14 11 11 count	375.0 354.0 357.0 238.0 <b>max culture</b>	197.647059 198.923077 182.909091 179.818182 <b>mean culture</b> 190.545455	196.0 199.0 165.0 176.0 median culture	0 1 0 0 resignations	7 2 2 3 <b>1st</b>	4 3 3 3 <b>2nd</b>	3 4 3 2 <b>3rd</b>	3 4 3 3 4th
seat orange purple green grey teddy seat orange purple	17 14 11 11 count  11 12	375.0 354.0 357.0 238.0 <b>max culture</b> 307.0 313.0	197.647059 198.923077 182.909091 179.818182 <b>mean culture</b> 190.545455 173.090909	196.0 199.0 165.0 176.0 median culture	0 1 0 0 resignations	7 2 2 3 <b>1st</b> 3 2	4 3 3 3 <b>2nd</b> 5	3 4 3 2 3rd 2 4	3 4 3 3 4th 1 3

7/11/2021 create\_reports

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In [ ]:		