Lab Assignment #2: Data Visualization (due on February 20)

1. Download the provided `oscars.xlsx` file containing Oscar winners' data from Kaggle. Save the file to your working directory.
2. Load the data from `oscars.xlsx` into a data frame using `pandas`.
3. Construct a pie chart showing the percentages of Oscar winners by gender. Save the chart as `gender_distribution.png` to your working directory.
4. Estimate the quality and informativeness of the pie chart. Apply modifications, if necessary.
5. Construct a bar chart showing the number of winners across all categories. Save the chart as `winners_by_category.png` to your working directory.
6. Estimate the quality and informativeness of the bar chart.
7. Construct a bar chart showing the number of winners for the n most frequent categories. Save the chart as `top_n_winners_by_category.png` with the specified value of n.
8. Compare the two bar charts.
9. Study the ways to change the size and palette of charts, horizontal or vertical orientation of bars, width of bars and intervals between bars, position of the text, axes labels and title.

Note: Consider handling the following exceptions:

- File not found.
- File format issues.
- Missing or unexpected columns in the dataset.

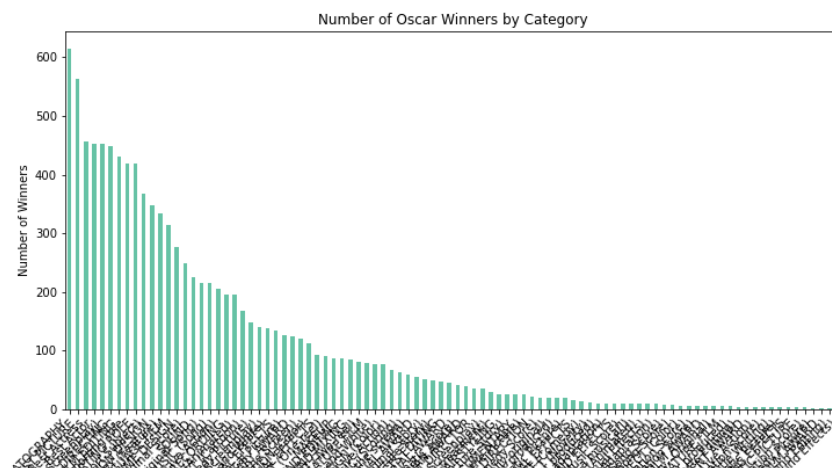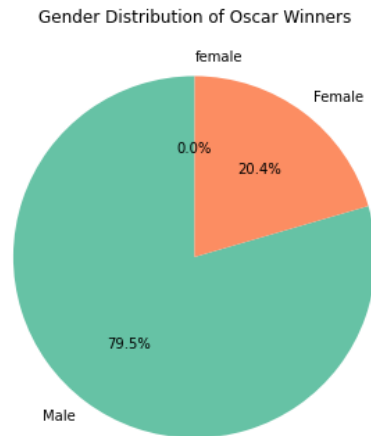What other exception can be handled?

Sample `input` and `output`:

	year_film	year_ceremony	ceremony	...	Race	film	winner
0	1927	1928	1	...	White	The Last Command	True
1	1927	1928	1	...	White	7th Heaven	True
2	1928	1929	2	...	White	In Old Arizona	True
3	1928	1929	2	...	White	Coquette	True
4	1929	1930	3	...	White	Disraeli	True
	...	...	...	...	...	...	...
10391	2019	2020	92	...	White	NaN	True
10392	2019	2020	92	...	White	NaN	True

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10393          2019         2020          92  ...   White            NaN    True

10394          2019         2020          92  ...   White            NaN    True

10395          1992         1993          65  ...   Black      Malcom X    False

[10396 rows x 9 columns]
```

Gender Distribution of Oscar Winners

Number of Oscar Winners by Category

Enter n: 10

Top 10 Categories with Most Oscar Winners