

## Data Visualization and Communication Homework 1

### Remarks:

Write the code yourself. **Cheating is strictly forbidden.**

For each problem write your code in the function format and give the names of the functions as problem numbers, for example for the solution of problem1:

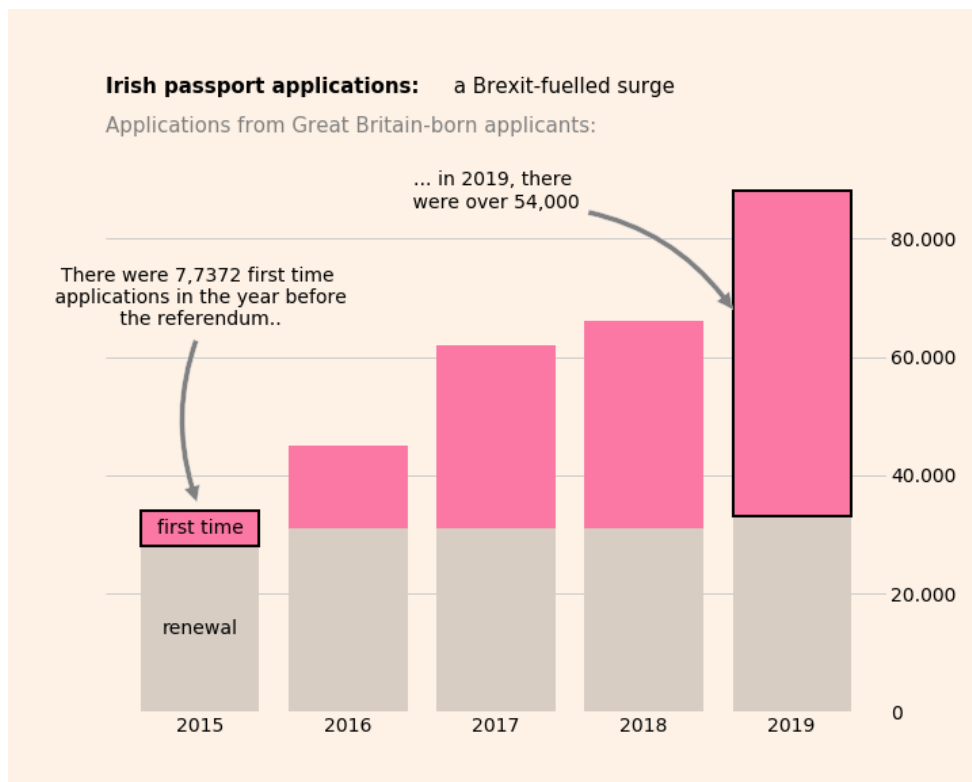
```
def problem1(input):  
    return something
```

Put the codes for all problems into one file (jupyter notebook file) and name that file using your student username in the following format: badays\_via508\_homework1.ipynb. The notebook file should definitely contain the outputs of the functions.

Give as much as documentation for your script using comments.

### Problem 1 (50 Points)

You are given "iris\_pasaport\_applications.xlsx" file which contains irish passport applications for the first time and renewal. Using this file reproduce the figure given below. Use background color as #FEF2E6 . For the colors on the bars use #D7CDC3 and #FB78A4



## Problem 2 (50 Points)

Reproduce the following figure which shows a scatter plot for weekly change in mobility vs weekly change in new covid19 cases. You can use the data given below.

```
country_index=["Chile","India","Canada","France","Italy",
               "US","UK","Israel","Germany"]
mobility=[-6,-2,-4,-2,-2,-1,3.5,3,2]
case=[10,50,30,15,-10,5,-10,-30,20]
colorlist=["navy","cyan","dodgerblue","cyan","cyan","dodgerblue","navy","navy","cyan"]
```

you can use colors in colorlist for the colors of markers in scatter plot.

