Introduction to Programming 2016-2017
Exercise 7

Question 1

Severe rain conditions in Middle Earth led to a public outcry for a weekly rain assessment system. This should been done using the function **weeklyRain**.

The function receives **three** input arguments:

1. **cityNames** (Cell array *n*1*) – Each row contains a string with name of a city.
2. **dailyRain** (Matrix *n*7*) – Each column contains the amount of rain that was measured during each day in each city, each row contains data for one city.
3. **chosenCity** (String) – Name of one city.

The function returns **three** arguments:

1. **meanDaily** (*Vector 1*7*) - The mean amount of rain in Middle Earth during each day
2. **chosenResult** (*Cell array 1*3*) with the following elements :
    a. The name of the chosen city (*string*).
    b. The average amount of rain drops that fell in this city (*scalar*).
    c. The string 'a good day' or 'a bad day' depending on the measures from the last day for this city is larger than 100, this string should be 'a good day', otherwise it should be 'a bad day' (*string*).
3. **grossRain** (*Matrix of n*7*) - For all the measurement in the input matrix, round the element to the nearest multiple of 10 (i.e. 18→20, 113→110).

Example:

For:

cityNames = { 'Rivendell' ; 'Esgaroth'}

dailyRain =

```
    2    4   60   89   65  102   50
   62   34   90  120  200    7   29
```

chosenCity = 'Esgaroth'

[meanDaily, chosenResult, grossRain] = weatherFunc(citiesCell, dataMat, oneName)

meanDaily = [32 19 75 104.5 132.5 54.5 39.5]

```
chosenResult =    { 'Esgaroth'    [77.4286]    'a bad day'}
grossRain =
     0     0     60    90    70     100    50
    60    30    90   120   200      10    30
```

General notes:

Submission date: Soft copy should be submitted by Sunday (8.1.17) - 24:00.

Hard copy should be submitted in the Tirgul group.

Good luck!