

## Tartalomjegyzék

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## 9th Homework

### Program

You have to write a python program which

- reads a .csv file
- stores the **NEPTUN**, **MID** and **REP** fields (midterm and repetition results).
  - ◆ use `csv.DictReader` because the order of the columns may be different
- store those students who attended repetition at all
  - ◆ If someone haven't attended a midterm, then the corresponding cell will be empty.
- For these students calculate the growth rate: the increase in performance divided by the original performance:
  - ◆  $(REP - MID) / MID$
  - ◆ if the original midterm was 0 points or haven't attended at all, then the relative growth rate is infinity:  
`float("http://wiki.math.bme.huinf" http://wiki.math.bme.hu)`
  - ◆ unless the repetition was 0 points too, in that case the growth rate is 0
- The program should read the data from `input.csv` and write the output into `output.csv` in two columns: **NEPTUN** and **GROWTH**
  - ◆ the rows should be sorted by NEPTUN code

### Hint

See the lecture notes or this: `extract_points_from_cc.py` in folder ea\_anyag/Info2/.

### Example

For example if **input.csv** is this:

```
MID,REP,NAME,NEPTUN
0,"http://wiki.math.bme.hupeople's front of judea"http://wiki.math.bme.hu,GM6MRT
17,,Steve Jobs,NC3J0K
,0,Brian,RQQCFE
19,9,Pontius Pilate,BQ6IAJ
1,,N. Jesus,QDMXVF
18,,Bill Gates,D1CXLO
0,"http://wiki.math.bme.huknights who say NI"http://wiki.math.bme.hu,CZN5JA
,1,"http://wiki.math.bme.huRobin, the brave"http://wiki.math.bme.hu,BWQ5AU
17,19,"http://wiki.math.bme.huGelehed, the pure"http://wiki.math.bme.hu,BY9B8G
```

The **output.csv** should contain this:

NEPTUN, GROWTH  
BQ6IAJ, -0.5263157894736842  
BWQ5AU, inf  
BY9B8G, 0.11764705882352941  
RQQCFE, 0

## Handing-in

Deadline: **2018-05-25 23:59**

The perfect solution is 5 points but you can have partial credit too.

Send a single python (.py) file from your **math address** to this address:

- **info1hazi@gmail.com**
- The name of the file should be *EN1\_HF9\_<user account>.py*. For example for me:  
**EN1\_HF9\_borbely.py**