BLG561E Deep Learning HOMEWORK 1

In this assignment, you will implement Fully Connected Neural Network (FCN) components in order to perform a supervised classification task.

Download the required data BLG561E-HW1.zip from Ninova.

Distribution of this homework (in any form including github and such) WITH and WITHOUT your solutions to this homework is strictly prohibited.

INSTRUCTIONS:

- Use Python 3.5+ or later version in this homework.
- In order to install required packages, download the Homework zip or archived file from Ninova, then unzip it, and inside the HW folder, use the command:

  pip3 install -r requirements.txt

- In the folder where your homework files are unzipped, use the command: jupyter-notebook ; Usually, a web browser is directly opened, and you will be able to access the notebook files (*.ipynb) from the browser.

- For second part of the homework you have to download data from: https://drive.google.com/open?id=1pxbCfRj8x7cekSH--652qy-Wz8QFcvek

Usage of any built-in functions for code parts that you are asked to write are not allowed. We provide a skeleton code on which to build on your own architecture. In the Layer class, there are two important methods, named as forward and backward. Almost everything you will use in this assignment is derived from this class. **You should modify and fill in the code under blg561/layers.py, which includes functions such as layer.AffineLayer.* ...**

Go to the Jupyter Notebook Homework1 - ANNs .ipynb to follow step by step instructions for completing your homework.

SUBMISSION INSTRUCTIONS:

In order to collect your assignments, zip again all the folder contents. In other words, what we give you as homework files (not including data dowloaded from Google Drive), you will fill them in and zip them all and send back to us.
If you are a Linux/MacOS user, in the outer folder where your homework files reside, you can run:

```
zip -r STUDENT_NO.zip ./
```

To sum up you zip everything including Homework1 - ANNs .ipynb and layer.py, in the same form as you received them.

Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an FF grade for the course, to disciplinary action and to expulsion from the university.

For more information read the **page: ITU Ethics in University:**
http://www.odek.itu.edu.tr/?SayfaId=13

* For your questions, **one-time Office Hour** of our TA Furkan Özçelik will be announced next week. You can email Furkan at: ozcelikfu@itu.edu.tr for more urgent questions.