Assignment2: Build a CNN model and generate its final feature map.

Dataset to be used: FEI Face dataset, containing 14 images of face of each subject from different angle and light conditions. There are 200 subjects in the dataset, hence 2800 images. The dataset is available here: <https://fei.edu.br/~cet/facedatabase.html>

**Download links :**

[originalimages\_part1](https://fei.edu.br/~cet/originalimages_part1.zip) (~ 84MB)

[originalimages\_part2](https://fei.edu.br/~cet/originalimages_part2.zip) (~ 87MB)

[originalimages\_part3](https://fei.edu.br/~cet/originalimages_part3.zip) (~ 86MB)

[originalimages\_part4](https://fei.edu.br/~cet/originalimages_part4.zip) (~ 87MB)

Divide the dataset in training, testing and validation sets. Try dividing it with uniform samples but no overlap in dataset division should be done.

Also add 5 of your friend’s images (10 images each) in train and test dataset.

Build a CNN model, to recognize various subjects.

**Important Step: Analyze, visualize and generate final feature map of your model just before Softmax function.**

Try tweaking the network by using Dropout, Drop Connect and any other method to change/ analyze and improve performance of your model.