Part I:
We will use a subset of the PASCAL VOC dataset for this assignment. This dataset can be downloaded from this assignment. Code for data loader (in PyTorch) with 2500 training images is given in this link. You need to iterate through the data loader and save the data in a Colab directory. We have provided a code that can help you to understand how to iterate through PyTorch dataloader in shared Colab Notebook.

Use the above dataset to train Faster R-CNN. We will be using the implementation of Faster R-CNN provided in this tutorial. You need to do hyperparameter tuning, especially for anchor boxes. Understand the code and make appropriate changes to it so that it can be used for the training of resized PASCAL VOC images.

Part II:
In this part, we will solve the assignment for object detection provided in this course. You can find solved assignment on GitHub easily. Please go through the assignment and try to solve it yourself. You will be implementing functions for non-max suppression, calculation of IoU, and evaluation of YOLO in this assignment.