Background: In Assignment 2, you would be given one data set and perform two tasks, one for semi-supervised learning, the other for multi-task learning. The total marks of this assignment is 20 points. However, it would be counted as 15 in your final marks. For instance, if you achieve 10/20, you will get 7.5/15. Put your answers in a ipynb file. If you choose not to answer the bonus question, you can put your answers in multiple markdown cells.

In A2, you would be given a dataset named MTL-AQA. You can download and check the information of this dataset here: https://github.com/ParitoshParmar/MTL-AQA. **MTL-AQA contains data related to a task named Action Quality Assessment (AQA). AQA aims to evaluate how well an action performs, i.e., predict score from a given video. It is a significant problem with applications in many domains, including healthcare (e.g., evaluate the progress of patients in performing certain rehabilitation tasks or train the personnel for performing medical procedures) and sports (e.g., to help athletes improve their performance).**
You are allowed to read the paper associated with this dataset and reuse their code with references.

(1) (10 marks) Form a semi-supervised AQA task from this data, describe how you would design the experiment setup for evaluating a semi-supervised learning approach on your proposed task, provide a valid solution (e.g., model architecture) for your experiment setup.

(2) (4 marks-Bonus Point) Implement your proposed semi-supervised AQA solution (in a jupyter notebook).

(3) (10 marks) Read the paper titled "What and How Well You Performed? A Multitask Learning Approach to Action Quality Assessment", summarize their paper by answering 1) how they form a multi-task learning task from the given dataset? 2) besides their proposed multi-task learning problem, do you think other multi-task problems can be formed from the AQA context? Give at least one example. 3) provide another application that can benefit from their multi-task learning approach.