

## Data Analysis Experiment:

1. Explore the dataset and its columns (number of columns, rows, data types, missing data, ...etc)
2. Divide the process of cleaning data in steps for example
  - a. Step one: the missing data
  - b. Step two: convert category into integer and so on ...
3. Explore the visualization of the data if you have one
4. Support your results with screenshot of code
5. Explore the final dataset after cleaning
6. Show the colap file
7. compare the time when you run the code locally and when you run it in colap

## Machine learning Experiment:

1. Explore the data set before and after cleaning (number of columns, rows, data types, missing data, ...etc)
2. Explore the problem that the model will solve.
3. Explore if the problem is regression or classification
4. Write that you split the data into (test, train)
5. Write the methods you have used (ex: linear regressions, random forest ,...etc)
6. Compare the accuracy of the used methods with **more than one metric**
7. Explore your complete code in colap
8. compare the time when you run the code locally and when you run it in colap

## FPGA Experiment:

1. Show the circuit diagram of ALU and each component (ADD-Sub-...)
2. Show the verilog code of ALU and each component
3. Show the control truth table of the ALU (000 ADD- 001 SUB- ...)