

**Section 1: Lab Assessment based on Customer dataset. The dataset will be provided to the students. You are required to write Python scripts in order to answer each of the questions. Your scripts should be written in Jupyter notebook/Colab. Submit your ipynb notebook.**

**The test duration is 45 min.**

**(20 Marks)**

- 1) Create a data frame that contains all the data from Customer.xlsx  
(2 Mark)
- 2) Plot a suitable graph to show the number of customers for different types of payment methods. Label the title of the graph with "Payment Methods".  
(3 Marks)
- 4) Drop all rows with missing value(s).  
(1 Mark)
- 5) Normalize LastTransaction values to a range of 0 to 1.  
(2 Marks)
- 6) Replace the following values of Payment method (0-credit card, 1-cheque, 2-cash)  
(2 Marks)
- 7) You are required to create a prediction model to predict churn based on GaussianNB model using the dataset that you have preprocessed up till question 6. Use 70% of the data for training and 30% for testing. Report the training and testing accuracy, confusion matrix and make a comment on the model performance.  
(10 Marks)