**Lab: How to remove missing values in the data set**

Download the excel sheet for the data set named as “customer-churn-data” from model. Follow the steps to remove the missing values in the data set.

1) Import the data file into Rapid miner and store in your personal repository

2) Load the operator, “Read Excel” on the major Rapid miner process and load the file from the local computer drive

or

2) Retrieve the already imported data from repository and drag the data "customer-churn-data" into process and connect with the results port of the process panel

3) Each row is called as an example and each column is called as an attribute

4) Label the attribute of interest from the data sheet

5) Missing values with question mark in the data shows that we have not information about the customer that this is loyal or churn

6) If they are churn, we should take some pre-emptive actions to protect these churn customers

7) We used Rapid miner Filter operator in this example

8) Drag the filter operator and drag in the process window

9) Right click on the operator if you like to disconnect with the result port

10) click filter button in the right side of parameter panel

11) select churn value and consider the option “is not missing”

12) Click on Statistics tab to check the missing values and you will find that there are not missing values.

13) If you like to explore further, please you should watch the youtube link as mentioned below

* https://www.youtube.com/watch?v=u2RQcev\_SGQ&list=PLssWC2d9JhOZLbQNZ80uOxLypglgWqbJA&index=8