## **REPORT**

## **Lab4.Pandas Grouping and Aggregation**

In this lab, we have practiced on apply functions of Series and Data Frame - group data in Pandas - aggregate values in groups - plot the results of aggregation - aggregate multiple columns and multiple functions

First, import library such as pandas, NumPy, math, matplotlib load the "thanksgiving-2015-poll-data-data.csv" then do pre-processing as head, shape, describe, isnull, unique.

Apply function gender\_code () to get get gender in bool form

Apply function clean\_income () to categorize the range of income

Group one column of the data and found basic properties then
use aggregate function on it and plot the bar graph

Then, perform above steps on multiple columns.