***Tutorial 7– Data Visualization***

1. *economics* data set is a data set in the *ggplot2* package which was produced from US economic time series data. Using thisdata set and *ggplot2* package do the following tasks:
   1. Plot a line for the total population (*pop),* where the x-axis in the plot displays the month of data collection (*date*).
   2. Plot a line for the total population (*pop)* after 2005-01-01. **Hint**: use *filter* function in *dplyr* package.
2. *flights* data set is a data set in *nycflights13* package which contains on-time data for all flights that departed NYC in 2013. Using thisdata set and *ggplot2* package do the following tasks:
   1. Use a proper plot to display the data in carrier name column (*carrier*).
   2. Use proper plots to display the data in departure delays (*dep\_delay*)*.*
   3. Use proper plots to display the data in arrival delays (*arr\_delay*)*.*
   4. Use a proper plot to display the co-variation between departure delays (*dep\_delay*) and arrival delays (*arr\_delay*).
   5. Use a proper plot to display the co-variation between origin (*origin*) and destination (*dest*).
   6. Use a proper plot to display the co-variation between origin (*origin*) and departure delays (*dep\_delay*).
   7. Try grouping the plots used to answer section (b) by carrier name (*carrier*). **Hint**: use *color* parameter in *aes* function.
   8. Try facetting the plots used to answer section (b) by carrier name (*carrier*).