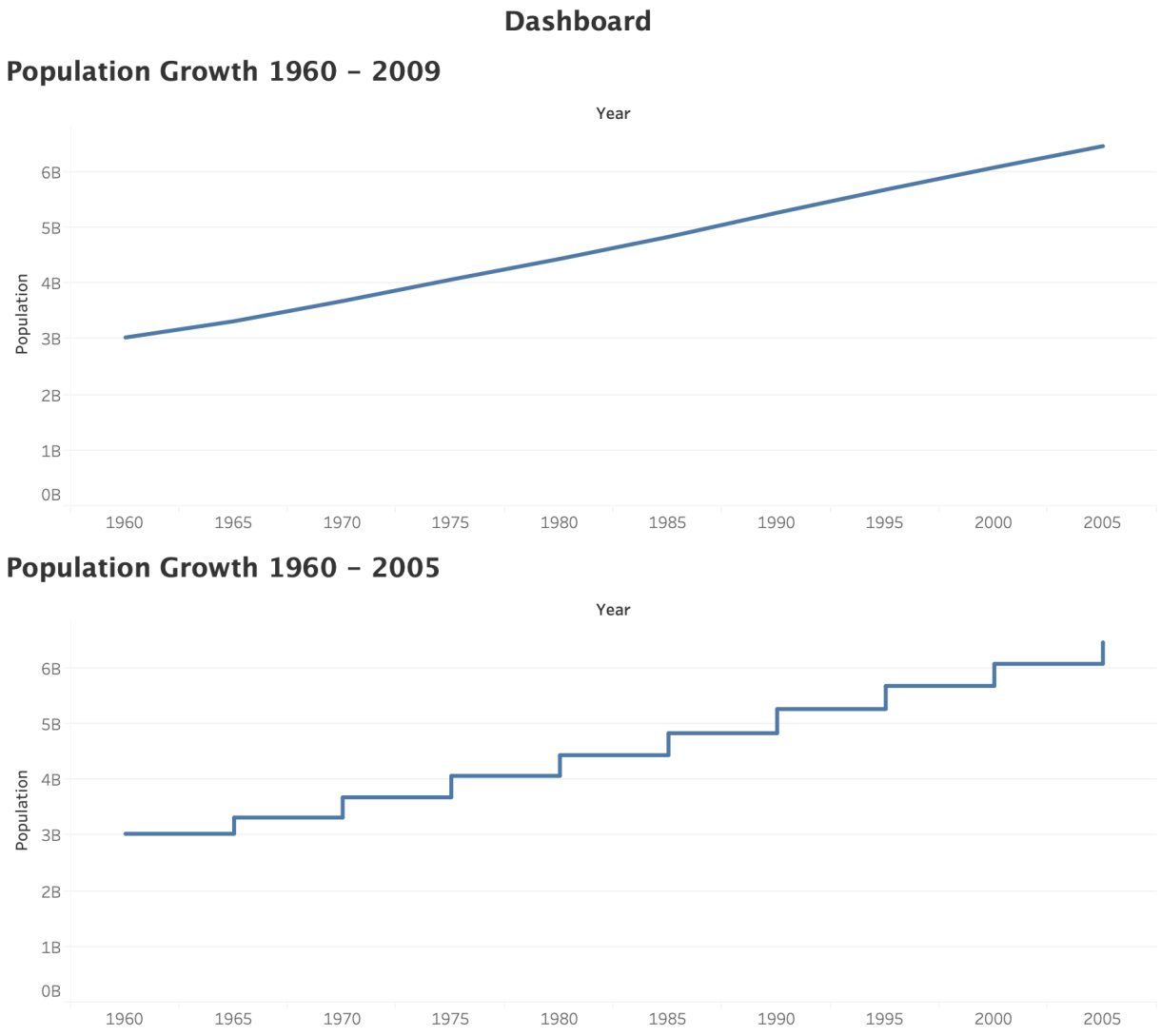
Tableau Work

- Line & Step Chart of Population growth



R Programming Work

Week 3-4: Exercises: Line Charts & Step Charts

Shani Kumar

Week 3-4: Exercises: Charts

You need to submit 3 line charts and 3 step charts using Tableau or PowerBI, Python and R using the data below (or your own datasets). You can also submit using D3, though not required. You can choose which library to use in Python or R, documentation is provided to help you decide and as you start to play around in the libraries, you will decide which you prefer.

Data source We are using dataset from Data Source URL file.

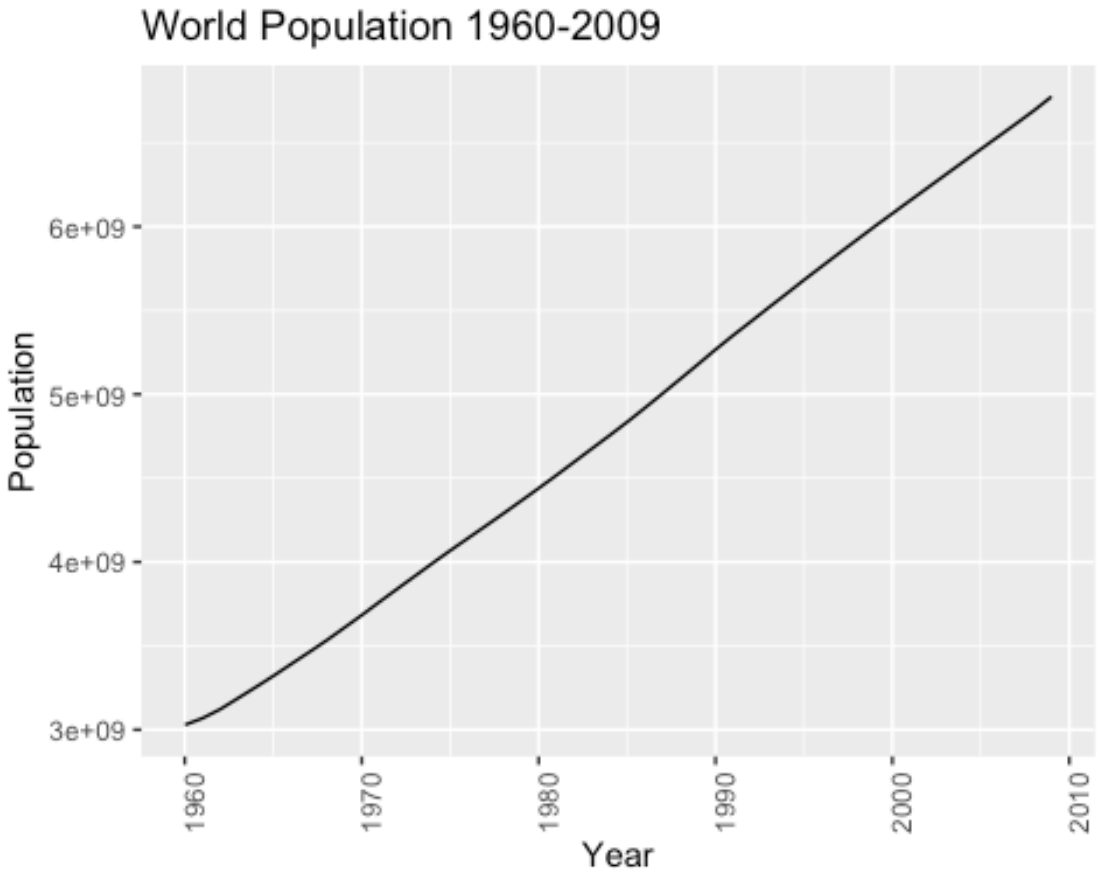
```
##   Year Population
## 1 1960 3028654024
## 2 1961 3068356747
## 3 1962 3121963107
## 4 1963 3187471383
## 5 1964 3253112403
## 6 1965 3320396924
```

Data structure:

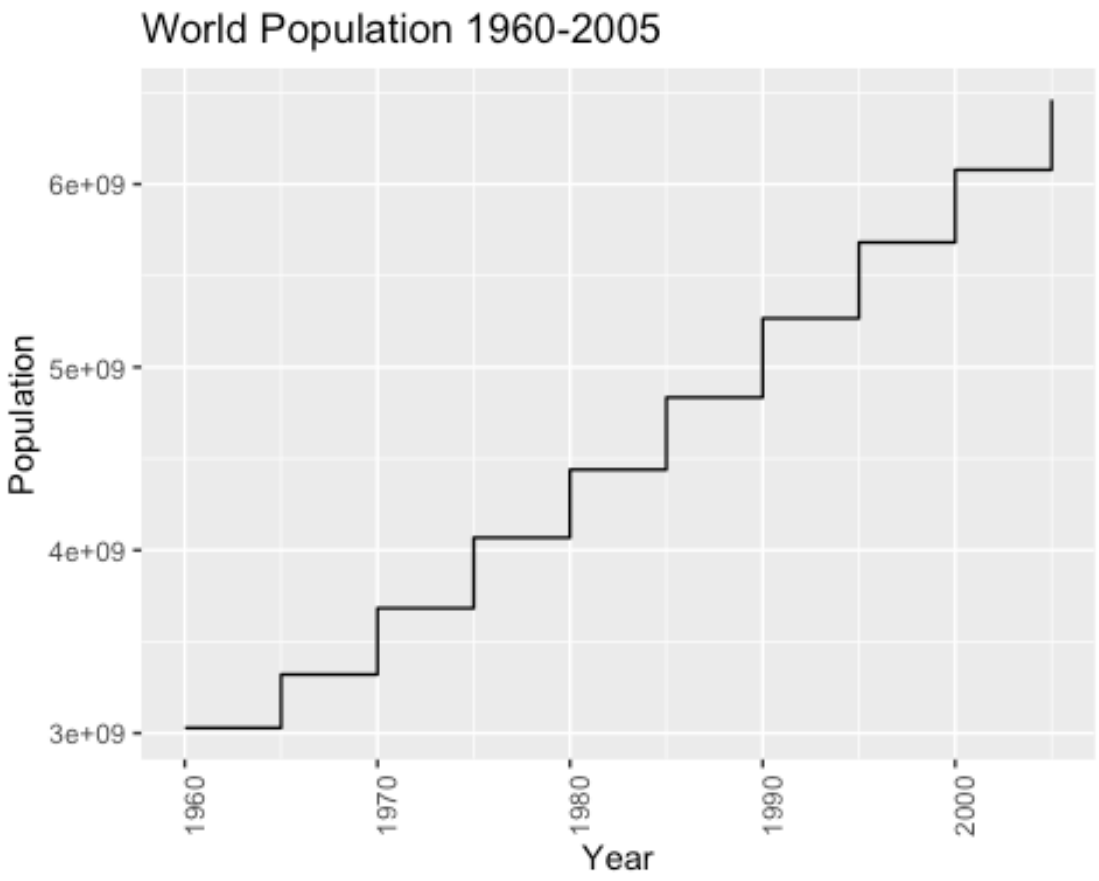
```
## 'data.frame':    50 obs. of  2 variables:
##  $ Year      : num  1960 1961 1962 1963 1964 ...
##  $ Population: num  3.03e+09 3.07e+09 3.12e+09 3.19e+09 3.25e+09 ...
```

Construct Charts:

Line Chart



Step Chart



Python Work

Week 3-4 - Assignment

Prepare - Line charts and Step charts
By
Shani Kumar

Introduction: Assignment Details

You need to submit 3 line charts and 3 step charts using Tableau or PowerBI, Python and R using the data below (or your own datasets). You can also submit using D3, though not required. You can choose which library to use in Python or R, documentation is provided to help you decide and as you start to play around in the libraries, you will decide which you prefer.

Source Data

https://content.bellevue.edu/cst/dsc/640/datasets/ex2-2.zip

In [1]:

```
# Impprt required libraries/packages
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

# configure display of graph
%matplotlib inline
```

Load data into a dataframe

In [2]:

```
# load the csv file as a data frame
world_population = pd.read_excel('world-population.xlsm')
# summarize the shape of the dataset
print("Dataset Shape: ",world_population.shape)
# see the sample of the data
print("\n\nSample Data: ")
world_population.head()
```

```
Dataset Shape:  (50, 2)

Sample Data:
```

Out[2]:

	Year	Population
0	1960	3028654024
1	1961	3068356747
2	1962	3121963107
3	1963	3187471383
4	1964	3253112403

Line Chart

In [3]:

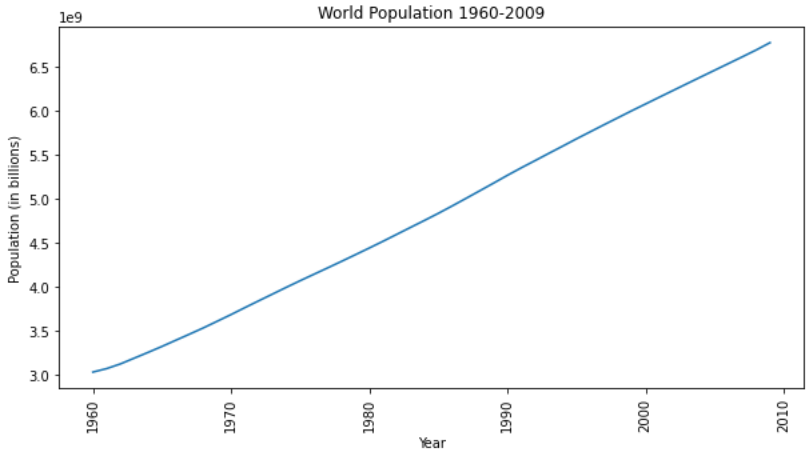
```
# Line bar chart
# Set plot size
```

```
plt.figure(figsize=[10,5])

#plot the line chart
plt.plot(world_population['Year'], world_population['Population'])

#setup label
plt.xlabel('Year')
plt.xticks(rotation=90)
plt.ylabel('Population (in billions)')

# setup title
plt.title('World Population 1960-2009')
#Show now
plt.show()
```



Step Chart

In [4]:

```
# Step chart

# Setup step
step_year_5 = world_population[world_population['Year'] % 5 == 0]

# Set plot size
plt.figure(figsize=[10,5])

#plot the step chart
plt.step(step_year_5['Year'], step_year_5['Population'])

#setup label
plt.xlabel('Year')
plt.xticks(rotation=90)
plt.ylabel('Population (in billions)')
```

```
# setup title
plt.title('World Population 1960-2005')

#Show now
plt.show()
```