

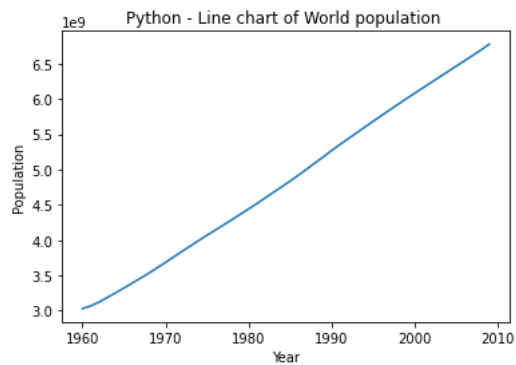
Python Excercises

```
In [2]: import pandas as pd
import matplotlib.pyplot as plt
```

```
In [3]: df = pd.read_excel('world-population.xlsm')
```

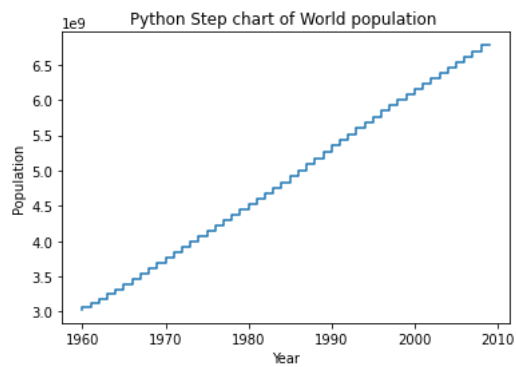
Python - Line Chart

```
In [5]: plt.plot(df['Year'], df['Population'])
plt.title('Python - Line chart of World population ')
plt.xlabel('Year')
plt.ylabel('Population')
plt.show()
```



Python - Step Chart

```
In [6]: plt.step(df['Year'], df['Population'])
plt.title('Python Step chart of World population ')
plt.xlabel('Year')
plt.ylabel('Population')
plt.show()
```



R Exercises

```
In [1]: # Import required packages
library('magrittr')
library("ggplot2")
library("dplyr")
library("xlsx")
```

Registered S3 methods overwritten by 'ggplot2':

method	from
[-.quosures	rlang
c.quosures	rlang
print.quosures	rlang

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

filter, lag

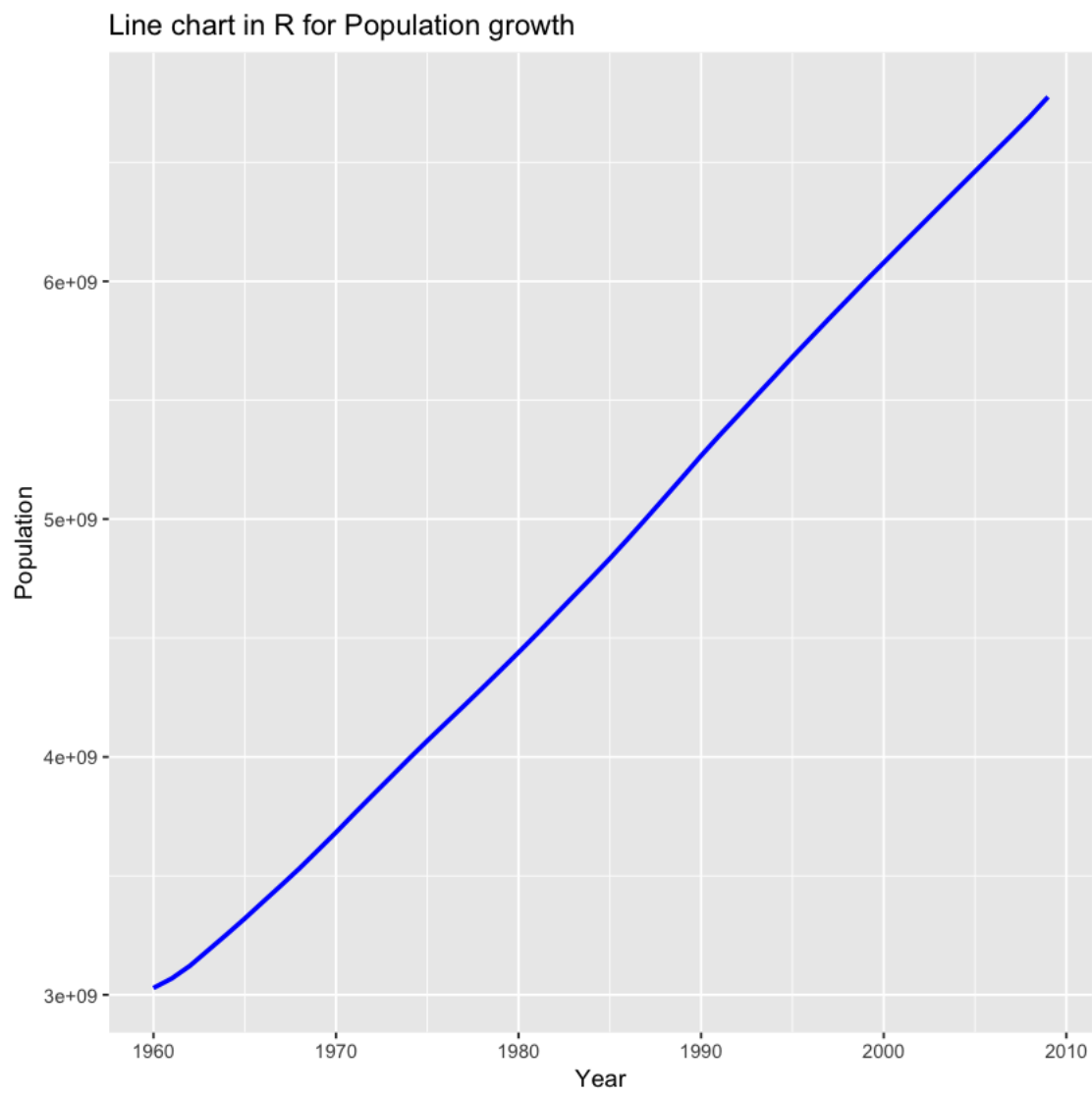
The following objects are masked from 'package:base':

intersect, setdiff, setequal, union

```
In [2]: file = paste(getwd(), '/world-population.xlsm', sep = '')
df = xlsx::read.xlsx(file, sheetIndex=1, stringsAsFactors=FALSE)
```

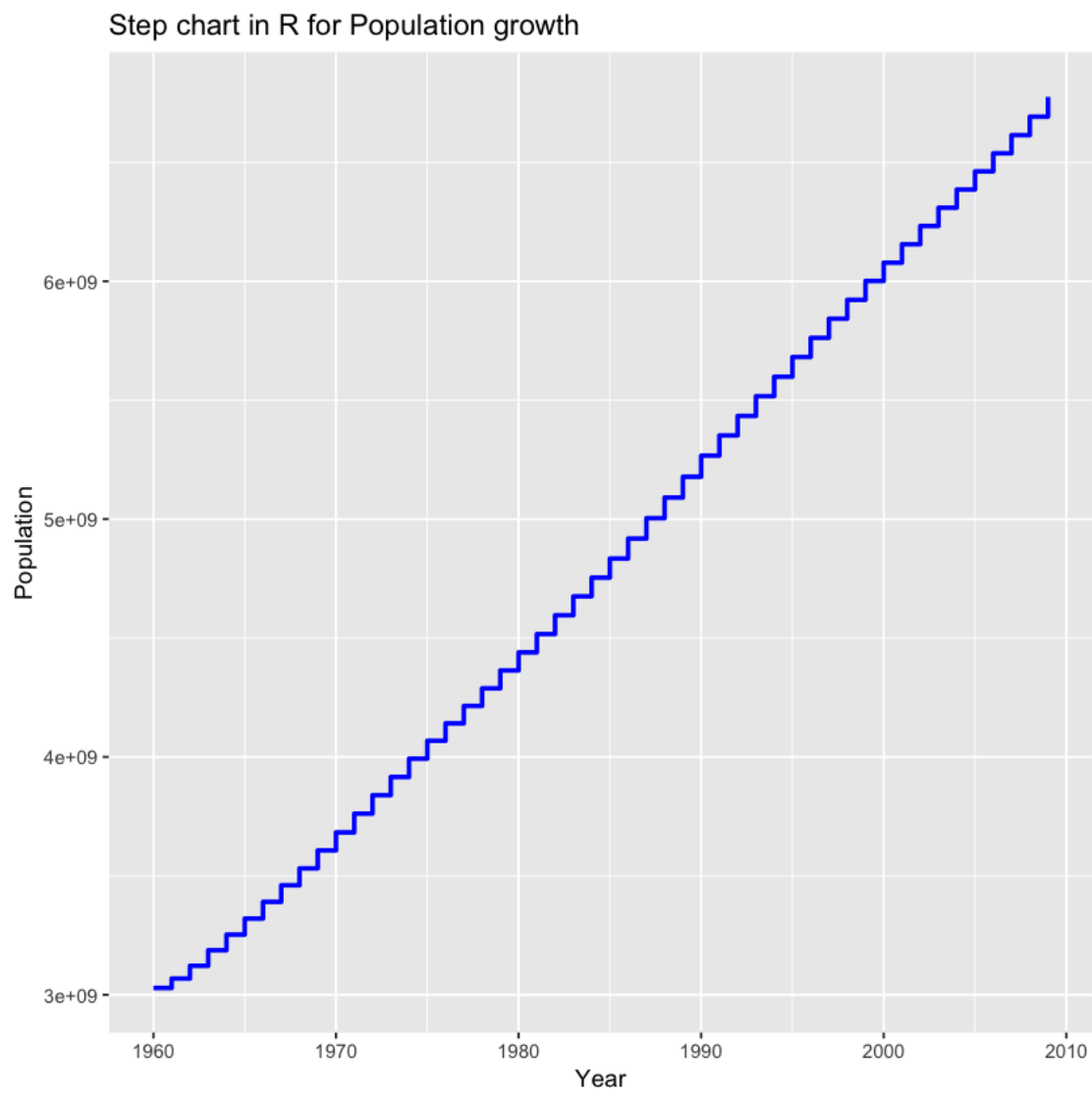
R - Line Chart

```
In [8]: ::geom_line(linetype='solid',color='blue', size=1.0) + ggplot2::ggtitle(label='Line chart in R for Population growth')
```

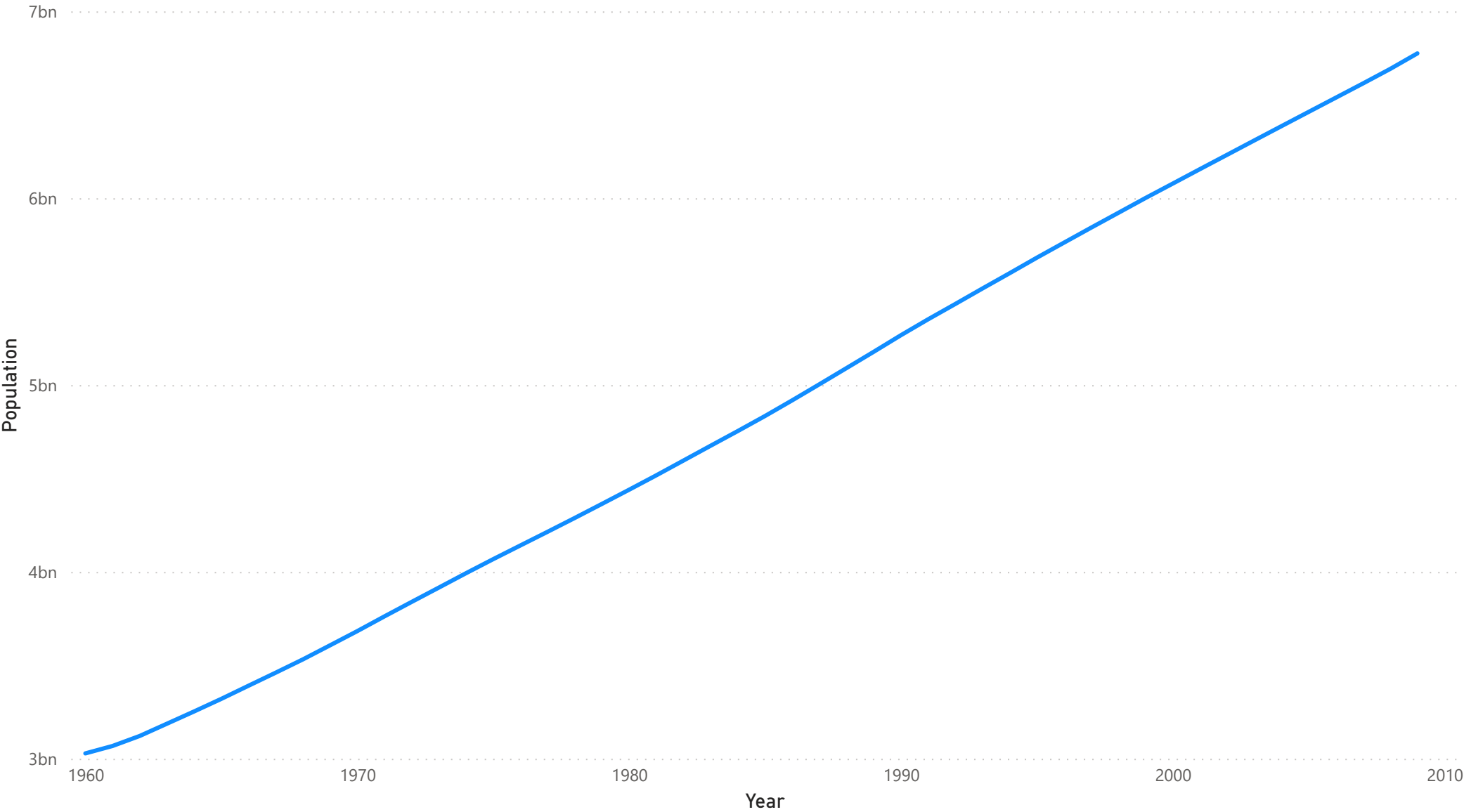


R - Step Chart

```
In [11]: tion)) + ggplot2::geom_step(linetype='solid', color='blue', size=1.0) + ggplot2::ggtitle(label='Step chart in R for Popu
```



Power BI - Line Chart



Power BI - Step Chart

