

- Setup map
- Read data for each country
- Display data for each country



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)
by Christine Alvarado, Mia Minnes, and Leo Porter, 2015.



- Setup map

- Read data for each country

- Display data for each country

A	B	C	D	E	F
Series Name	Series Code	Country Name	Country Code	2013 [YR201	Title
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Afghanistan	AFG	60.9314146	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Albania	ALB	77.5372439	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Algeria	DZA	71.0096585	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	American Samoa	ASM	..	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Andorra	ADO	..	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Angola	AGO	51.8661707	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Antigua and Barbuda	ATG	75.8292927	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Argentina	ARG	76.1872927	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Armenia	ARM	74.5407561	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Aruba	ABW	75.3321707	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Australia	AUS	82.197561	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Austria	AUT	80.8902439	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Azerbaijan	AZE	70.6931463	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Bahamas, The	BHS	75.072561	
Life expectancy at birth, total (years)	SP.DYN.LE00.IN	Bahrain	BHR	76.669878	

LifeExpectancyWorldBank.csv

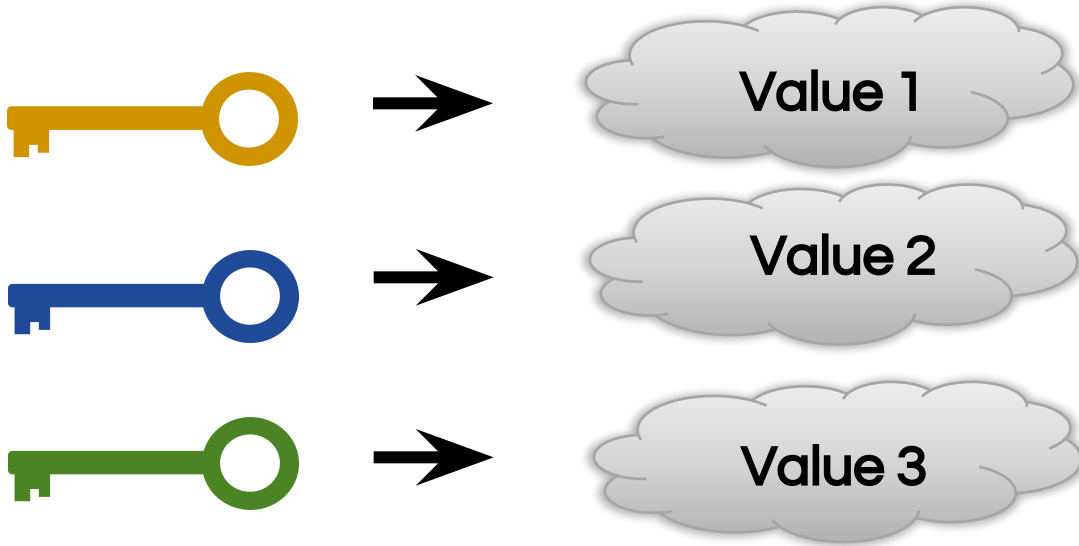
```
public class LifeExpectancy extends PApplet
{
    UnfoldingMap map;

    Map<String, Float> lifeExpByCountry;

    ...
}
```

Map: Keys → Values

Abstract data type: Map



Abstract data type: Map



Value 1



Value 2

String
countryID

Float
lifeExp

Stay tuned!

Abstract data type: Map



Value 1



Value 2

String
countryID

Float
lifeExp


```
public class LifeExpectancy extends PApplet
{
```

```
    UnfoldingMap map;
```

```
    Map<String, Float> lifeExpByCountry;
```

```
    public void setup() {
```

Create Object of type Map

```
        ...
```

```
        lifeExpByCountry = loadLifeExpectancyFromCSV  
            ("data/LifeExpectancyWorldBank.csv");
```

```
        ...
```

```
    }
```

```
private Map<String, Float>
```

```
    loadLifeExpectancyFromCSV(String fileName) {
```

```
}
```

```
private Map<String, Float>  
    loadLifeExpectancyFromCSV(String fileName) {
```

```
    Map<String, Float> lifeExpMap  
        = new HashMap<String, Float>();
```

Constructor

```
    ...
```

```
    return lifeExpMap;
```

```
}
```

```
private Map<String, Float>  
    loadLifeExpectancyFromCSV(String fileName) {
```

```
    Map<String, Float> lifeExpMap  
        = new HashMap<String, Float>();
```

Read file

```
    String[] rows = loadStrings(fileName);
```

```
    return lifeExpMap;
```

```
}
```

```
private Map<String, Float>  
    loadLifeExpectancyFromCSV(String fileName) {
```

```
    Map<String, Float> lifeExpMap ...
```

```
    String[] rows = ...
```

For each ... in ...

```
    for (String row : rows) {  
        String[] columns = row.split(",");  
        if ( ... ) {  
            float value = Float.parseFloat(columns[5]);  
            lifeExpMap.put(columns[4], value);  
        }  
    }
```

```
    return lifeExpMap;
```

```
}
```

```
private Map<String, Float>
    loadLifeExpectancyFromCSV(String fileName) {

    Map<String, Float> lifeExpMap ...

    String[] rows = ...

    for (String row : rows) {
        String[] columns = row.split(",");
        if ( ... ) {
            float value = Float.parseFloat(columns[5]);
            lifeExpMap.put(columns[4], value);
        }
    }
    return lifeExpMap;
}
```

```
private Map<String, Float>
    loadLifeExpectancyFromCSV(String fileName) {

    Map<String, Float> lifeExpMap ...

    String[] rows = ...

    for (String row : rows) {
        String[] columns = row.split(",");
        if ( ... ) {
            float value = Float.parseFloat(columns[5]);
            lifeExpMap.put(columns[4], value);
        }
    }
    return lifeExpMap;
}
```

```
public class LifeExpectancy extends PApplet
{
    UnfoldingMap map;
    Map<String, Float> lifeExpByCountry;

    public void setup() {
        ...
        lifeExpByCountry = loadLifeExpectancyFromCSV(
            "data/LifeExpectancyWorldBank.csv");
        ...
    }
}
```

Read in Data