Working with Jupyter Notebook

The following example is based on Script `Descr-Figures` from Chapter 1 and demonstrates the use of **Jupyter Notebooks** to document your work step by step. We will describe the two most important building blocks:

- basic Markdown commands to format your text in `Markdown` cells
- how to import and run Julia code in `Code` cells

Import and Prepare Data

Let's start by loading all packages:

```
In [ ]: using WooldridgeDatasets, Statistics, DataFrames, FreqTables, Plots
```

In the next step, we import our data and define important variables:

```
In [ ]: affairs = DataFrame(wooldridge("affairs"))
        counts = freqtable(affairs.kids)
        labels = ["no", "yes"]

        print(counts)
```
```
[171, 430]
```

Analyse Data

View your Data

To get an overview you could use `first(affairs, 5)`.

Calculate Descriptive Statistics

Now we are interested in printing out the average age. We start with its definition and use LaTeX to enter the equation:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^{N} x_i$$
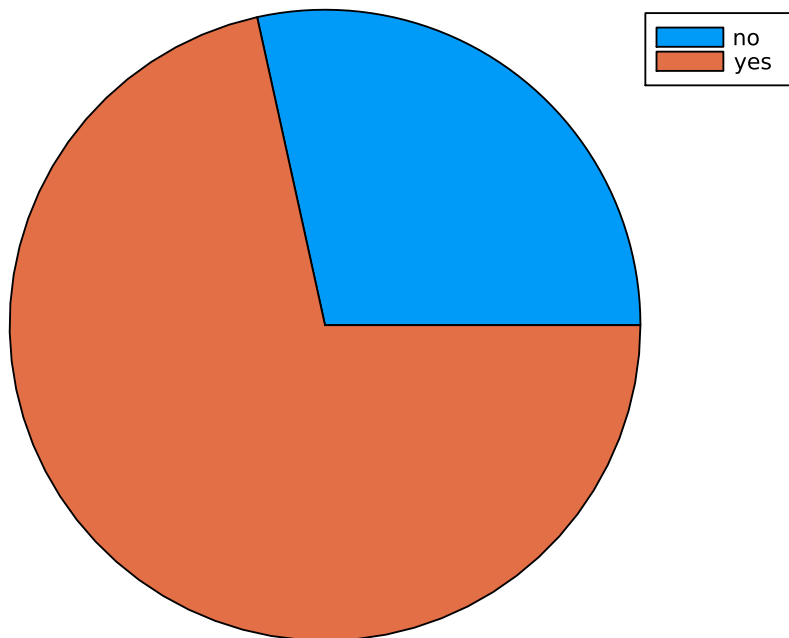
The resulting Julia code gives:

```
In [ ]: age_mean = mean(affairs.age)
        print(age_mean)
```
```
32.48752079866888
```

Produce Graphic Results

In Chapter 1, we saw how to produce a pie chart. Let's repeat it here:

```
In [ ]: pie(labels, counts)
```


You can also show Julia code without executing it. You can use `inline code`, or for longer paragraphs

```
bar(labels, counts)
```