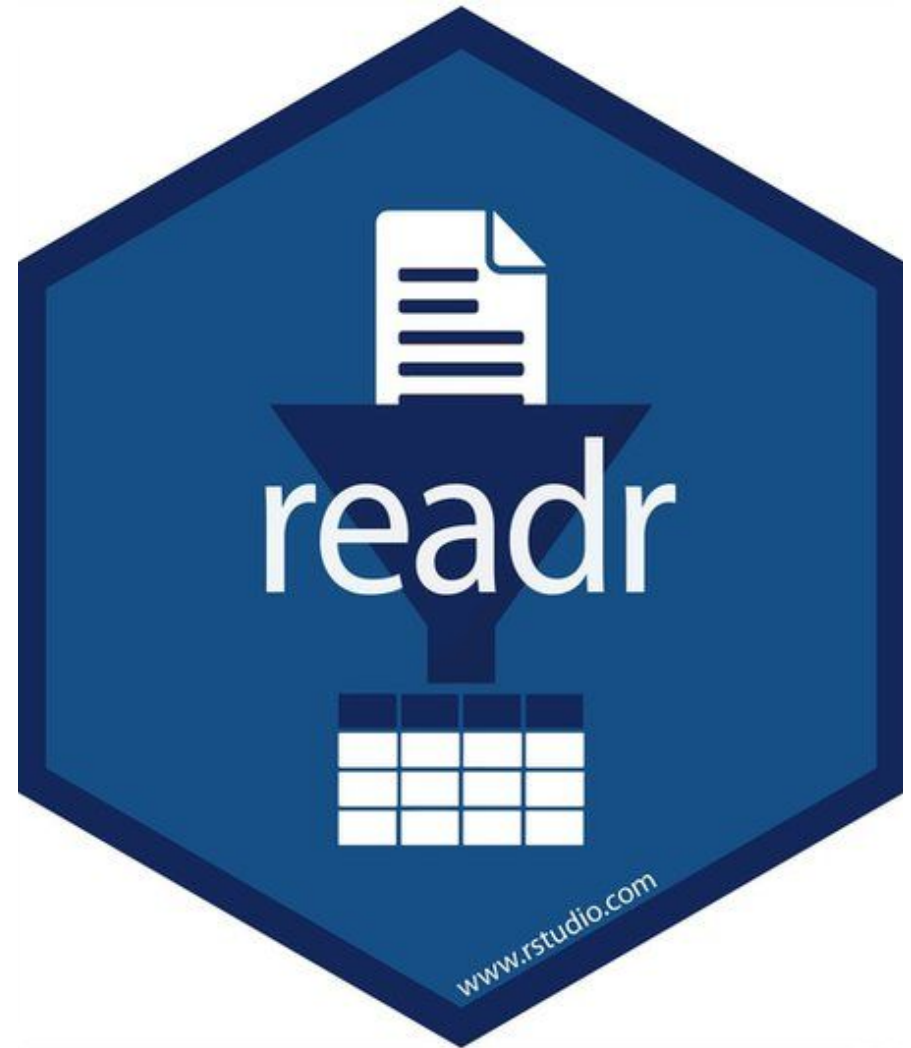
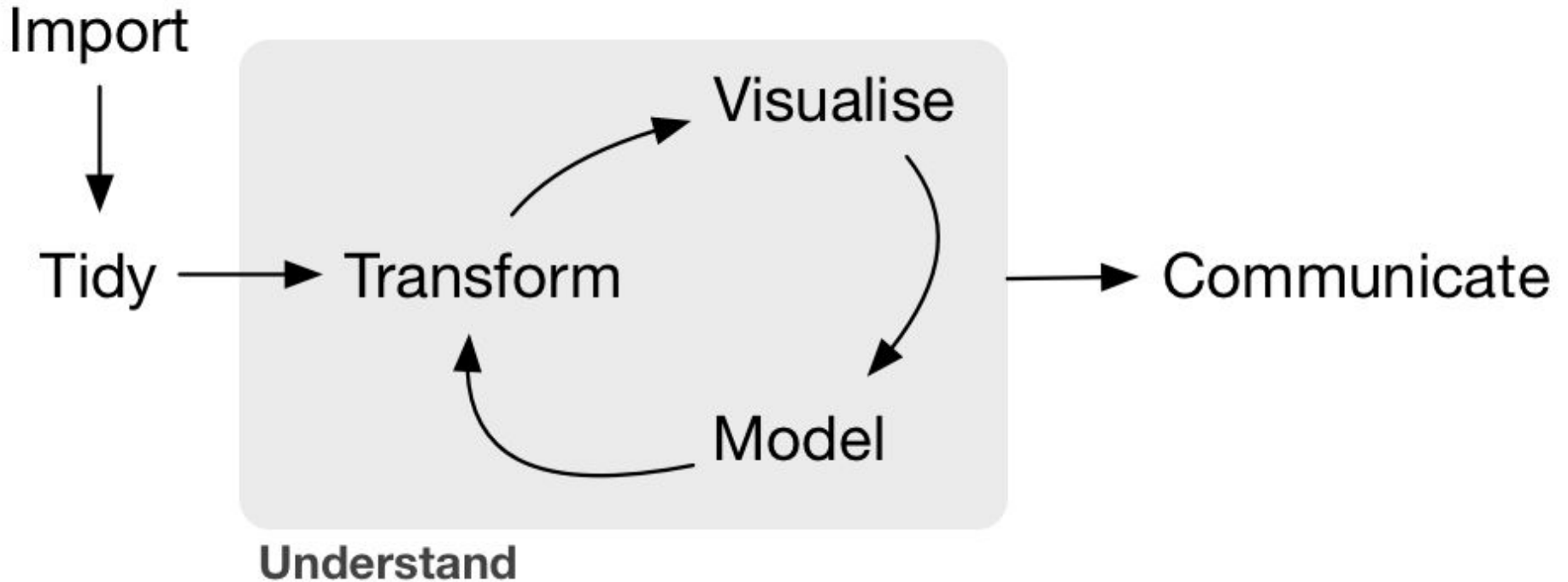


# reading and writing data with `readr`

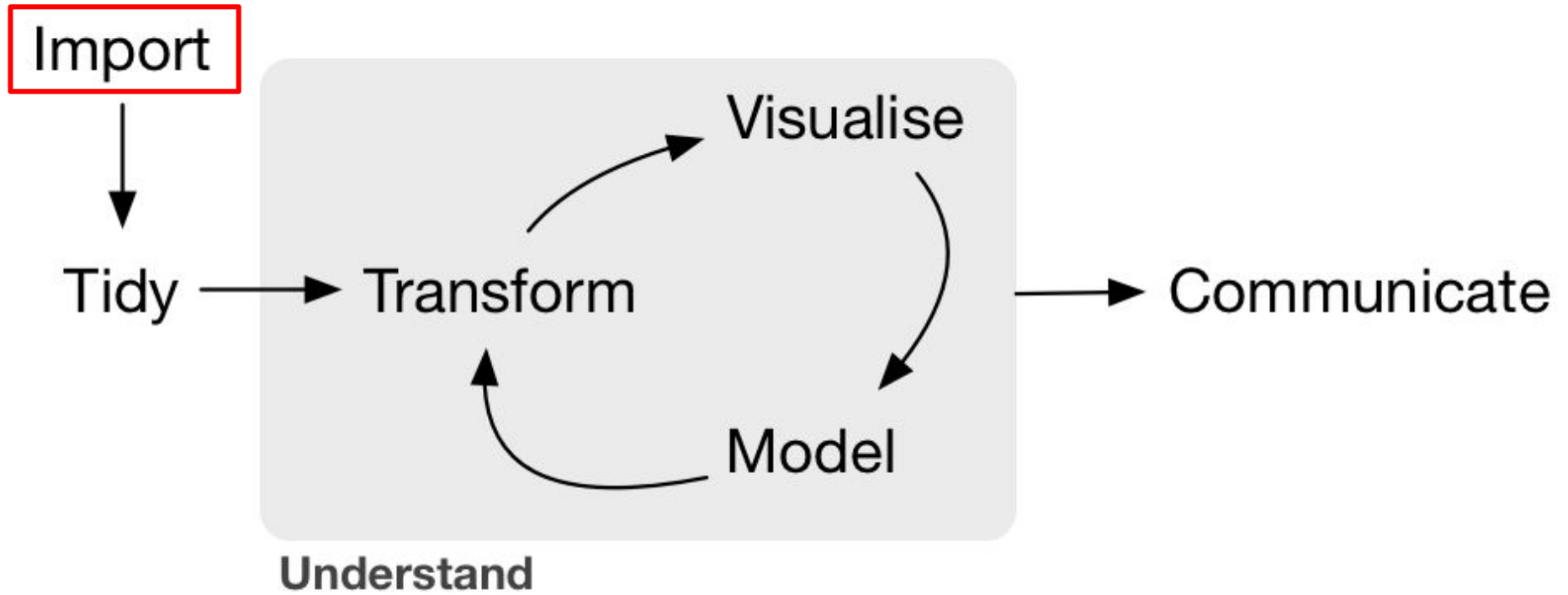
Fels Bioinformatics  
Meetup 2018.10.19



# Steps in Data Analysis



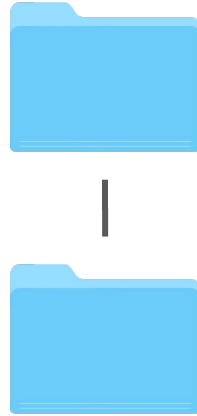
# Steps in Data Analysis



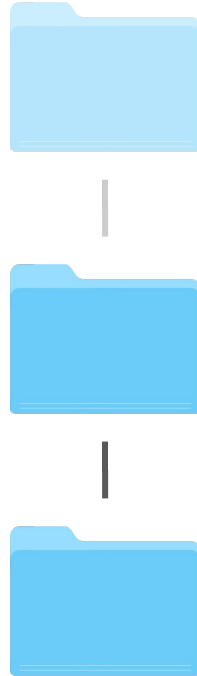
# Directory



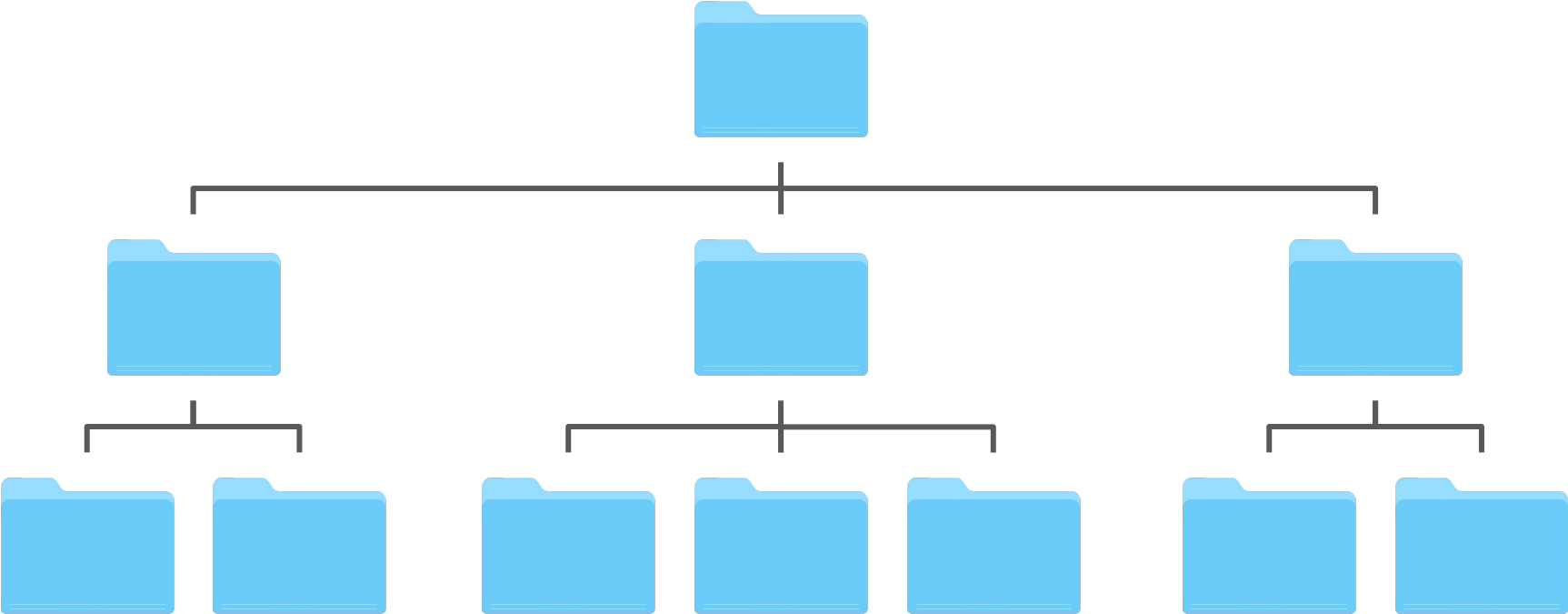
# Parent Directory



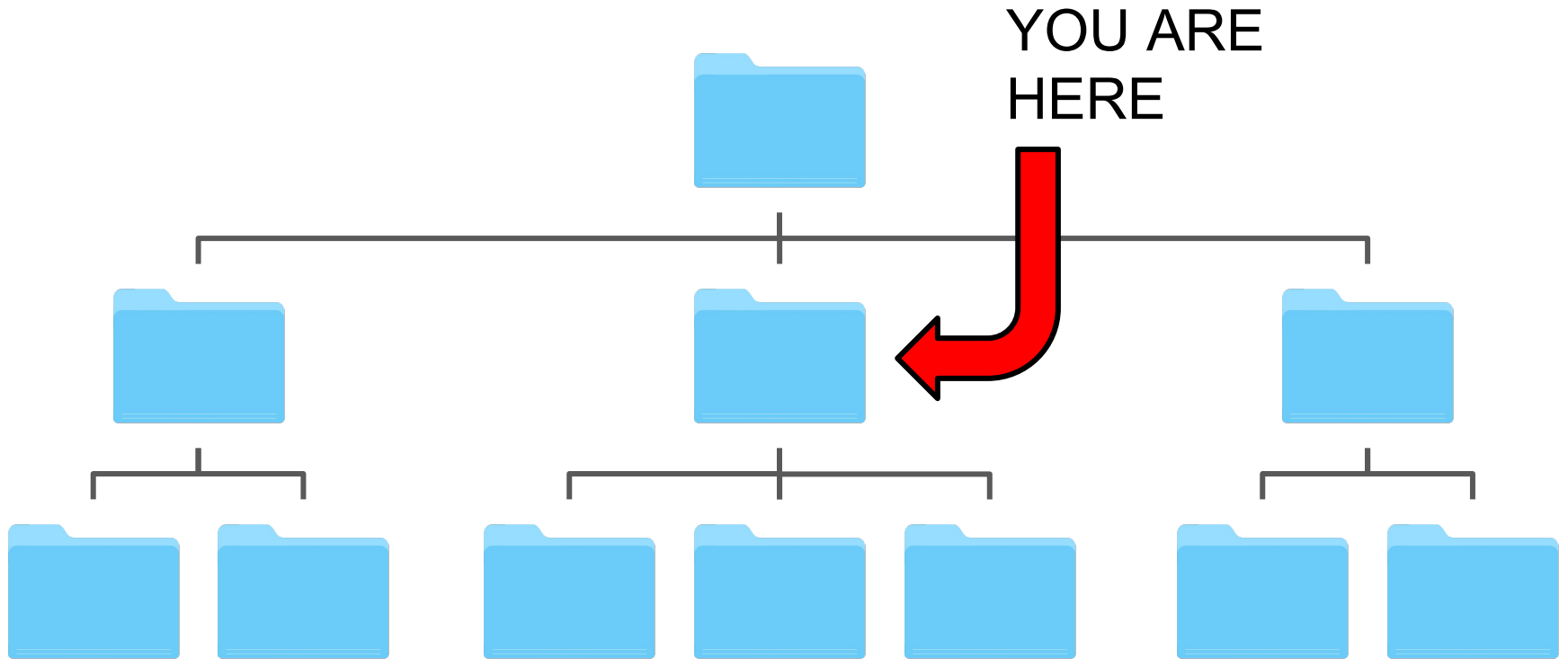
# Child Directory / Subdirectory



# Directory Tree

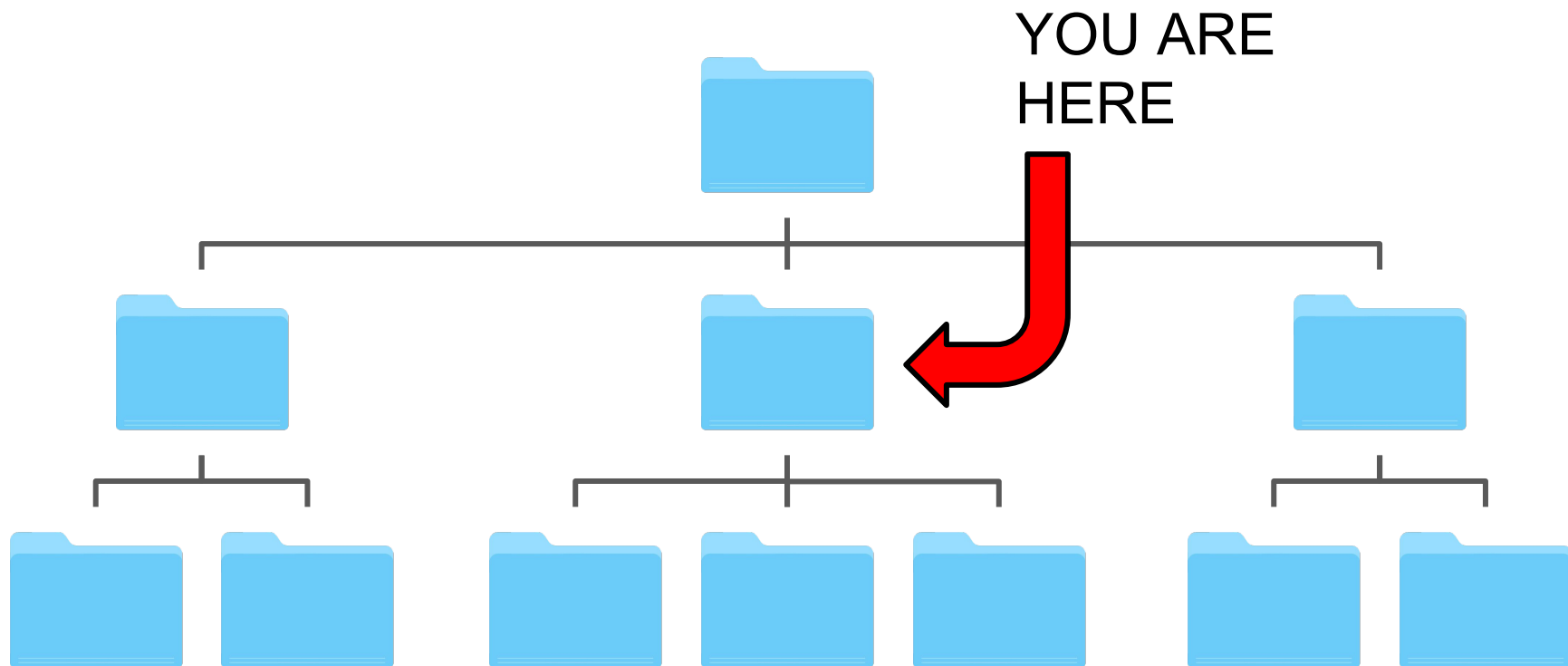


# Working Directory





# File Path



`/parent_directory/child_directory1/`

# Data File Formats

Linux (where data analysis/bioinformatics is mostly done) likes plain text files. Data is usually stored in delimited plain text files. A delimiter is any character that is used to specify boundaries between data, mostly commonly tabs or commas

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## tab separated values (TSV)

```
Sepal.Length    Sepal.Width Petal.Length    Petal.Width Species
5.1 3.5 1.4 0.2 setosa
4.9 3    1.4 0.2 setosa
4.7 3.2 1.3 0.2 setosa
4.6 3.1 1.5 0.2 setosa
5    3.6 1.4 0.2 setosa
```

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Sepal.Length    Sepal.Width Petal.Length    Petal.Width Species
5.1 3.5 1.4 0.2 setosa
4.9 3    1.4 0.2 setosa
4.7 3.2 1.3 0.2 setosa
4.6 3.1 1.5 0.2 setosa
5    3.6 1.4 0.2 setosa
```

## comma separated values (CSV)

```
Sepal.Length, Sepal.Width, Petal.Length, Petal.Width, Species~
5.1, 3.5, 1.4, 0.2, setosa~
4.9, 3, 1.4, 0.2, setosa~
4.7, 3.2, 1.3, 0.2, setosa~
4.6, 3.1, 1.5, 0.2, setosa~
5, 3.6, 1.4, 0.2, setosa~
```

# Data File Formats

ANYTHING, however, can be used to delimit files

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spaces (probably third most common)

```
|Sepal.Length Sepal.Width Petal.Length Petal.Width Species~  
5.1 3.5 1.4 0.2 setosa~  
4.9 3 1.4 0.2 setosa~  
4.7 3.2 1.3 0.2 setosa~  
4.6 3.1 1.5 0.2 setosa~  
5 3.6 1.4 0.2 setosa~
```

# Data File Formats

ANYTHING, however, can be used to delimit files

spaces (probably third most common)

```
Sepal.Length Sepal.Width Petal.Length Petal.Width Species~  
5.1 3.5 1.4 0.2 setosa~  
4.9 3 1.4 0.2 setosa~  
4.7 3.2 1.3 0.2 setosa~  
4.6 3.1 1.5 0.2 setosa~  
5 3.6 1.4 0.2 setosa~
```

or seriously whatever people want

```
Sepal.Length/Sepal.Width/Petal.Length/Petal.Width/Species~  
5.1/3.5/1.4/0.2/setosa~  
4.9/3/1.4/0.2/setosa~  
4.7/3.2/1.3/0.2/setosa~  
4.6/3.1/1.5/0.2/setosa~  
5/3.6/1.4/0.2/setosa~
```