

Lecture 8 - R Software

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<https://rfidcard.cards>

Entering Text items as Data

If the data you require are not numerical, you simply use quotes to differentiate them from numbers. There is no difference between using single and double quotes **R** converts them all to double.

The following example shows a simple text sample comprising of days of the week:

```
> day1 = c('Mon', 'Tue', 'Wed', 'Thu')  
> day1  
[1] "Mon" "Tue" "Wed" "Thu"
```

You can combine other text objects in the same way as you did for the numeric objects previously, like so:

```
> day1 = c(day1, 'Fri')  
> day1  
[1] "Mon" "Tue" "Wed" "Thu" "Fri"
```

If you mix text and numbers, the entire data object becomes a text variable and the numbers are converted to text, shown in the following. You can see that the items are text because **R** encloses each item in quotes:

```

> mix = c(data1, day 1)
> mix
[1] "3" "5" "7" "5" "3" "2" "6" "8" "5" "6" "9" "Mon"
[13] "Tue" "Wed" "Thu" "Fri"

```

Reading a File of Data from a Disk

To read a file with the `scan()` command you simply add `file = 'filename'` to the command. For example:

```

> data6 = scan(file = 'test data.txt')
Read 15 items
> data6
[1] 23.0 17.0 12.5 11.0 17.0 12.0 14.5 9.0 11.0 9.0 12.5 14.5 17.0 8.0 21.0

```

Note: The filename must be enclosed in quotes (single or double).

R looks for your data file in the default directory. You can find the default directory by using the `getwd()` command like so:

```

> getwd()
[1] "C: / Documents and Settings / Administrator / My Documents"
> getwd()
[1] "/ Users / markgardener"

```

If file is somewhere else, we must type its name and location in full. The location is relative to the default directory.

In the preceding example the file was on the desktop so the command ought to have been:

```
> data6 = scan(file = 'Desktop/test data.txt')
```

You can also type in a URL and link to a file over the Internet directly; once again the full URL is required.

It may be easier to point permanently at a directory so that the files can be loaded simply by typing their names. You can alter the working directory using the `setwd('pathname')` command.

To step up one level we can type `setwd('..')`

We can look at a directory and see which files/folders are within it using the `setwd(dir())` or `list.files()` command:

`dir()` or `list.files()`

The default is to show the files and folders in the current working directory, but you can type in a path (in single quote marks) to list files in any directory.

For example:

```
dir('Documents')  
dir('Documents/Excel files')
```