In [1]:
```
# Ignore warning
options(warn=-1)
```

Input and Output

1) CSV file

CSV stands for comma separated values

Reading CSV using read.csv()

In [2]:
```
x <- read.csv("demo.csv")
```

In [3]:
```
x
```

ID	Name	Marks
1	John	60
2	Jack	80
3	Jill	78
4	Jenny	67

Reading CSV using read.table()

read.csv() is a special version of read.table()

In [4]:
```
read.table(file="demo.csv",sep=",")
```

V1	V2	V3
ID	Name	Marks
1	John	60
2	Jack	80
3	Jill	78
4	Jenny	67

Writing to CSV file using write.csv()

In [5]:
```
head(state.x77)
```

	Population	Income	Illiteracy	Life Exp	Murder	HS Grad	Frost	Area
Alabama	3615	3624	2.1	69.05	15.1	41.3	20	50708
Alaska	365	6315	1.5	69.31	11.3	66.7	152	566432
Arizona	2212	4530	1.8	70.55	7.8	58.1	15	113417
Arkansas	2110	3378	1.9	70.66	10.1	39.9	65	51945
California	21198	5114	1.1	71.71	10.3	62.6	20	156361
Colorado	2541	4884	0.7	72.06	6.8	63.9	166	103766

In [6]:
```
df <- state.x77
```

In [7]:
```
write.csv(df, file="state.csv")
```

2) Excel file

Reading excel file

use package **readxl**

In [8]:
```
library(readxl)
```

list the sheets of the excel file

In [9]:
```
excel_sheets('demo.xlsx')
```

'Sheet1'

read excel file sheet using **read_excel()** function

In [10]:
```
read_excel('demo.xlsx', sheet="Sheet1")
```

ID	Name	Marks
1	Jack	80
2	John	90
3	Jill	67
4	Jenny	78

Writing to excel files

install package **xlsx**

In [16]:
```
install.packages('xlsx',repos="http://cran.rstudio.com/")
```

use package **xlsx**

In [12]:
```
library(xlsx)
```

write to excel file using **write.xlsx()**

In [13]:
```
head(women)
```

height	weight
58	115
59	117
60	120
61	123
62	126
63	129

In [14]:
```
df <- women
```

In [15]:
```
write.xlsx(women,"output.xlsx")
```