

SESSION 2: Introduction to working with R

Assignment 3

1. How to Import SAS XPORT Files into R With The foreign package

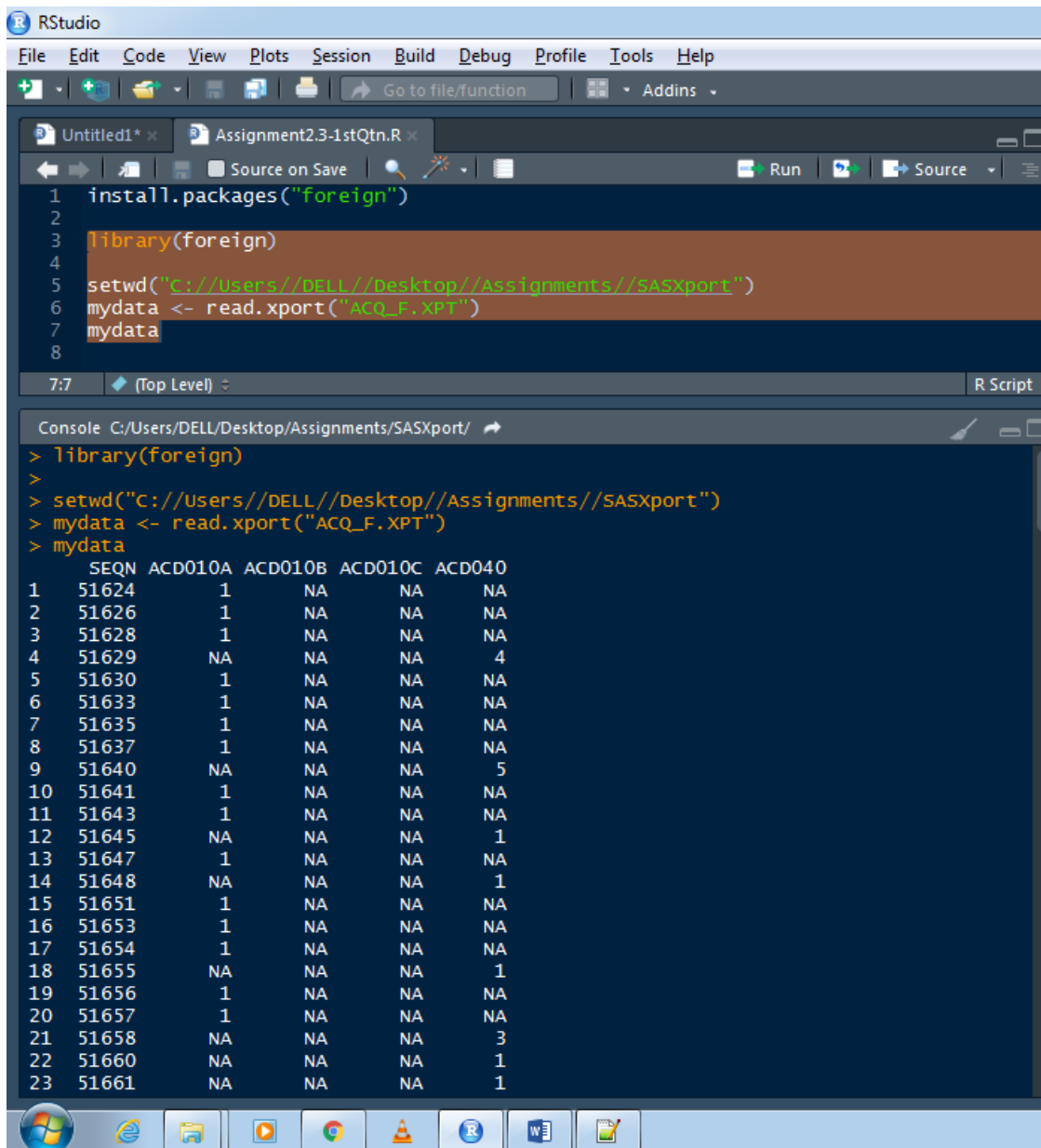
Answer: Downloaded **ACQ_F.xpt** from online

```
library(foreign)
```

```
setwd("C://Users//DELL//Desktop//Assignments//SASXport")
```

```
mydata <- read.xport("ACQ_F.XPT")
```

```
mydata
```



The screenshot shows the RStudio interface with the following code in the script editor:

```
1 install.packages("foreign")
2
3 library(foreign)
4
5 setwd("C://Users//DELL//Desktop//Assignments//SASXport")
6 mydata <- read.xport("ACQ_F.XPT")
7 mydata
8
```

The console output shows the successful execution of the code and the resulting data frame structure:

```
> library(foreign)
>
> setwd("C://Users//DELL//Desktop//Assignments//SASXport")
> mydata <- read.xport("ACQ_F.XPT")
> mydata
```

	SEQN	ACD010A	ACD010B	ACD010C	ACD040
1	51624	1	NA	NA	NA
2	51626	1	NA	NA	NA
3	51628	1	NA	NA	NA
4	51629	NA	NA	NA	4
5	51630	1	NA	NA	NA
6	51633	1	NA	NA	NA
7	51635	1	NA	NA	NA
8	51637	1	NA	NA	NA
9	51640	NA	NA	NA	5
10	51641	1	NA	NA	NA
11	51643	1	NA	NA	NA
12	51645	NA	NA	NA	1
13	51647	1	NA	NA	NA
14	51648	NA	NA	NA	1
15	51651	1	NA	NA	NA
16	51653	1	NA	NA	NA
17	51654	1	NA	NA	NA
18	51655	NA	NA	NA	1
19	51656	1	NA	NA	NA
20	51657	1	NA	NA	NA
21	51658	NA	NA	NA	3
22	51660	NA	NA	NA	1
23	51661	NA	NA	NA	1

2. How To Import SAS Files into R With The haven Package?

Answer: To import SAS file Package **Haven** has to be installed.

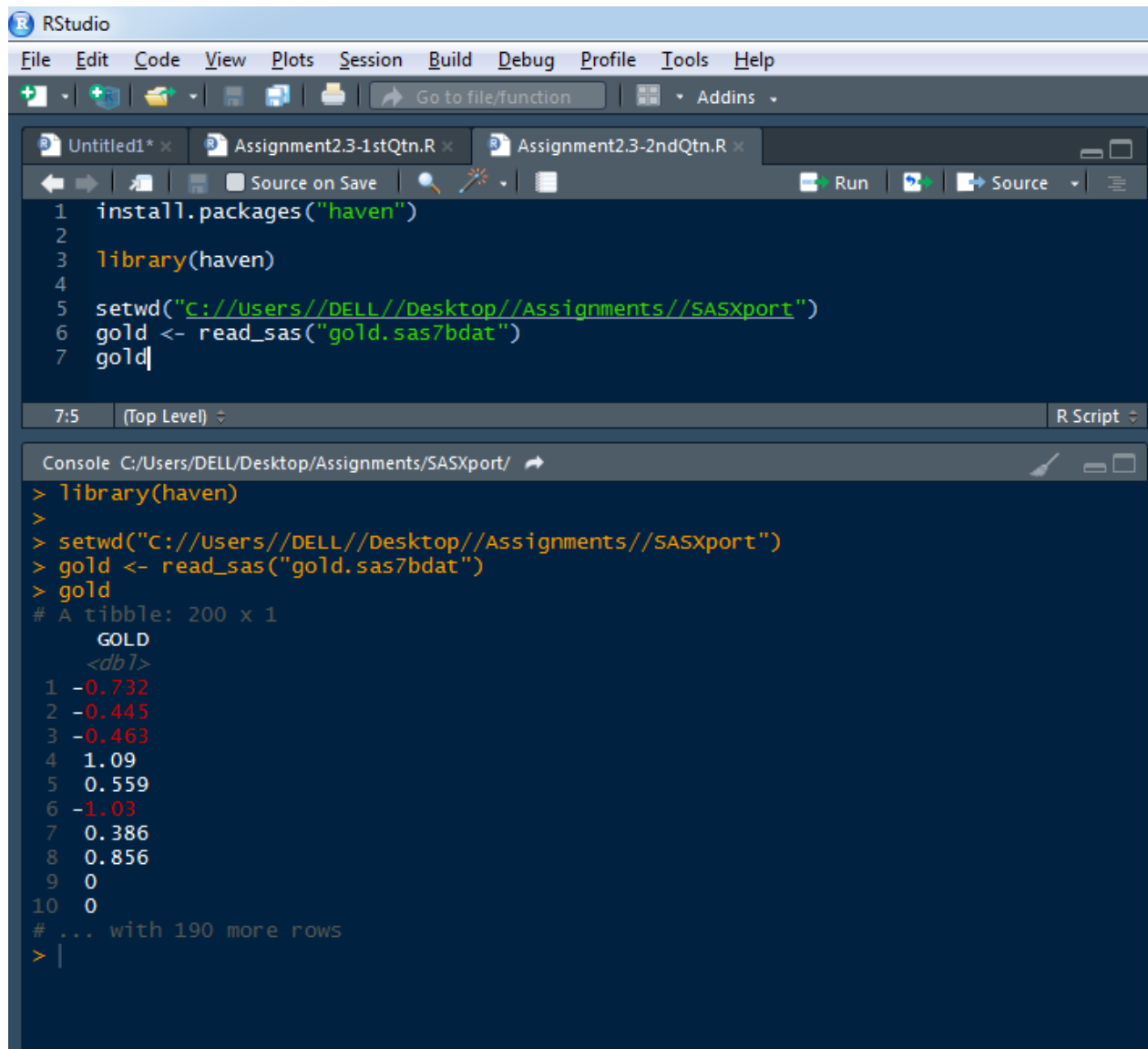
```
install.packages("haven")
```

```
library(haven)
```

```
setwd("C://Users//DELL//Desktop//Assignments//SASXport")
```

```
gold <- read_sas("gold.sas7bdat")
```

```
gold
```



The screenshot shows the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu is a toolbar with icons for file operations and a 'Go to file/function' search bar. The script editor shows the following R code:

```
1 install.packages("haven")
2
3 library(haven)
4
5 setwd("C://Users//DELL//Desktop//Assignments//SASXport")
6 gold <- read_sas("gold.sas7bdat")
7 gold
```

The console output shows the execution of the code:

```
> library(haven)
>
> setwd("C://Users//DELL//Desktop//Assignments//SASXport")
> gold <- read_sas("gold.sas7bdat")
> gold
# A tibble: 200 x 1
  GOLD
  <dbl>
1 -0.732
2 -0.445
3 -0.463
4 1.09
5 0.559
6 -1.03
7 0.386
8 0.856
9 0
10 0
# ... with 190 more rows
> |
```

3. How to read Weka Attribute-Relation File Format (ARFF) files in R?

Answer: To read Weka Attribute-Relation File Format (ARFF) files package **foreign** has to be installed.

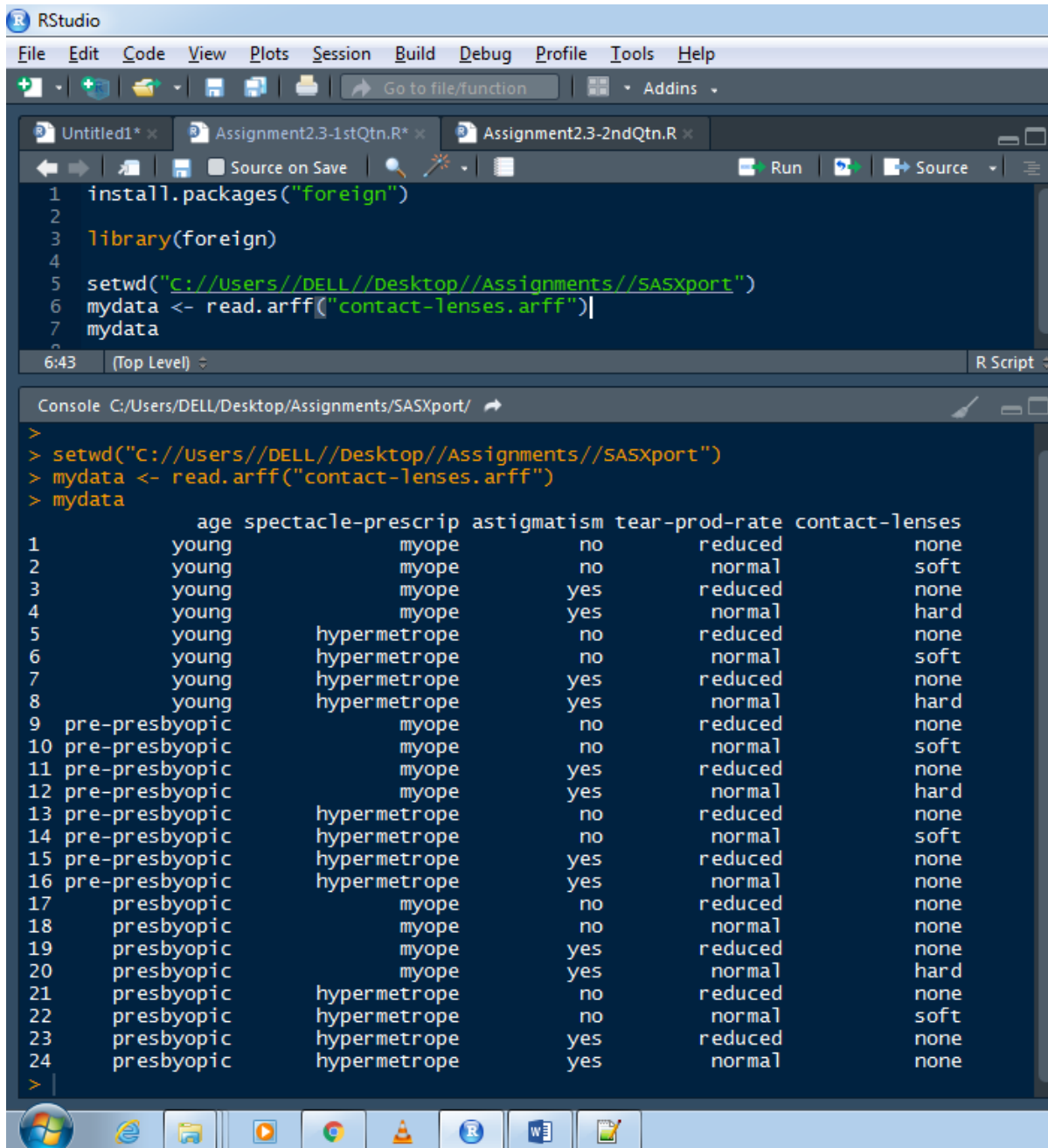
```
install.packages("foreign")
```

```
library(foreign)
```

```
setwd("C://Users//DELL//Desktop//Assignments//SASXport")
```

```
mydata <- read.arff("contact-lenses.arff")
```

```
mydata
```



The screenshot shows the RStudio interface with the following code in the script editor:

```
1 install.packages("foreign")
2
3 library(foreign)
4
5 setwd("C://Users//DELL//Desktop//Assignments//SASXport")
6 mydata <- read.arff("contact-lenses.arff")
7 mydata
```

The console output shows the execution of the code and the resulting data frame 'mydata':

```
>
> setwd("C://Users//DELL//Desktop//Assignments//SASXport")
> mydata <- read.arff("contact-lenses.arff")
> mydata
```

	age	spectacle-prescrip	astigmatism	tear-prod-rate	contact-lenses
1	young	myope	no	reduced	none
2	young	myope	no	normal	soft
3	young	myope	yes	reduced	none
4	young	myope	yes	normal	hard
5	young	hypermetrope	no	reduced	none
6	young	hypermetrope	no	normal	soft
7	young	hypermetrope	yes	reduced	none
8	young	hypermetrope	yes	normal	hard
9	pre-presbyopic	myope	no	reduced	none
10	pre-presbyopic	myope	no	normal	soft
11	pre-presbyopic	myope	yes	reduced	none
12	pre-presbyopic	myope	yes	normal	hard
13	pre-presbyopic	hypermetrope	no	reduced	none
14	pre-presbyopic	hypermetrope	no	normal	soft
15	pre-presbyopic	hypermetrope	yes	reduced	none
16	pre-presbyopic	hypermetrope	yes	normal	none
17	presbyopic	myope	no	reduced	none
18	presbyopic	myope	no	normal	none
19	presbyopic	myope	yes	reduced	none
20	presbyopic	myope	yes	normal	hard
21	presbyopic	hypermetrope	no	reduced	none
22	presbyopic	hypermetrope	no	normal	soft
23	presbyopic	hypermetrope	yes	reduced	none
24	presbyopic	hypermetrope	yes	normal	none

4. How to read a heavy csv/tsv file using readr package?

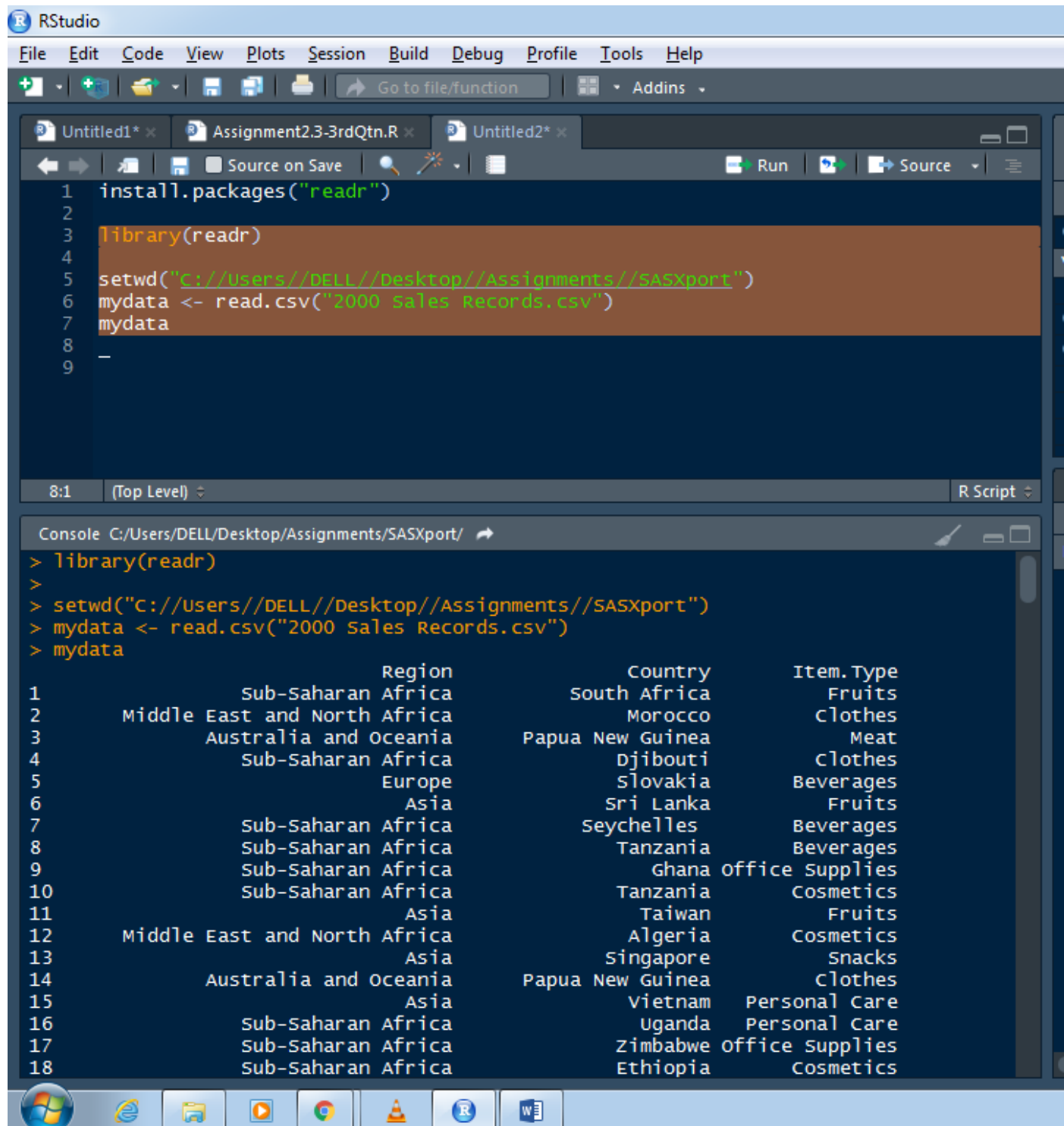
Answer: Read csv file

```
library(readr)
```

```
setwd("C://Users//DELL//Desktop//Assignments//SASXport")
```

```
mydata <- read.csv("2000 Sales Records.csv")
```

```
mydata
```



```
1 install.packages("readr")
2
3 library(readr)
4
5 setwd("C://Users//DELL//Desktop//Assignments//SASXport")
6 mydata <- read.csv("2000 Sales Records.csv")
7 mydata
8
9
```

Console C:/Users/DELL/Desktop/Assignments/SASXport/

```
> library(readr)
>
> setwd("C://Users//DELL//Desktop//Assignments//SASXport")
> mydata <- read.csv("2000 Sales Records.csv")
> mydata
```

	Region	Country	Item.Type
1	Sub-Saharan Africa	South Africa	Fruits
2	Middle East and North Africa	Morocco	Clothes
3	Australia and Oceania	Papua New Guinea	Meat
4	Sub-Saharan Africa	Djibouti	Clothes
5	Europe	Slovakia	Beverages
6	Asia	Sri Lanka	Fruits
7	Sub-Saharan Africa	Seychelles	Beverages
8	Sub-Saharan Africa	Tanzania	Beverages
9	Sub-Saharan Africa	Ghana	office Supplies
10	Sub-Saharan Africa	Tanzania	Cosmetics
11	Asia	Taiwan	Fruits
12	Middle East and North Africa	Algeria	Cosmetics
13	Asia	Singapore	Snacks
14	Australia and Oceania	Papua New Guinea	Clothes
15	Asia	Vietnam	Personal Care
16	Sub-Saharan Africa	Uganda	Personal Care
17	Sub-Saharan Africa	Zimbabwe	office Supplies
18	Sub-Saharan Africa	Ethiopia	Cosmetics

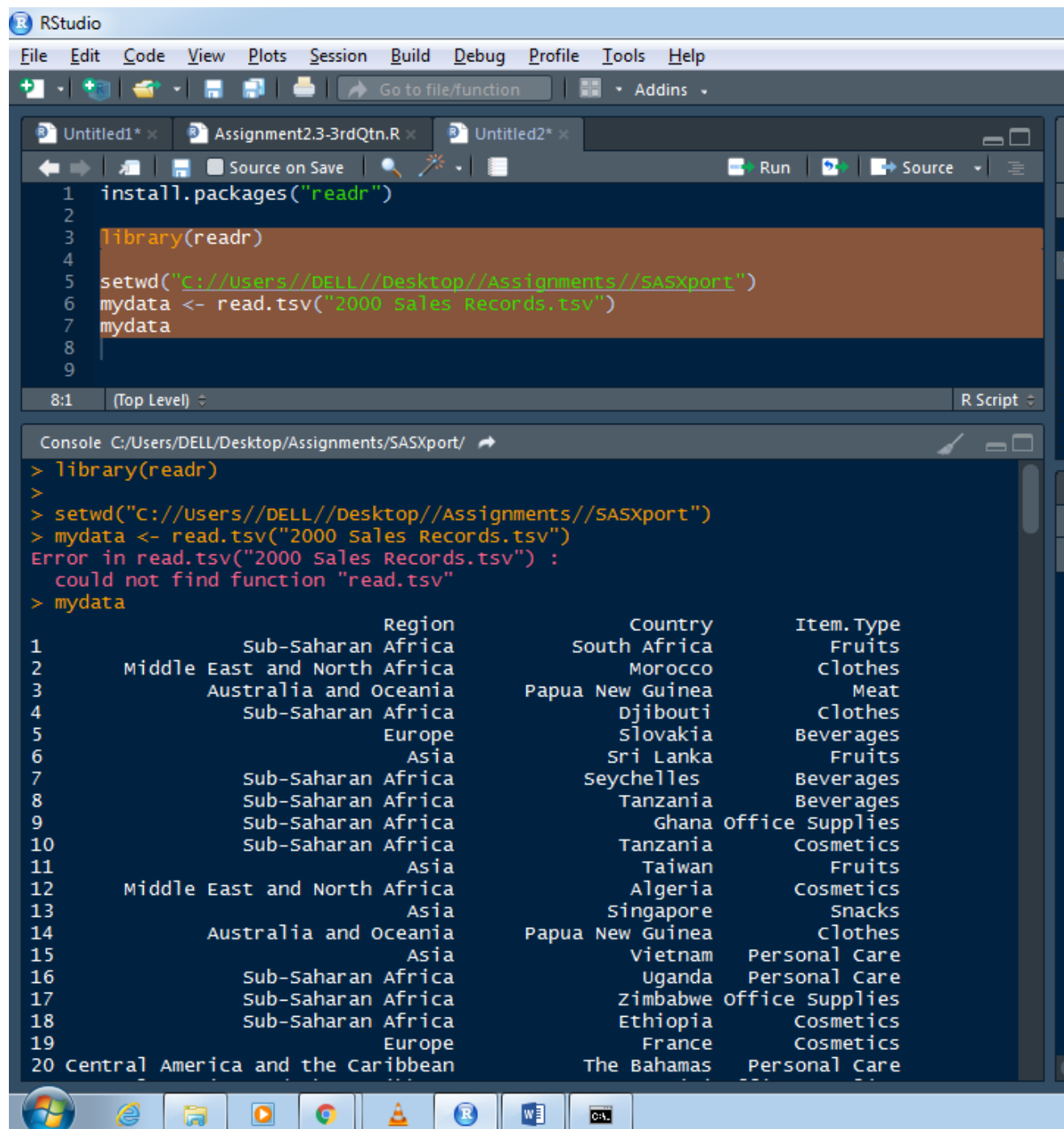
Read tsv file

```
library(readr)
```

```
setwd("C://Users//DELL//Desktop//Assignments//SASXport")
```

```
mydata <- read.tsv("2000 Sales Records.tsv")
```

```
mydata
```



The screenshot shows the RStudio interface. The script editor contains the following code:

```
1 install.packages("readr")
2
3 library(readr)
4
5 setwd("C://Users//DELL//Desktop//Assignments//SASXport")
6 mydata <- read.tsv("2000 Sales Records.tsv")
7 mydata
8
9
```

The console shows the execution of the code, with an error message for the `read.tsv` function and the resulting data frame:

```
> library(readr)
>
> setwd("C://Users//DELL//Desktop//Assignments//SASXport")
> mydata <- read.tsv("2000 Sales Records.tsv")
Error in read.tsv("2000 Sales Records.tsv") :
  could not find function "read.tsv"
> mydata
```

	Region	Country	Item.Type
1	Sub-Saharan Africa	South Africa	Fruits
2	Middle East and North Africa	Morocco	Clothes
3	Australia and Oceania	Papua New Guinea	Meat
4	Sub-Saharan Africa	Djibouti	Clothes
5	Europe	Slovakia	Beverages
6	Asia	Sri Lanka	Fruits
7	Sub-Saharan Africa	Seychelles	Beverages
8	Sub-Saharan Africa	Tanzania	Beverages
9	Sub-Saharan Africa	Ghana	office Supplies
10	Sub-Saharan Africa	Tanzania	Cosmetics
11	Asia	Taiwan	Fruits
12	Middle East and North Africa	Algeria	Cosmetics
13	Asia	Singapore	Snacks
14	Australia and Oceania	Papua New Guinea	clothes
15	Asia	Vietnam	Personal Care
16	Sub-Saharan Africa	Uganda	Personal Care
17	Sub-Saharan Africa	Zimbabwe	office supplies
18	Sub-Saharan Africa	Ethiopia	Cosmetics
19	Europe	France	Cosmetics
20	Central America and the Caribbean	The Bahamas	Personal Care