R Assignment 1

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Markdown Element

1. *Italics phrase:*

"Champions keep playing until they get it right ." — Billie Jean King

2. **Bold Phrase:**

"A problem is a chance for you to do your best." — Duke Ellington

3.

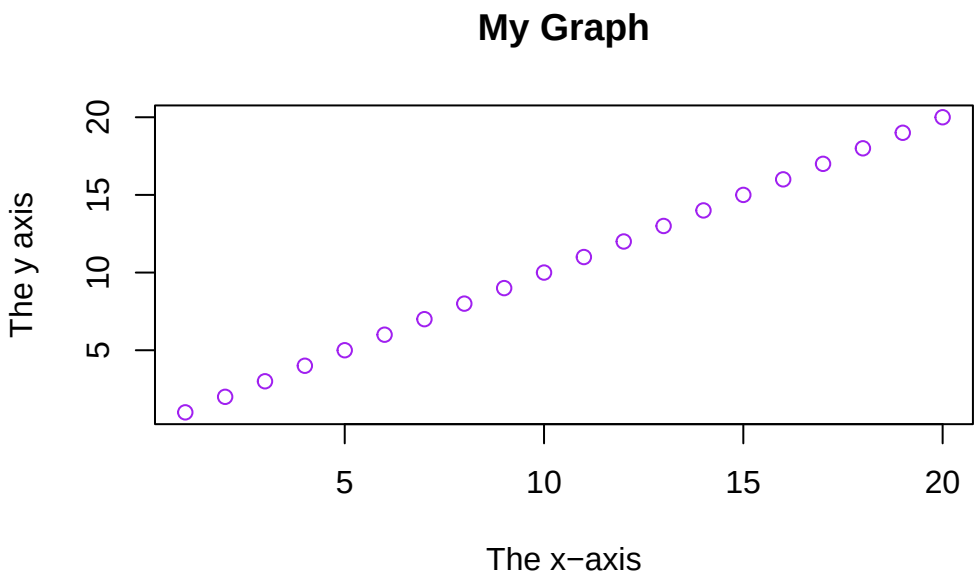
Image:

Figure 1: **Keep Spreading Happiness**

4.

R Plot

```
plot(1:20, xlab="The x-axis", ylab="The y axis",main="My Graph",col="purple")
```



5.

Table

Employee_id	Company Name	Department	Salary	Date of Birth
1	Starbucks	Store Manager	$50,000/year	01-01-2000
2	Tim Hortons	Cashier	$35,000/year	02-02-2001
3	Shambhu Coffee Bar	Back end Assistant	$29,000/year	15-08-2009

6.

Ordered List

1. One
2. Two
3. Three
4. Four
5. Five

7.

   Unordered List

- Bullet List 1
- Bullet List 2
- Bullet List 3

8. **Headings,sub-headings,and sub-sub-headings**

Times of India Newspaper

Sports Section

Cricket News

1.

Question

What is the probability that someone is wearing spectacles?

2.

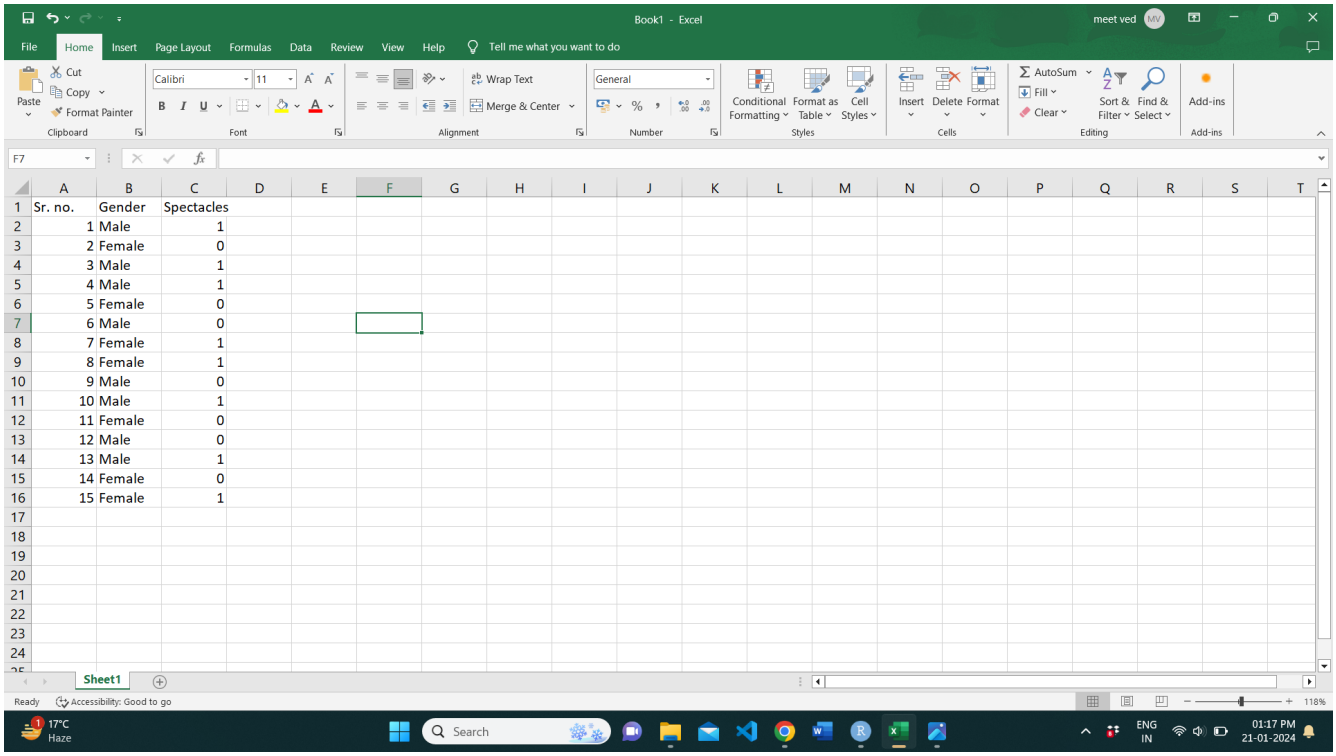
Collection Method

While waiting for a bus at a bus stop, I made the decision to enter data into my laptop about whether or not the person was wearing spectacles.

Image 1

Figure 2: **Bus Terminal Photo**

Image 2



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Sr. no.	Gender	Spectacles																	
2	1	Male	1																	
3	2	Female	0																	
4	3	Male	1																	
5	4	Male	1																	
6	5	Female	0																	
7	6	Male	0																	
8	7	Female	1																	
9	8	Female	1																	
10	9	Male	0																	
11	10	Male	1																	
12	11	Female	0																	
13	12	Male	0																	
14	13	Male	1																	
15	14	Female	0																	
16	15	Female	1																	
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Figure 3: **Data Collection Sheet**

3.

Read the .csv file

```
x_spectacles<-read.csv("1_R_Excel_Sheet.csv")
x_spectacles
```

```
  Sr..no. Gender Spectacles
1       1   Male          1
2       2 Female          0
3       3   Male          1
4       4   Male          0
5       5 Female          1
6       6   Male          0
```

```
7         7 Female          1
8         8 Female          1
9         9   Male          1
10       10   Male          0
11       11 Female          0
12       12   Male          0
13       13   Male          1
14       14 Female          1
15       15 Female          1
```

4.

Counts of observations in each category

```
library(dplyr)
```

```
Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union
```

```
my_summary_data <- x_spectacles %>%
    group_by(Gender) %>%
    summarise(Count = n())
my_summary_data
```

```
# A tibble: 2 x 2
  Gender Count
  <chr>  <int>
1 Female     7
2 Male       8
```

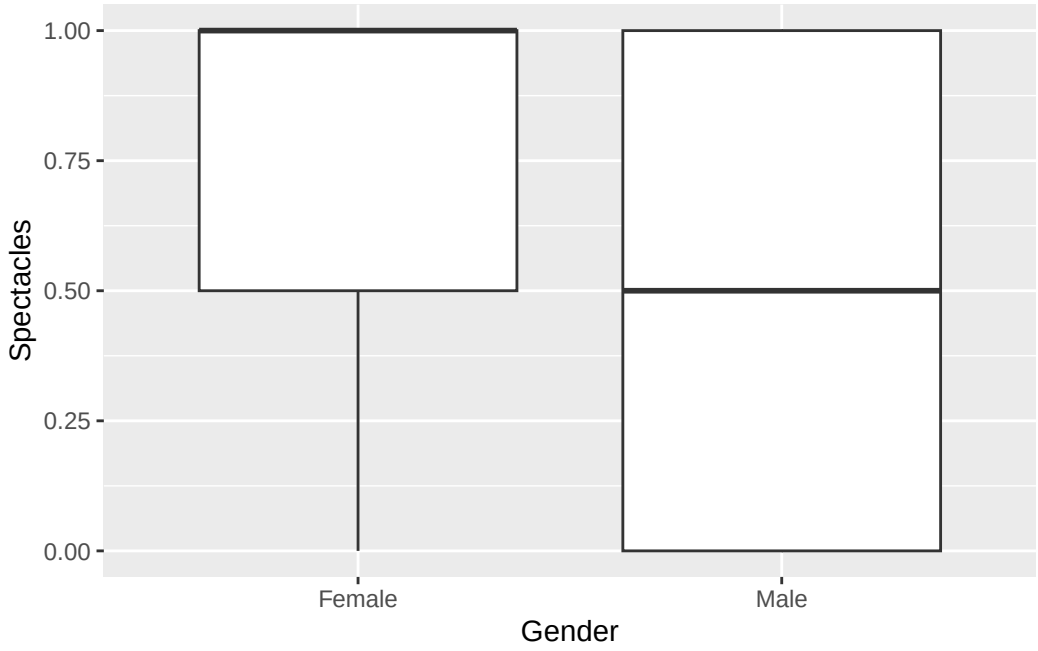
Proportions of observations in each category

```
x_spectacles %>%
 group_by(Gender) %>%
 mutate(Proportion = Spectacles/sum(Spectacles))
```

```
# A tibble: 15 x 4
# Groups:   Gender [2]
   Sr..no. Gender Spectacles Proportion
     <int> <chr>       <int>      <dbl>
 1       1 Male            1       0.25
 2       2 Female          0       0
 3       3 Male            1       0.25
 4       4 Male            0       0
 5       5 Female          1       0.2
 6       6 Male            0       0
 7       7 Female          1       0.2
 8       8 Female          1       0.2
 9       9 Male            1       0.25
10      10 Male            0       0
11      11 Female          0       0
12      12 Male            0       0
13      13 Male            1       0.25
14      14 Female          1       0.2
15      15 Female          1       0.2
```

ggplot2 (nice, publication, quality graph)

```
library(ggplot2)
ggplot(data = x_spectacles, mapping = aes(x = Gender, y = Spectacles))+
geom_boxplot()
```



Table

Sr. no.	Gender	Spectacles
1	Male	1
2	Female	0
3	Male	1
4	Male	0
5	Female	1
6	Male	0
7	Female	1
8	Female	1
9	Male	1
10	Male	0
11	Female	0
12	Male	0
13	Male	1
14	Female	1
15	Female	1

5.

Graphical Method: Bar Plot

```
counts <- table(x_spectacles[, c("Gender", "Spectacles")])

barplot(t(counts),
        main="Counts of people wearing spectacles (Grey Color)"
        ,names.arg = c("Female","Male")
        ,xlab = "Gender"
        ,ylab="Spectacles"
        # ,col = "blue"
        ,
horiz = FALSE)
legend("left",legend = c("Wearing spectacles", "Not wearing spectacles"),col=c("Grey","black"
```


```
counts
```

```
        Spectacles
Gender   0 1
  Female 2 5
  Male   4 4
```

```
#ggplot(x_spectacles, aes(x=Gender, y=Spectacles)) +
 # geom_bar(stat = "identity",color="purple")+
  #ggtitle("Counts of people wearing spectacles")
```

6.

Discuss your data, numeric and graphical summaries.

- Do I have an answer to the original question?

  Undoubtedly, by carefully reading the documentation as needed, I was able to solve the problems that was presented to me. In addition to improving my coding skills, solving this problem made me think more logically, which was exciting.

- What issues came up during this process?

  There are 2 issues which I faced while solving the problem

  1. Finding the syntax for determining the proportion values for each category value was difficult for me.
  2. The data that I gathered for my .csv file is currently being incorrectly described by the bar plot graph values.

- If you knew how or had the resources, what would you do differently?

  I read the materials carefully before beginning the task, which undoubtedly helps me save time.

- Anything else of interest?

  First off, answering these questions increased my curiosity in the R language. However, I'm wondering which language is used in the data analysis field—Python or R?

  Second, I'd like to learn more about the newest tools being used in the business outside of R language. Knowing these tools would help us market our talents on resumes and land a job once we've finished our master's degree at Trent University.