RWorksheet #5

Jeodalyn Edulag BSIT 2-A

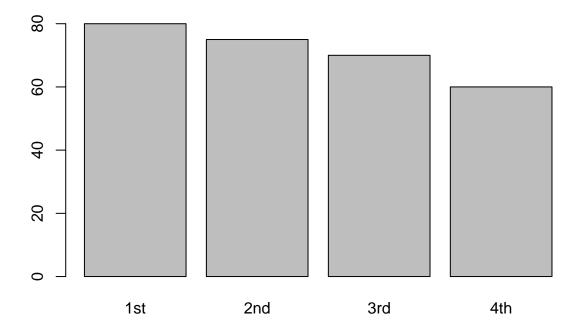
2022-11-22

1. The table shows the enrollment of BS in Computer Science, SY 2010-2011.

```
## Course.Year X.2019.2020
## 1 1st 80
## 2 2nd 75
## 3 3rd 70
## 4 4th 60
```

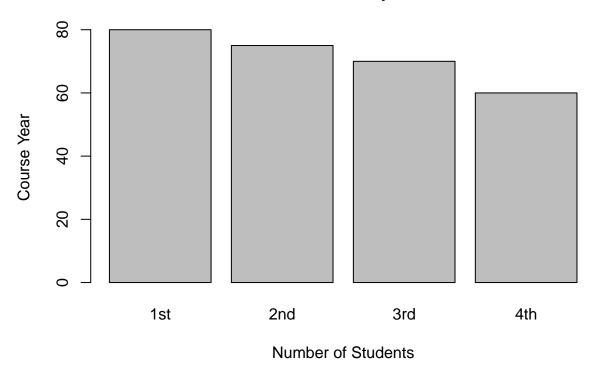
a. Plot the data using a bar graph. Write the codes and copy the result.

```
e <- c("1st" = 80, "2nd" = 75, "3rd" = 70, "4th" = 60)
barplot(e)
```



b. Using the same table, label the barchart with Title = " Enrollment of BS Computer Science horizontal axis = "Curriculum Year" and vertical axis = "number of students"

Enrollment of BS Computer Science



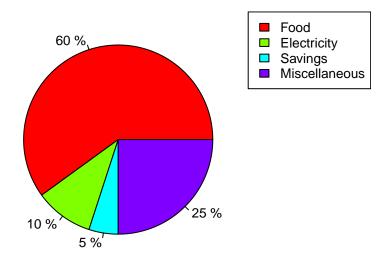
- 2. The monthly income of De Jesus family was spent on the following: 60% on Food, 10% on electricity, 5% for savings, and 25% for other miscellaneous expenses
 - a. Create a table for the above scenario. Write the codes and its result.

```
bills <- c("Food", "Electricity", "Savings",</pre>
        "Miscellaneous_expenses")
exp < -c(60, 10, 5, 25)
m <- data.frame(bills, exp)</pre>
##
                       bills exp
## 1
                               60
## 2
                 Electricity
                     Savings
## 4 Miscellaneous_expenses
1 <- table(m)</pre>
##
## bills
                              5 10 25 60
                                 1 0 0
     Electricity
```

```
## Food 0 0 0 1
## Miscellaneous_expenses 0 0 1 0
## Savings 1 0 0 0
```

b. Plot the data using a pie chart. Add labels, colors and legend. Write the codes and its result.

De Jesus family Monthly Expenses



- 3. Open the mtcars dataset.
 - a. Create a simple histogram specifically for mpg (miles per gallon) variable. Use \$ to select the mpg only. Write the codes and its result.

```
data(mtcars)

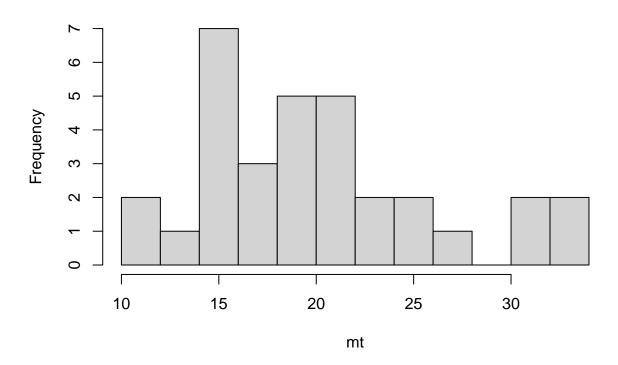
mt <- (mtcars$mpg)

mt</pre>
```

```
## [1] 21.0 21.0 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 17.8 16.4 17.3 15.2 10.4 ## [16] 10.4 14.7 32.4 30.4 33.9 21.5 15.5 15.2 13.3 19.2 27.3 26.0 30.4 15.8 19.7 ## [31] 15.0 21.4
```

hist(mt, breaks=12)

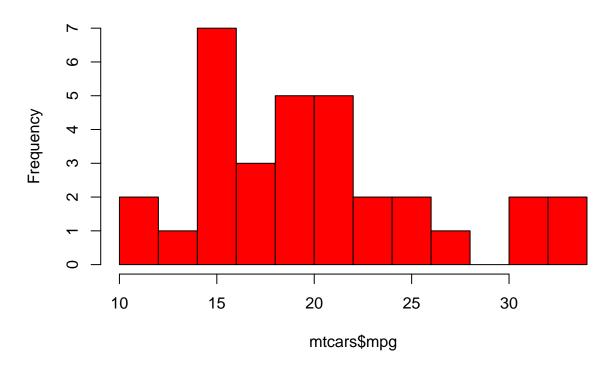
Histogram of mt



b. Colored histogram with different number of bins.

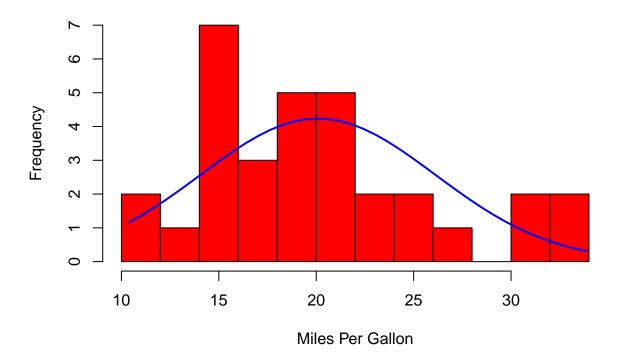
hist(mtcars\$mpg, breaks=12, col="red")

Histogram of mtcars\$mpg



c. Add a Normal Curve

Histogram with Normal Curve



4. Open the iris dataset. Create a subset for each species. a. Write the codes and its result.

```
data("iris")
julz <- data.frame(iris)
julz</pre>
```

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##		Separ.Length	Separ.width	Petal.Length	Petal.width	Species
##	1	5.1	3.5	1.4	0.2	setosa
##	2	4.9	3.0	1.4	0.2	setosa
##	3	4.7	3.2	1.3	0.2	setosa
##	4	4.6	3.1	1.5	0.2	setosa
##	5	5.0	3.6	1.4	0.2	setosa
##	6	5.4	3.9	1.7	0.4	setosa
##	7	4.6	3.4	1.4	0.3	setosa
##	8	5.0	3.4	1.5	0.2	setosa
##	9	4.4	2.9	1.4	0.2	setosa
##	10	4.9	3.1	1.5	0.1	setosa
##	11	5.4	3.7	1.5	0.2	setosa
##	12	4.8	3.4	1.6	0.2	setosa
##	13	4.8	3.0	1.4	0.1	setosa
##	14	4.3	3.0	1.1	0.1	setosa
##	15	5.8	4.0	1.2	0.2	setosa
##	16	5.7	4.4	1.5	0.4	setosa
##	17	5.4	3.9	1.3	0.4	setosa

	4.0					
##	18	5.1	3.5	1.4	0.3	setosa
##	19	5.7	3.8	1.7	0.3	setosa
##	20	5.1	3.8	1.5	0.3	setosa
##	21	5.4	3.4	1.7	0.2	setosa
##	22	5.1	3.7	1.5	0.4	setosa
##	23	4.6	3.6	1.0	0.2	setosa
##	24	5.1	3.3	1.7	0.5	setosa
##	25	4.8	3.4	1.9	0.2	setosa
##	26	5.0	3.0	1.6	0.2	setosa
##	27	5.0	3.4	1.6	0.4	setosa
##	28	5.2	3.5	1.5	0.2	setosa
##	29	5.2	3.4	1.4	0.2	setosa
##	30	4.7	3.2	1.6	0.2	setosa
##	31	4.8	3.1	1.6	0.2	setosa
##	32	5.4	3.4	1.5	0.4	setosa
##	33	5.2	4.1	1.5	0.1	setosa
##	34	5.5	4.2	1.4	0.2	setosa
##	35	4.9	3.1	1.5	0.2	setosa
##	36	5.0	3.2	1.2	0.2	setosa
##	37	5.5	3.5	1.3	0.2	setosa
##	38	4.9	3.6	1.4	0.1	setosa
##	39	4.4	3.0	1.3	0.2	setosa
##	40	5.1	3.4	1.5	0.2	setosa
##	41	5.0	3.5	1.3	0.3	setosa
##	42	4.5	2.3	1.3	0.3	setosa
##	43	4.4	3.2	1.3	0.2	setosa
##	44	5.0	3.5	1.6	0.6	setosa
##	45	5.1	3.8	1.9	0.4	setosa
##	46	4.8	3.0	1.4	0.3	setosa
##	47	5.1	3.8	1.6	0.2	setosa
##	48	4.6	3.2	1.4	0.2	setosa
##	49	5.3	3.7	1.5	0.2	setosa
##	50	5.0	3.3	1.4	0.2	setosa
##	51	7.0	3.2	4.7	1.4 ver	
##	52	6.4	3.2	4.5		sicolor
##	53	6.9	3.1	4.9	1.5 ver	
##		5.5	2.3	4.9	1.3 ver	
##		6.5	2.8	4.6	1.5 ver	
					1.3 ver	
##		5.7	2.8	4.5		
	57	6.3	3.3	4.7	1.6 ver	
	58	4.9	2.4	3.3	1.0 ver	
	59	6.6	2.9	4.6	1.3 ver	
	60	5.2	2.7	3.9	1.4 ver	
	61	5.0	2.0	3.5	1.0 ver	
	62	5.9	3.0	4.2	1.5 ver	
	63	6.0	2.2	4.0	1.0 ver	
##	64	6.1	2.9	4.7	1.4 ver	
	65	5.6	2.9	3.6	1.3 ver	
##	66	6.7	3.1	4.4	1.4 ver	
	67	5.6	3.0	4.5	1.5 ver	
	68	5.8	2.7	4.1	1.0 ver	
##	69	6.2	2.2	4.5	1.5 ver	sicolor
##	70	5.6	2.5	3.9	1.1 ver	sicolor
##	71	5.9	3.2	4.8	1.8 ver	sicolor

## 72	6.1	2.8	4.0	1.3 versicolor
## 73	6.3	2.5	4.9	1.5 versicolor
## 74	6.1	2.8	4.7	1.2 versicolor
## 7 4 ## 75	6.4	2.9	4.7	1.3 versicolor
			4.4	
## 76	6.6	3.0		1.4 versicolor
## 77	6.8	2.8	4.8	1.4 versicolor
## 78	6.7	3.0	5.0	1.7 versicolor
## 79	6.0	2.9	4.5	1.5 versicolor
## 80	5.7	2.6	3.5	1.0 versicolor
## 81	5.5	2.4	3.8	1.1 versicolor
## 82	5.5	2.4	3.7	1.0 versicolor
## 83	5.8	2.7	3.9	1.2 versicolor
## 84	6.0	2.7	5.1	1.6 versicolor
## 85	5.4	3.0	4.5	1.5 versicolor
## 86	6.0	3.4	4.5	1.6 versicolor
## 87	6.7	3.1	4.7	1.5 versicolor
## 88	6.3	2.3	4.4	1.3 versicolor
## 89	5.6	3.0	4.1	1.3 versicolor
## 90	5.5	2.5	4.0	1.3 versicolor
## 91	5.5	2.6	4.4	1.2 versicolor
## 92	6.1	3.0	4.6	1.4 versicolor
## 93	5.8	2.6	4.0	1.2 versicolor
## 94	5.0	2.3	3.3	1.0 versicolor
## 95	5.6	2.7	4.2	1.3 versicolor
## 96	5.7	3.0	4.2	1.2 versicolor
## 97	5.7	2.9	4.2	1.3 versicolor
## 98	6.2	2.9	4.3	1.3 versicolor
## 99	5.1	2.5	3.0	1.1 versicolor
## 100	5.7	2.8	4.1	1.3 versicolor
## 101	6.3	3.3	6.0	2.5 virginica
## 102	5.8	2.7	5.1	1.9 virginica
## 103	7.1	3.0	5.9	2.1 virginica
## 104	6.3	2.9	5.6	1.8 virginica
## 105	6.5	3.0	5.8	2.2 virginica
## 106	7.6	3.0	6.6	2.1 virginica
## 107	4.9	2.5	4.5	1.7 virginica
## 108	7.3	2.9	6.3	1.8 virginica
## 109	6.7	2.5	5.8	1.8 virginica
## 110	7.2	3.6	6.1	2.5 virginica
## 111	6.5	3.2	5.1	2.0 virginica
## 112	6.4	2.7	5.3	1.9 virginica
## 113	6.8	3.0	5.5	2.1 virginica
## 114	5.7	2.5	5.0	2.0 virginica
## 115	5.8	2.8	5.1	2.4 virginica
## 116	6.4	3.2	5.3	2.3 virginica
## 117	6.5	3.0	5.5	1.8 virginica
## 118	7.7	3.8	6.7	2.2 virginica
## 119	7.7	2.6	6.9	2.3 virginica
## 120	6.0	2.2	5.0	1.5 virginica
## 121	6.9	3.2	5.7	2.3 virginica
## 122	5.6	2.8	4.9	2.0 virginica
## 123	7.7	2.8	6.7	2.0 virginica
## 124	6.3	2.7	4.9	1.8 virginica
## 125	6.7	3.3	5.7	2.1 virginica

	126	7.2	3.2	6.0	1.8	virginica
##	127	6.2	2.8	4.8	1.8	virginica
##	128	6.1	3.0	4.9	1.8	virginica
##	129	6.4	2.8	5.6	2.1	virginica
##	130	7.2	3.0	5.8	1.6	virginica
##	131	7.4	2.8	6.1	1.9	virginica
##	132	7.9	3.8	6.4	2.0	virginica
##	133	6.4	2.8	5.6	2.2	virginica
##	134	6.3	2.8	5.1	1.5	virginica
##	135	6.1	2.6	5.6	1.4	virginica
##	136	7.7	3.0	6.1	2.3	virginica
##	137	6.3	3.4	5.6	2.4	virginica
##	138	6.4	3.1	5.5	1.8	virginica
##	139	6.0	3.0	4.8	1.8	virginica
##	140	6.9	3.1	5.4	2.1	virginica
##	141	6.7	3.1	5.6	2.4	virginica
##	142	6.9	3.1	5.1	2.3	virginica
##	143	5.8	2.7	5.1	1.9	virginica
##	144	6.8	3.2	5.9	2.3	virginica
##	145	6.7	3.3	5.7	2.5	virginica
##	146	6.7	3.0	5.2	2.3	virginica
##	147	6.3	2.5	5.0	1.9	virginica
##	148	6.5	3.0	5.2	2.0	virginica
##	149	6.2	3.4	5.4	2.3	virginica
##	150	5.9	3.0	5.1	1.8	virginica

df_set <- data.frame(iris)</pre>

df_set

##		Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
##	1	5.1	3.5	1.4	0.2	setosa
##	2	4.9	3.0	1.4	0.2	setosa
##	3	4.7	3.2	1.3	0.2	setosa
##	4	4.6	3.1	1.5	0.2	setosa
##	5	5.0	3.6	1.4	0.2	setosa
##	6	5.4	3.9	1.7	0.4	setosa
##	7	4.6	3.4	1.4	0.3	setosa
##	8	5.0	3.4	1.5	0.2	setosa
##	9	4.4	2.9	1.4	0.2	setosa
##	10	4.9	3.1	1.5	0.1	setosa
##	11	5.4	3.7	1.5	0.2	setosa
##	12	4.8	3.4	1.6	0.2	setosa
##	13	4.8	3.0	1.4	0.1	setosa
##	14	4.3	3.0	1.1	0.1	setosa
##	15	5.8	4.0	1.2	0.2	setosa
##	16	5.7	4.4	1.5	0.4	setosa
##	17	5.4	3.9	1.3	0.4	setosa
##	18	5.1	3.5	1.4	0.3	setosa
##	19	5.7	3.8	1.7	0.3	setosa
##	20	5.1	3.8	1.5	0.3	setosa
##	21	5.4	3.4	1.7	0.2	setosa
##	22	5.1	3.7	1.5	0.4	setosa
##	23	4.6	3.6	1.0	0.2	setosa
##	24	5.1	3.3	1.7	0.5	setosa

		4.8	3.4	1.9	0.2	setosa
## 2		5.0	3.0	1.6	0.2	setosa
## 2	27	5.0	3.4	1.6	0.4	setosa
		5.2	3.5	1.5	0.2	setosa
## 2	29	5.2	3.4	1.4	0.2	setosa
## 3	30	4.7	3.2	1.6	0.2	setosa
## 3	31	4.8	3.1	1.6	0.2	setosa
## 3	32	5.4	3.4	1.5	0.4	setosa
## 3	33	5.2	4.1	1.5	0.1	setosa
## 3	34	5.5	4.2	1.4	0.2	setosa
## 3	35	4.9	3.1	1.5	0.2	setosa
## 3	36	5.0	3.2	1.2	0.2	setosa
## 3	37	5.5	3.5	1.3	0.2	setosa
## 3	38	4.9	3.6	1.4	0.1	setosa
## 3	39	4.4	3.0	1.3	0.2	setosa
## 4	40	5.1	3.4	1.5	0.2	setosa
## 4	41	5.0	3.5	1.3	0.3	setosa
## 4	42	4.5	2.3	1.3	0.3	setosa
## 4	43	4.4	3.2	1.3	0.2	setosa
## 4	14	5.0	3.5	1.6	0.6	setosa
## 4	45	5.1	3.8	1.9	0.4	setosa
## 4	46	4.8	3.0	1.4	0.3	setosa
## 4		5.1	3.8	1.6	0.2	setosa
		4.6	3.2	1.4	0.2	setosa
		5.3	3.7	1.5	0.2	setosa
		5.0	3.3	1.4	0.2	setosa
		7.0	3.2	4.7		rsicolor
## 5		6.4	3.2	4.5		rsicolor
		6.9	3.1	4.9		rsicolor
		5.5	2.3	4.0		rsicolor
		6.5	2.8	4.6		rsicolor
		5.7	2.8	4.5		rsicolor
		6.3	3.3	4.7		rsicolor
		4.9	2.4	3.3		csicolor
		6.6	2.9	4.6		csicolor
		5.2	2.7	3.9		rsicolor
## 6		5.0	2.0	3.5		rsicolor
## 6		5.9	3.0	4.2		rsicolor
## 6		6.0	2.2	4.0		rsicolor
## 6		6.1	2.9	4.7		csicolor
## 6		5.6	2.9	3.6		rsicolor
		6.7	3.1	4.4		rsicolor
		5.6	3.0	4.5		csicolor
		5.8	2.7	4.1		csicolor
		6.2	2.2	4.5		csicolor
		5.6	2.5	3.9		csicolor
		5.9	3.2	4.8		csicolor
		6.1	2.8	4.0		csicolor
		6.3	2.5	4.9		csicolor
		6.1	2.8	4.7		csicolor
		6.4	2.9	4.3		csicolor
		6.6	3.0	4.4		csicolor
		6.8	2.8	4.8		csicolor
## 7		6.7	3.0	5.0		csicolor
## /	10	0.1	5.0	5.0	1.1 ve	PICOTOL

===				
## 79	6.0	2.9	4.5	1.5 versicolor
## 80	5.7	2.6	3.5	1.0 versicolor
## 81	5.5	2.4	3.8	1.1 versicolor
## 82	5.5	2.4	3.7	1.0 versicolor
## 83	5.8	2.7	3.9	1.2 versicolor
## 84	6.0	2.7	5.1	1.6 versicolor
## 85	5.4	3.0	4.5	1.5 versicolor
## 86	6.0	3.4	4.5	1.6 versicolor
## 87	6.7	3.1	4.7	1.5 versicolor
## 88	6.3	2.3	4.4	1.3 versicolor
## 89	5.6	3.0	4.1	1.3 versicolor
## 90	5.5	2.5	4.0	1.3 versicolor
## 91	5.5	2.6	4.4	1.2 versicolor
## 92	6.1	3.0	4.6	1.4 versicolor
## 93	5.8	2.6	4.0	1.2 versicolor
## 94	5.0	2.3	3.3	1.0 versicolor
## 9 1 ## 95	5.6	2.7	4.2	1.3 versicolor
## 95 ## 96	5.7	3.0	4.2	1.2 versicolor
		2.9		1.2 versicolor
## 97	5.7		4.2	
## 98	6.2	2.9	4.3	1.3 versicolor
## 99	5.1	2.5	3.0	1.1 versicolor
## 100	5.7	2.8	4.1	1.3 versicolor
## 101	6.3	3.3	6.0	2.5 virginica
## 102	5.8	2.7	5.1	1.9 virginica
## 103	7.1	3.0	5.9	2.1 virginica
## 104	6.3	2.9	5.6	1.8 virginica
## 105	6.5	3.0	5.8	2.2 virginica
## 106	7.6	3.0	6.6	2.1 virginica
## 107	4.9	2.5	4.5	1.7 virginica
## 108	7.3	2.9	6.3	1.8 virginica
## 109	6.7	2.5	5.8	1.8 virginica
## 110	7.2	3.6	6.1	2.5 virginica
## 111	6.5	3.2	5.1	2.0 virginica
## 112	6.4	2.7	5.3	1.9 virginica
## 113	6.8	3.0	5.5	2.1 virginica
## 114	5.7	2.5	5.0	2.0 virginica
## 115	5.8	2.8	5.1	2.4 virginica
## 116	6.4	3.2	5.3	2.3 virginica
## 117	6.5	3.0	5.5	1.8 virginica
## 118	7.7	3.8	6.7	2.2 virginica
## 119	7.7	2.6	6.9	2.3 virginica
## 120	6.0	2.2	5.0	1.5 virginica
## 121	6.9	3.2	5.7	2.3 virginica
## 122	5.6	2.8	4.9	2.0 virginica
## 123	7.7	2.8	6.7	2.0 virginica
## 124	6.3	2.7	4.9	1.8 virginica
## 125	6.7	3.3	5.7	2.1 virginica
## 126	7.2	3.2	6.0	1.8 virginica
## 127	6.2	2.8	4.8	1.8 virginica
## 128	6.1	3.0	4.9	1.8 virginica
## 129	6.4	2.8	5.6	2.1 virginica
## 130	7.2	3.0	5.8	1.6 virginica
## 131	7.4	2.8	6.1	1.9 virginica
## 132	7.9	3.8	6.4	2.0 virginica
				3

##	133	6.4	2.8	5.6	2.2	virginica
##	134	6.3	2.8	5.1	1.5	virginica
##	135	6.1	2.6	5.6	1.4	virginica
##	136	7.7	3.0	6.1	2.3	virginica
##	137	6.3	3.4	5.6	2.4	virginica
##	138	6.4	3.1	5.5	1.8	virginica
##	139	6.0	3.0	4.8	1.8	virginica
##	140	6.9	3.1	5.4	2.1	virginica
##	141	6.7	3.1	5.6	2.4	virginica
##	142	6.9	3.1	5.1	2.3	virginica
##	143	5.8	2.7	5.1	1.9	virginica
##	144	6.8	3.2	5.9	2.3	virginica
##	145	6.7	3.3	5.7	2.5	virginica
##	146	6.7	3.0	5.2	2.3	virginica
##	147	6.3	2.5	5.0	1.9	virginica
##	148	6.5	3.0	5.2	2.0	virginica
##	149	6.2	3.4	5.4	2.3	virginica
##	150	5.9	3.0	5.1	1.8	virginica

df_vir <- data.frame(iris)
df_vir</pre>

##		Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
##	1	5.1	3.5	1.4	0.2	setosa
##	2	4.9	3.0	1.4	0.2	setosa
##	3	4.7	3.2	1.3	0.2	setosa
##	4	4.6	3.1	1.5	0.2	setosa
##	5	5.0	3.6	1.4	0.2	setosa
##	6	5.4	3.9	1.7	0.4	setosa
##	7	4.6	3.4	1.4	0.3	setosa
##	8	5.0	3.4	1.5	0.2	setosa
##	9	4.4	2.9	1.4	0.2	setosa
##	10	4.9	3.1	1.5	0.1	setosa
##	11	5.4	3.7	1.5	0.2	setosa
##	12	4.8	3.4	1.6	0.2	setosa
##	13	4.8	3.0	1.4	0.1	setosa
##	14	4.3	3.0	1.1	0.1	setosa
##	15	5.8	4.0	1.2	0.2	setosa
##	16	5.7	4.4	1.5	0.4	setosa
##	17	5.4	3.9	1.3	0.4	setosa
##	18	5.1	3.5	1.4	0.3	setosa
##	19	5.7	3.8	1.7	0.3	setosa
##	20	5.1	3.8	1.5	0.3	setosa
##	21	5.4	3.4	1.7	0.2	setosa
##	22	5.1	3.7	1.5	0.4	setosa
##	23	4.6	3.6	1.0	0.2	setosa
##	24	5.1	3.3	1.7	0.5	setosa
##	25	4.8	3.4	1.9	0.2	setosa
##	26	5.0	3.0	1.6	0.2	setosa
##	27	5.0	3.4	1.6	0.4	setosa
##	28	5.2	3.5	1.5	0.2	setosa
##	29	5.2	3.4	1.4	0.2	setosa
##	30	4.7	3.2	1.6	0.2	setosa
##	31	4.8	3.1	1.6	0.2	setosa

## 32	5.4	3.4	1.5	0.4 setosa	3
## 33	5.2	4.1	1.5	0.1 setosa	3
## 34	5.5	4.2	1.4	0.2 setosa	a
## 35	4.9	3.1	1.5	0.2 setosa	a
## 36	5.0	3.2	1.2	0.2 setosa	a
## 37	5.5	3.5	1.3	0.2 setosa	a
## 38	4.9	3.6	1.4	0.1 setosa	a
## 39	4.4	3.0	1.3	0.2 setosa	
## 40	5.1	3.4	1.5	0.2 setosa	
## 41	5.0	3.5	1.3	0.3 setosa	
## 42	4.5	2.3	1.3	0.3 setosa	
## 43		3.2	1.3	0.2 setos	
	4.4				
## 44	5.0	3.5	1.6	0.6 setosa	
## 45	5.1	3.8	1.9	0.4 setosa	
## 46	4.8	3.0	1.4	0.3 setosa	
## 47	5.1	3.8	1.6	0.2 setosa	
## 48	4.6	3.2	1.4	0.2 setosa	3
## 49	5.3	3.7	1.5	0.2 setosa	3
## 50	5.0	3.3	1.4	0.2 setosa	3
## 51	7.0	3.2	4.7	1.4 versicolor	r
## 52	6.4	3.2	4.5	1.5 versicolo	r
## 53	6.9	3.1	4.9	1.5 versicolo	r
## 54	5.5	2.3	4.0	1.3 versicolo	r
## 55	6.5	2.8	4.6	1.5 versicolo	r
## 56	5.7	2.8	4.5	1.3 versicolo	r
## 57	6.3	3.3	4.7	1.6 versicolo	
## 58	4.9	2.4	3.3	1.0 versicolor	
## 59	6.6	2.9	4.6	1.3 versicolor	
## 60	5.2	2.7	3.9	1.4 versicolo	
## 61	5.0	2.0	3.5	1.0 versicolo	
## 62			4.2		
	5.9	3.0		1.5 versicolo	
## 63	6.0	2.2	4.0	1.0 versicolo	
## 64	6.1	2.9	4.7	1.4 versicolo	
## 65	5.6	2.9	3.6	1.3 versicolor	
## 66	6.7	3.1	4.4	1.4 versicolor	
## 67	5.6	3.0	4.5	1.5 versicolor	
## 68	5.8	2.7	4.1	1.0 versicolor	
## 69	6.2	2.2	4.5	1.5 versicolo	r
## 70	5.6	2.5	3.9	1.1 versicolo	r
## 71	5.9	3.2	4.8	1.8 versicolo	r
## 72	6.1	2.8	4.0	1.3 versicolo	r
## 73	6.3	2.5	4.9	1.5 versicolo	r
## 74	6.1	2.8	4.7	1.2 versicolo	r
## 75	6.4	2.9	4.3	1.3 versicolo	r
## 76	6.6	3.0	4.4	1.4 versicolo	r
## 77	6.8	2.8	4.8	1.4 versicolo	
## 78	6.7	3.0	5.0	1.7 versicolo	
## 79	6.0	2.9	4.5	1.5 versicolo	
## 80	5.7	2.6	3.5	1.0 versicolo	
## 81				1.1 versicolo	
	5.5	2.4	3.8		
## 82 ## 92	5.5	2.4	3.7	1.0 versicolor	
## 83	5.8	2.7	3.9	1.2 versicolo	
## 84	6.0	2.7	5.1	1.6 versicolo	
## 85	5.4	3.0	4.5	1.5 versicolo	٢

## 86	6.0	3.4	4.5	1.6 versicolor
## 87	6.7	3.1	4.7	1.5 versicolor
## 88	6.3	2.3	4.4	1.3 versicolor
## 89	5.6	3.0	4.1	1.3 versicolor
## 90	5.5	2.5	4.0	1.3 versicolor
## 91	5.5	2.6	4.4	1.2 versicolor
## 92	6.1	3.0	4.6	1.4 versicolor
## 93	5.8	2.6	4.0	1.2 versicolor
## 94	5.0	2.3	3.3	1.0 versicolor
## 95	5.6	2.7	4.2	1.3 versicolor
## 96	5.7	3.0	4.2	1.2 versicolor
## 97	5.7	2.9	4.2	1.3 versicolor
## 98	6.2	2.9	4.3	1.3 versicolor
## 99	5.1	2.5	3.0	1.1 versicolor
## 100	5.7	2.8	4.1	1.3 versicolor
## 101	6.3	3.3	6.0	2.5 virginica
## 102	5.8	2.7	5.1	1.9 virginica
## 103	7.1	3.0	5.9	2.1 virginica
## 104	6.3	2.9	5.6	1.8 virginica
## 105	6.5	3.0	5.8	2.2 virginica
## 106	7.6	3.0	6.6	2.1 virginica
## 107	4.9	2.5	4.5	1.7 virginica
## 108	7.3	2.9	6.3	1.8 virginica
## 109	6.7	2.5	5.8	1.8 virginica
## 110	7.2	3.6	6.1	2.5 virginica
## 111	6.5	3.2	5.1	2.0 virginica
## 112	6.4	2.7	5.3	1.9 virginica
## 113	6.8	3.0	5.5	2.1 virginica
## 114	5.7	2.5	5.0	2.0 virginica
## 115	5.8	2.8	5.1	2.4 virginica
## 116	6.4	3.2	5.3	2.3 virginica
## 117	6.5	3.0	5.5	1.8 virginica
## 118	7.7	3.8	6.7	2.2 virginica
## 119	7.7	2.6	6.9	2.3 virginica
## 120	6.0	2.2	5.0	1.5 virginica
## 121	6.9	3.2	5.7	2.3 virginica
## 122	5.6	2.8	4.9	2.0 virginica
## 123	7.7	2.8	6.7	2.0 virginica
## 124	6.3	2.7	4.9	1.8 virginica
## 125	6.7	3.3	5.7	2.1 virginica
## 126	7.2	3.2	6.0	1.8 virginica
## 127	6.2	2.8	4.8	1.8 virginica
## 128	6.1	3.0	4.9	1.8 virginica
## 129	6.4	2.8	5.6	2.1 virginica
## 130	7.2	3.0	5.8	1.6 virginica
## 131	7.4	2.8	6.1	1.9 virginica
## 132	7.9	3.8	6.4	2.0 virginica
## 133	6.4	2.8	5.6	2.2 virginica
## 134	6.3	2.8	5.1	1.5 virginica
## 135	6.1	2.6	5.6	1.4 virginica
## 136	7.7	3.0	6.1	2.3 virginica
## 137	6.3	3.4	5.6	2.4 virginica
## 138	6.4	3.1	5.5	1.8 virginica
## 139	6.0	3.0	4.8	1.8 virginica
100	5.0	5.0	4.0	1.0 viigimica

##	140	6.9	3.1	5.4	2.1	virginica
##	141	6.7	3.1	5.6	2.4	virginica
##	142	6.9	3.1	5.1	2.3	virginica
##	143	5.8	2.7	5.1	1.9	virginica
##	144	6.8	3.2	5.9	2.3	virginica
##	145	6.7	3.3	5.7	2.5	virginica
##	146	6.7	3.0	5.2	2.3	virginica
##	147	6.3	2.5	5.0	1.9	virginica
##	148	6.5	3.0	5.2	2.0	virginica
##	149	6.2	3.4	5.4	2.3	virginica
##	150	5.9	3.0	5.1	1.8	virginica

df_verclr <- data.frame(iris)
df_verclr</pre>

##		Sepal Length	Sepal.Width	Petal.Length	Petal.Width	Species
##	1	5.1	3.5	1.4	0.2	setosa
##	2	4.9	3.0	1.4	0.2	setosa
##	3	4.7	3.2	1.3	0.2	setosa
##	4	4.6	3.1	1.5	0.2	setosa
##	5	5.0	3.6	1.4	0.2	setosa
##	6	5.4	3.9	1.7	0.4	setosa
##	7	4.6	3.4	1.4	0.3	setosa
##	8	5.0	3.4	1.5	0.2	setosa
##	9	4.4	2.9	1.4	0.2	setosa
##	10	4.9	3.1	1.5	0.1	setosa
##	11	5.4	3.7	1.5	0.2	setosa
##	12	4.8	3.4	1.6	0.2	setosa
##	13	4.8	3.0	1.4	0.1	setosa
##	14	4.3	3.0	1.1	0.1	setosa
##	15	5.8	4.0	1.2	0.2	setosa
##	16	5.7	4.4	1.5	0.4	setosa
##	17	5.4	3.9	1.3	0.4	setosa
##	18	5.1	3.5	1.4	0.3	setosa
##	19	5.7	3.8	1.7	0.3	setosa
##	20	5.1	3.8	1.5	0.3	setosa
##	21	5.4	3.4	1.7	0.2	setosa
##	22	5.1	3.7	1.5	0.4	setosa
##	23	4.6	3.6	1.0	0.2	setosa
##	24	5.1	3.3	1.7	0.5	setosa
	25	4.8	3.4	1.9	0.2	setosa
##	26	5.0	3.0	1.6	0.2	setosa
##	27 28	5.0	3.4	1.6	0.4	setosa
## ##	28 29	5.2 5.2	3.5 3.4	1.5	0.2	setosa
##	30	4.7	3.4	1.4 1.6	0.2	setosa
##	31	4.7	3.2	1.6	0.2	setosa setosa
##	32	5.4	3.4	1.5	0.2	setosa
##	33	5.2	4.1	1.5	0.4	setosa
##	34	5.5	4.2	1.4	0.2	setosa
##	35	4.9	3.1	1.5	0.2	setosa
##	36	5.0	3.2	1.2	0.2	setosa
##	37	5.5	3.5	1.3	0.2	setosa
##		4.9	3.6	1.4	0.1	setosa
	50	1.0	3.0	1.1	3.1	Dooba

##	39	4.4	3.0	1.3	0.2	setosa
	40	5.1	3.4	1.5	0.2	setosa
	41	5.0	3.5	1.3	0.3	setosa
##	42	4.5	2.3	1.3	0.3	setosa
##	43	4.4	3.2	1.3	0.2	setosa
##	44	5.0	3.5	1.6	0.6	setosa
##	45	5.1	3.8	1.9	0.4	setosa
##	46	4.8	3.0	1.4	0.3	setosa
##	47	5.1	3.8	1.6	0.2	setosa
##	48	4.6	3.2	1.4	0.2	setosa
##	49	5.3	3.7	1.5	0.2	setosa
##	50	5.0	3.3	1.4	0.2	setosa
##	51	7.0	3.2	4.7		ersicolor
##	52	6.4	3.2	4.5		ersicolor
##	53	6.9	3.1	4.9	1.5 ve	ersicolor
##	54	5.5	2.3	4.0	1.3 ve	rsicolor
##	55	6.5	2.8	4.6	1.5 ve	ersicolor
##	56	5.7	2.8	4.5	1.3 ve	ersicolor
##	57	6.3	3.3	4.7	1.6 ve	ersicolor
##	58	4.9	2.4	3.3	1.0 ve	ersicolor
##	59	6.6	2.9	4.6	1.3 ve	ersicolor
##	60	5.2	2.7	3.9	1.4 ve	ersicolor
##	61	5.0	2.0	3.5	1.0 ve	ersicolor
##	62	5.9	3.0	4.2	1.5 ve	ersicolor
##	63	6.0	2.2	4.0	1.0 ve	ersicolor
##	64	6.1	2.9	4.7	1.4 ve	ersicolor
##	65	5.6	2.9	3.6	1.3 ve	ersicolor
##	66	6.7	3.1	4.4	1.4 ve	ersicolor
##	67	5.6	3.0	4.5	1.5 ve	ersicolor
##	68	5.8	2.7	4.1	1.0 ve	ersicolor
##	69	6.2	2.2	4.5	1.5 ve	ersicolor
##	70	5.6	2.5	3.9		ersicolor
##	71	5.9	3.2	4.8		ersicolor
##	72	6.1	2.8	4.0		ersicolor
##	73	6.3	2.5	4.9		ersicolor
##	74	6.1	2.8	4.7		ersicolor
##		6.4	2.9	4.3		ersicolor
	76	6.6	3.0	4.4		ersicolor
	77	6.8	2.8	4.8		ersicolor
	78	6.7	3.0	5.0		ersicolor
	79	6.0	2.9	4.5		ersicolor
	80	5.7	2.6	3.5		ersicolor
	81	5.5	2.4	3.8		ersicolor
	82 83	5.5	2.4	3.7		ersicolor ersicolor
	84	5.8		3.9		rsicolor
	85	6.0 5.4	2.7 3.0	5.1 4.5		ersicolor
	86	6.0	3.4	4.5		rsicolor
	87	6.7	3.1	4.7		rsicolor
	88	6.3	2.3	4.7		rsicolor
	89	5.6	3.0	4.1		rsicolor
##		5.5	2.5	4.0		rsicolor
##		5.5	2.6	4.4		rsicolor
##		6.1	3.0	4.6		ersicolor

## 93	5.8	2.6	4.0	1.2 versicolor
## 94	5.0	2.3	3.3	1.0 versicolor
## 95	5.6	2.7	4.2	1.3 versicolor
## 96	5.7	3.0	4.2	1.2 versicolor
## 97	5.7	2.9	4.2	1.3 versicolor
## 98	6.2	2.9	4.3	1.3 versicolor
## 99	5.1	2.5	3.0	1.1 versicolor
## 100	5.7	2.8	4.1	1.3 versicolor
## 101	6.3	3.3	6.0	2.5 virginica
## 102	5.8	2.7	5.1	1.9 virginica
## 103	7.1	3.0	5.9	2.1 virginica
## 104	6.3	2.9	5.6	1.8 virginica
## 105	6.5	3.0	5.8	2.2 virginica
## 106	7.6	3.0	6.6	2.1 virginica
## 107	4.9	2.5	4.5	1.7 virginica
## 108	7.3	2.9	6.3	1.8 virginica
## 108	6.7	2.5	5.8	1.8 virginica
			6.1	•
## 110	7.2	3.6		2.5 virginica
## 111	6.5	3.2	5.1	2.0 virginica
## 112	6.4	2.7	5.3	1.9 virginica
## 113	6.8	3.0	5.5	2.1 virginica
## 114	5.7	2.5	5.0	2.0 virginica
## 115	5.8	2.8	5.1	2.4 virginica
## 116	6.4	3.2	5.3	2.3 virginica
## 117	6.5	3.0	5.5	1.8 virginica
## 118	7.7	3.8	6.7	2.2 virginica
## 119	7.7	2.6	6.9	2.3 virginica
## 120	6.0	2.2	5.0	1.5 virginica
## 121	6.9	3.2	5.7	2.3 virginica
## 122	5.6	2.8	4.9	2.0 virginica
## 123	7.7	2.8	6.7	2.0 virginica
## 124	6.3	2.7	4.9	1.8 virginica
## 125	6.7	3.3	5.7	2.1 virginica
## 126	7.2	3.2	6.0	1.8 virginica
## 127	6.2	2.8	4.8	1.8 virginica
## 128	6.1	3.0	4.9	1.8 virginica
## 129	6.4	2.8	5.6	2.1 virginica
## 130	7.2	3.0	5.8	1.6 virginica
## 131	7.4	2.8	6.1	1.9 virginica
## 132	7.9	3.8	6.4	2.0 virginica
## 133	6.4	2.8	5.6	2.2 virginica
## 134	6.3	2.8	5.1	1.5 virginica
## 135	6.1	2.6	5.6	1.4 virginica
## 136	7.7	3.0	6.1	2.3 virginica
## 137	6.3	3.4	5.6	2.4 virginica
## 138	6.4	3.1	5.5	1.8 virginica
## 139	6.0	3.0	4.8	1.8 virginica
## 140	6.9	3.1	5.4	2.1 virginica
## 141	6.7	3.1	5.6	2.4 virginica
## 142	6.9	3.1	5.1	2.3 virginica
## 143	5.8	2.7	5.1	1.9 virginica
## 144	6.8	3.2	5.9	2.3 virginica
## 145	6.7	3.3	5.7	2.5 virginica
## 146	6.7	3.0	5.2	2.3 virginica
	-			

```
## 147
                6.3
                             2.5
                                           5.0
                                                        1.9 virginica
## 148
                 6.5
                                           5.2
                                                        2.0 virginica
                             3.0
## 149
                 6.2
                             3.4
                                           5.4
                                                        2.3
                                                             virginica
## 150
                             3.0
                5.9
                                           5.1
                                                        1.8 virginica
s1 <- subset(df_set, Species == 'setosa' )</pre>
s1
##
      Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1
               5.1
                            3.5
                                          1.4
                                                       0.2
                                                            setosa
## 2
                            3.0
                4.9
                                          1.4
                                                       0.2
                                                            setosa
## 3
                4.7
                            3.2
                                          1.3
                                                       0.2
                                                            setosa
## 4
                4.6
                            3.1
                                          1.5
                                                       0.2
                                                            setosa
## 5
               5.0
                            3.6
                                          1.4
                                                       0.2
                                                            setosa
## 6
               5.4
                            3.9
                                          1.7
                                                       0.4
                                                            setosa
## 7
                4.6
                            3.4
                                          1.4
                                                       0.3
                                                            setosa
## 8
               5.0
                            3.4
                                          1.5
                                                       0.2
                                                            setosa
## 9
                4.4
                            2.9
                                          1.4
                                                       0.2 setosa
## 10
                4.9
                                          1.5
                                                       0.1
                                                            setosa
                            3.1
                                                       0.2 setosa
## 11
               5.4
                            3.7
                                          1.5
## 12
               4.8
                                          1.6
                                                       0.2
                                                            setosa
                            3.4
## 13
               4.8
                            3.0
                                          1.4
                                                       0.1 setosa
## 14
                4.3
                            3.0
                                          1.1
                                                       0.1 setosa
## 15
               5.8
                            4.0
                                          1.2
                                                       0.2 setosa
               5.7
## 16
                            4.4
                                          1.5
                                                       0.4
                                                            setosa
## 17
                            3.9
                                          1.3
                                                       0.4
               5.4
                                                            setosa
## 18
               5.1
                            3.5
                                          1.4
                                                       0.3
                                                            setosa
## 19
               5.7
                            3.8
                                          1.7
                                                       0.3
                                                            setosa
## 20
               5.1
                            3.8
                                          1.5
                                                       0.3
                                                            setosa
## 21
               5.4
                            3.4
                                          1.7
                                                       0.2
                                                            setosa
## 22
               5.1
                            3.7
                                          1.5
                                                       0.4 setosa
## 23
                4.6
                            3.6
                                          1.0
                                                       0.2
                                                            setosa
## 24
               5.1
                            3.3
                                          1.7
                                                       0.5
                                                            setosa
## 25
                4.8
                            3.4
                                          1.9
                                                       0.2
                                                            setosa
## 26
               5.0
                            3.0
                                          1.6
                                                       0.2 setosa
## 27
               5.0
                            3.4
                                          1.6
                                                       0.4
                                                            setosa
## 28
               5.2
                            3.5
                                          1.5
                                                       0.2 setosa
## 29
               5.2
                            3.4
                                          1.4
                                                       0.2 setosa
## 30
                4.7
                            3.2
                                          1.6
                                                       0.2 setosa
## 31
                4.8
                            3.1
                                          1.6
                                                       0.2 setosa
## 32
               5.4
                            3.4
                                          1.5
                                                       0.4 setosa
## 33
               5.2
                            4.1
                                          1.5
                                                       0.1
                                                            setosa
## 34
               5.5
                            4.2
                                          1.4
                                                       0.2
                                                            setosa
## 35
                4.9
                            3.1
                                          1.5
                                                       0.2
                                                            setosa
## 36
               5.0
                            3.2
                                          1.2
                                                       0.2
                                                            setosa
## 37
               5.5
                            3.5
                                          1.3
                                                       0.2 setosa
## 38
                4.9
                            3.6
                                          1.4
                                                       0.1
                                                            setosa
## 39
                            3.0
                                                       0.2
                4.4
                                          1.3
                                                            setosa
## 40
               5.1
                            3.4
                                          1.5
                                                       0.2
                                                            setosa
               5.0
                            3.5
## 41
                                                       0.3 setosa
                                          1.3
## 42
               4.5
                            2.3
                                          1.3
                                                       0.3
                                                            setosa
## 43
                                                       0.2 setosa
               4.4
                            3.2
                                          1.3
## 44
               5.0
                            3.5
                                          1.6
                                                       0.6 setosa
## 45
               5.1
                                          1.9
                                                       0.4 setosa
                            3.8
```

```
1.4 0.3 setosa
                 3.0
## 46
            4.8
## 47
            5.1
                       3.8
                                  1.6
                                           0.2 setosa
## 48
            4.6
                       3.2
                                 1.4
                                            0.2 setosa
## 49
            5.3
                       3.7
                                  1.5
                                            0.2 setosa
## 50
            5.0
                                            0.2 setosa
                       3.3
                                  1.4
vs1 <- subset(df_vir, Species == 'versicolor' )</pre>
vs1
```

##		Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
##	51	7.0	3.2	4.7	1.4	versicolor
##	52	6.4	3.2	4.5	1.5	versicolor
##	53	6.9	3.1	4.9	1.5	versicolor
##	54	5.5	2.3	4.0	1.3	versicolor
##	55	6.5	2.8	4.6	1.5	versicolor
##	56	5.7	2.8	4.5	1.3	versicolor
##	57	6.3	3.3	4.7		versicolor
##	58	4.9	2.4	3.3	1.0	versicolor
	59	6.6	2.9	4.6		versicolor
	60	5.2	2.7	3.9		versicolor
	61	5.0	2.0	3.5		versicolor
	62	5.9	3.0	4.2		versicolor
	63	6.0	2.2	4.0		versicolor
	64	6.1	2.9	4.7		versicolor
	65	5.6	2.9	3.6		versicolor
	66	6.7	3.1	4.4		versicolor
	67	5.6	3.0	4.5		versicolor
	68	5.8	2.7	4.1		versicolor
	69	6.2	2.2	4.5		versicolor
	70	5.6	2.5	3.9		versicolor
	71	5.9	3.2	4.8		versicolor
	72	6.1	2.8	4.0		versicolor
	73	6.3	2.5	4.9		versicolor
	74	6.1	2.8	4.7		versicolor
	75	6.4	2.9	4.3		versicolor
	76	6.6	3.0	4.4		versicolor
##	77	6.8	2.8	4.8		versicolor
##	78	6.7	3.0	5.0		versicolor
	79	6.0	2.9	4.5		versicolor
	80	5.7	2.6	3.5		versicolor
	81	5.5	2.4	3.8		versicolor
	82	5.5	2.4	3.7		versicolor
	83	5.8	2.7	3.9		versicolor
	84	6.0	2.7	5.1		versicolor
## ##	85	5.4	3.0	4.5		versicolor
		6.0	3.4	4.5		versicolor
## ##		6.7	3.1	4.7		versicolor
		6.3	2.3	4.4		versicolor
## ##		5.6	3.0	4.1		versicolor versicolor
		5.5 5.5	2.5	4.0		
## ##			2.6 3.0	4.4		versicolor versicolor
		6.1		4.6		
##		5.8	2.6	4.0		versicolor
##	94	5.0	2.3	3.3	1.0	versicolor

```
## 95
            5.6
                      2.7
                                 4.2 1.3 versicolor
## 96
            5.7
                       3.0
                                  4.2
                                            1.2 versicolor
## 97
            5.7
                       2.9
                                  4.2
                                            1.3 versicolor
## 98
             6.2
                       2.9
                                  4.3
                                            1.3 versicolor
## 99
             5.1
                       2.5
                                  3.0
                                            1.1 versicolor
## 100
             5.7
                       2.8
                                  4.1
                                            1.3 versicolor
```

vir1 <- subset(df_verclr, Species == 'virginica')
vir1</pre>

##		Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
##	101	6.3	3.3	6.0	2.5	virginica
##	102	5.8	2.7	5.1	1.9	virginica
##	103	7.1	3.0	5.9	2.1	virginica
##	104	6.3	2.9	5.6	1.8	virginica
##	105	6.5	3.0	5.8		virginica
	106	7.6	3.0	6.6		virginica
	107	4.9	2.5	4.5		virginica
	108	7.3	2.9	6.3		virginica
	109	6.7	2.5	5.8		virginica
	110	7.2	3.6	6.1		virginica
	111	6.5	3.2	5.1		virginica
	112	6.4	2.7	5.3		virginica
	113	6.8	3.0	5.5		virginica
	114	5.7	2.5	5.0		virginica
	115	5.8	2.8	5.1		virginica
	116	6.4	3.2	5.3		virginica
	117	6.5	3.0	5.5		virginica
	118	7.7	3.8	6.7		virginica
	119	7.7	2.6	6.9		virginica
	120	6.0	2.2	5.0		virginica
	121	6.9	3.2	5.7		virginica
	122	5.6	2.8	4.9		virginica
	123	7.7	2.8	6.7		virginica
	124	6.3	2.7	4.9		virginica
	125	6.7	3.3	5.7		virginica
	126	7.2	3.2	6.0		virginica
	127	6.2	2.8	4.8		virginica
	128 129	6.1 6.4	3.0 2.8	4.9		virginica
	130	7.2	3.0	5.6 5.8		virginica
	131	7.2	2.8	6.1		virginica virginica
	132	7.4	3.8	6.4		virginica
	133	6.4	2.8	5.6		virginica
	134	6.3	2.8	5.1		virginica
	135	6.1	2.6	5.6		virginica
	136	7.7	3.0	6.1		virginica
	137	6.3	3.4	5.6		virginica
	138	6.4	3.1	5.5		virginica
	139	6.0	3.0	4.8		virginica
	140	6.9	3.1	5.4		virginica
	141	6.7	3.1	5.6		virginica
	142	6.9	3.1	5.1		virginica
	143	5.8	2.7	5.1		virginica
			=		= 7 0	S

```
## 144
                6.8
                             3.2
                                          5.9
                                                       2.3 virginica
## 145
                6.7
                                                       2.5 virginica
                             3.3
                                          5.7
## 146
                6.7
                             3.0
                                          5.2
                                                       2.3 virginica
                                                       1.9 virginica
## 147
                6.3
                             2.5
                                          5.0
## 148
                6.5
                             3.0
                                          5.2
                                                       2.0 virginica
                                                       2.3 virginica
## 149
                6.2
                             3.4
                                          5.4
## 150
                5.9
                             3.0
                                                       1.8 virginica
                                          5.1
```

b. Get the mean for every characteristics of each species using colMeans(). Write the codes and its result.

```
seto_1 <- colMeans(s1[sapply(df_set,is.numeric)])</pre>
seto_1
## Sepal.Length Sepal.Width Petal.Length Petal.Width
##
          5.006
                        3.428
                                      1.462
                                                   0.246
vir_2 <- colMeans(vir1[sapply(df_vir,is.numeric)])</pre>
vir_2
## Sepal.Length Sepal.Width Petal.Length Petal.Width
##
          6.588
                        2.974
                                      5.552
                                                   2.026
vs2 <- colMeans(vs1[sapply(df_verclr,is.numeric)])</pre>
vs2
## Sepal.Length Sepal.Width Petal.Length Petal.Width
##
          5.936
                        2.770
                                     4.260
                                                   1.326
```

c. Combine all species by using rbind() The table should be look like this:

```
jla <- rbind( seto_1, vs2, vir_2)
bem_df <- data.frame(jla)
bem_df</pre>
```

```
##
          Sepal.Length Sepal.Width Petal.Length Petal.Width
## seto 1
                 5.006
                              3.428
                                           1.462
                                                        0.246
## vs2
                 5.936
                              2.770
                                           4.260
                                                        1.326
## vir 2
                 6.588
                              2.974
                                           5.552
                                                        2.026
```

d. From the data in 4-c: Create the barplot(). Write the codes and its result. The barplot should be like this.

