CENTRAL UNIVERSITY OF RAJASTHAN

DEPARTMENT OF DATA SCIENCE

DECEMBER,2018

UNIVERSITY FEEDBACK SURVEY

UNDER THE GUIDANCE OF-

Dr. MANAS PATRA

Submitted by

Priya Sinha (18)
Aishwarya Verma (02)
Antara Khan (14)

CANDIDATE'S DECLARATION

We here declare that the work embodied in this project entitled “survey project on UNIVERSITY FEEDBACK” towards partial fulfilment of the requirement for the award of degree of M.SC IN BIG DATA ANALYTICS, is a bonafide piece of work carried out by as under the extreme supervision of Dr. Manas Patra, Department of Data science, Central university of Rajasthan.
The work presented in this project has not been submitted by us for the award of any other degree of this or any other university. We have taken care in all respects to honour the intellectual property right and we have acknowledged the contribution(s) of others for using them for this academic purpose.

DATE: **AISHWARYA VERMA (02)**
ANTARA KHAN(14)
PLACE : **PRIYA SINHA(18)**

CERTIFICATE

This is to certify that Ms. Aishwarya Verma, Ms. Antara Khan and Ms. Priya Sinha had completed their “survey project” under my supervision and the above statement made by them is correct and true to the best of my knowledge.

Dr. Manas Patra
HEAD OF DEPARTMENT
Data Science Department
Central UNIVERSITY OF RAJASTHAN.

PLACE: Ajmer, Rajasthan
DATE

ACKNOWLEDGEMENT

I feel much honored in presenting this dissertation report in such an authenticable form of sheer endurance and continual efforts of inspiring excellence from various coordinating factor of cooperation and sincere efforts drawn from all sources of knowledge. I express my sincere central university of Rajasthan, for his valuable guidance and infilling support for the completion of this project work. We would also lie to thanks Dr. Manas Patra department of data science for this support and valuable guidance.

Date: December 2018
Place:

ABSTRACT

This project we have undertaken is “survey project on University Feedback”. This represents the total 467 students’ responses of university feedback forms.First, we have cleaned the data of 467 responses and got 422 cleaned data responses. We have analyzed the whole survey data through some test and graphically by the help of scatter plots, bar plots and also by making contingency table and applied Chi-square test which are shown the correlation between different columns on our feedback data.

The main purpose of this project to analyze feedback data and read the trends between the quantity we have chosen.

TABLE OF CONTENTS

UNIVERSITY FEEDBACK FORM

UNIVERSITY FEEDBACK FORM

Please fill this form only once .

* Required

1. **ENROLLMENT NUMBER** *

RATING PARAMETERS

RATING :- 5 : EXCELLENT , 4 : VERY GOOD , 3 : GOOD , 2 : AVERAGE , 1 : BELOW AVERAGE

2. **GENDER** *
Mark only one oval.

- ◯ Female
- ◯ Male
- ◯ Other

HOSTEL AND MESS

3. **1. FOOD QUALITY AND VARIETY** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

4. **2.HYGIENE & MAINTENANCE OF MESS** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

5. **3. CLEANLINESS OF WASHROOMS** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

6. **4. DRINKING WATER QUALITY** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

7. **5. WI-FI AND INTERNET SERVICES** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

8. **6. SPORTS AND GYM** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

9. **7. HOW SECURE DO YOU FEEL IN CAMPUS?** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

ACADEMICS

10. **1.ORGANISATION AND COVERAGE OF SYLLABUS** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

11. **2.RELEVANCE AND REAL WORLD APPLICATION** *
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

12. **3.EXAMINATION PATTERN AND GRADING SYSTEM**
Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

13. **4. CO- CURRICULAR ACTIVITIES** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

ABOUT THE INSTRUCTOR

14. **1.TECHNICAL CONTENT IN TEACHING** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

15. **2.LEVEL OF INTERACTION DURING LECTURES** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

16. **3.AVAILABILITY OUTSIDE CLASS** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

ACADEMIC FACILITIES

17. **1.LAB FACILITIES (EX: EQUIPMENT)** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

18. **2.AVAILABILITY OF BOOKS, E-RESOURCES, STUDY MATERIALS, ETC.** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

19. **3.QUALITY OF GUEST LECTURES, WORKSHOPS, SEMINARS, ETC** *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

OTHERS

20. **1. ARE YOU AWARE ABOUT SPARSH FOUNDATION AND ITS ACTIVITIES?** *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Maybe

21. **2. DO YOU FEEL GENDER D|SCR|M|NAT|ON EX|STS |N CURAJ?** *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Maybe

22. **3. HAVE YOU EXPERIENCED HARASSMENT IN ANY FORM (EX: PHYSICAL, VERBAL, ETC) IN CURAJ?** *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Maybe

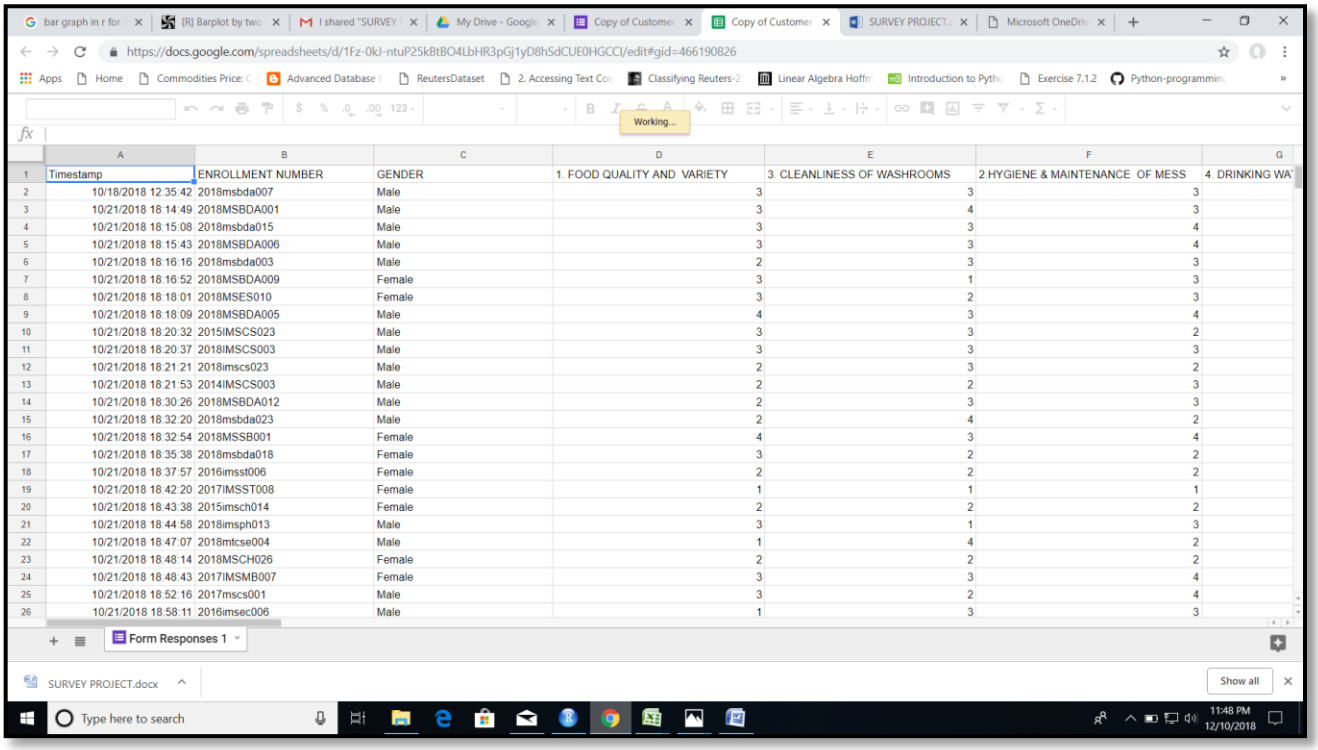
23. **4. ARE YOU SAT|SF|ED W|TH THE CCTV MONITOR|NG |N CURAJ?** *

Mark only one oval.

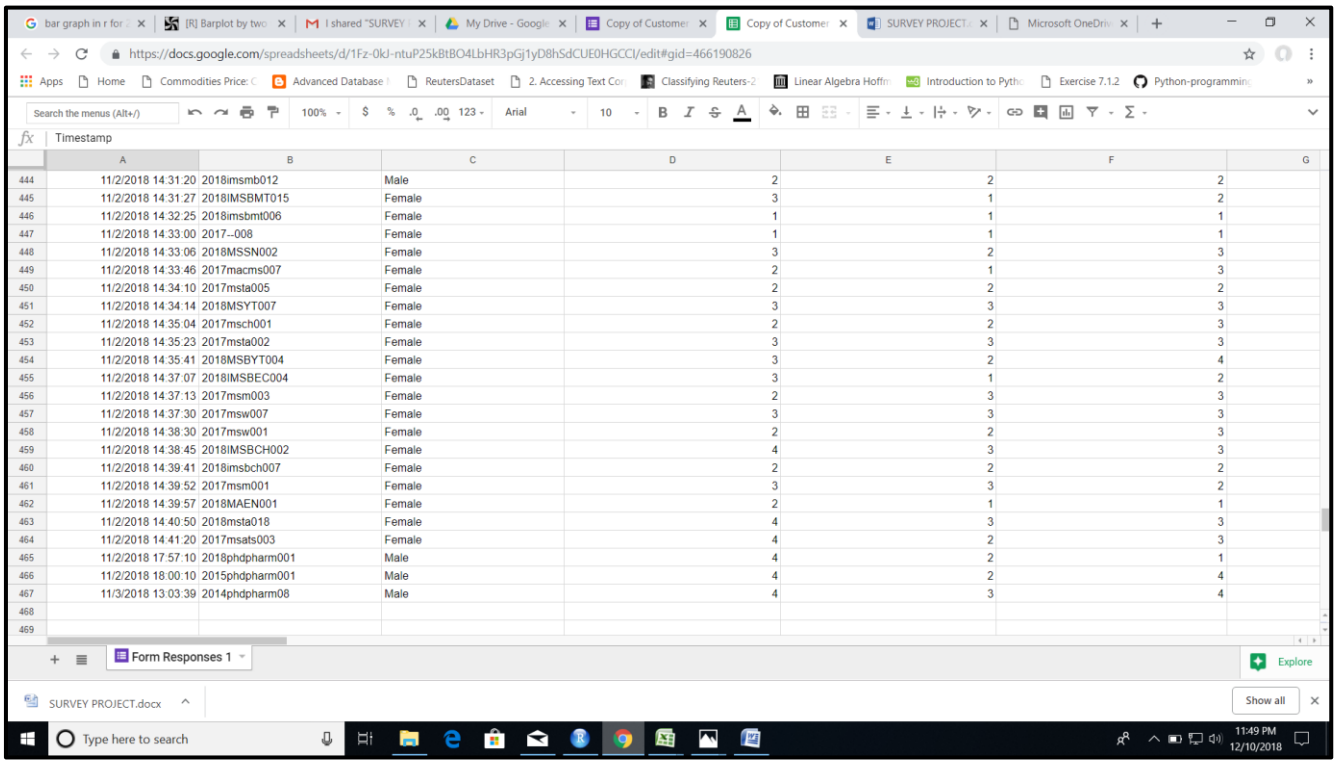
- ◯ Yes
- ◯ No
- ◯ Maybe

DATA COLLECTION

We have collected the data from the students regarding university's feedback. We have total 23 variables in it and the responses given in 5 categories (1,2,3,4,5) in some questions and for some it has 3 categories(Yes,No,Maybe).



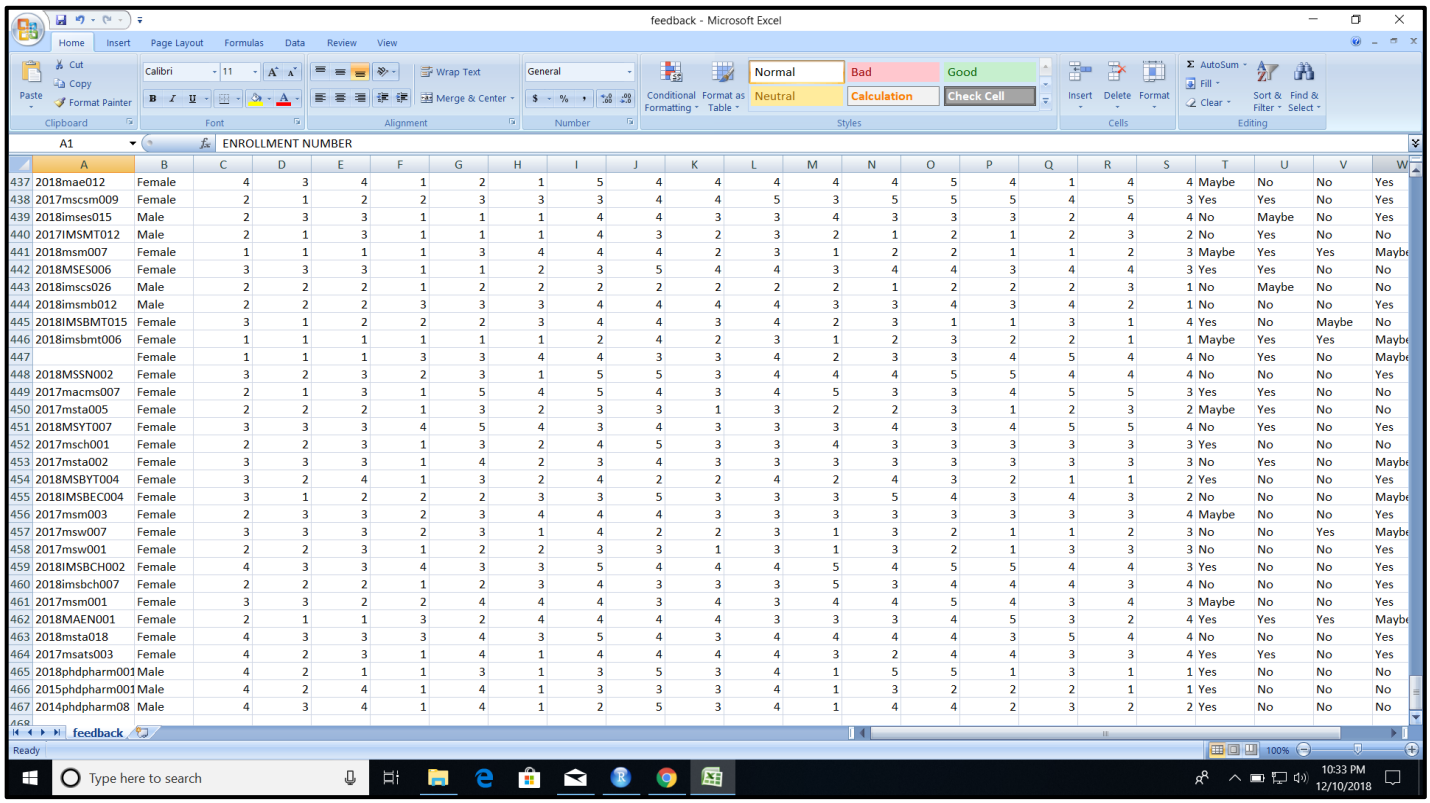
Timestamp	ENROLLMENT NUMBER	GENDER	1. FOOD QUALITY AND VARIETY	3. CLEANLINESS OF WASHROOMS	2.HYGIENE & MAINTENANCE OF MESS	4. DRINKING WA
10/18/2018 12:35:42	2018msbda007	Male	3	3	3	
10/21/2018 18:14:49	2018MSBDA001	Male	3	4	3	
10/21/2018 18:15:08	2018msbda015	Male	3	3	4	
10/21/2018 18:15:43	2018MSBDA006	Male	3	3	4	
10/21/2018 18:16:16	2018msbda003	Male	2	3	3	
10/21/2018 18:16:52	2018MSBDA009	Female	3	1	3	
10/21/2018 18:18:01	2018MSES010	Female	3	2	3	
10/21/2018 18:18:09	2018MSBDA005	Male	4	3	4	
10/21/2018 18:20:32	2015IMSCS023	Male	3	3	2	
10/21/2018 18:20:37	2018IMSCS003	Male	3	3	3	
10/21/2018 18:21:21	2018imscs023	Male	2	3	2	
10/21/2018 18:21:53	2014IMSCS003	Male	2	2	3	
10/21/2018 18:30:26	2018MSBDA012	Male	2	3	3	
10/21/2018 18:32:20	2018msbda023	Male	2	4	2	
10/21/2018 18:32:54	2018MSSB001	Female	4	3	4	
10/21/2018 18:35:38	2018msbda018	Female	3	2	2	
10/21/2018 18:37:57	2016imsst006	Female	2	2	2	
10/21/2018 18:42:20	2017IMSST008	Female	1	1	1	
10/21/2018 18:43:38	2015imsch014	Female	2	2	2	
10/21/2018 18:44:58	2018imsph013	Male	3	1	3	
10/21/2018 18:47:07	2018mtcse004	Male	1	4	2	
10/21/2018 18:48:14	2018MSCH026	Female	2	2	2	
10/21/2018 18:48:43	2017IMSMB007	Female	3	3	4	
10/21/2018 18:52:16	2017mscs001	Male	3	2	4	
10/21/2018 18:58:11	2016imsec006	Male	1	3	3	

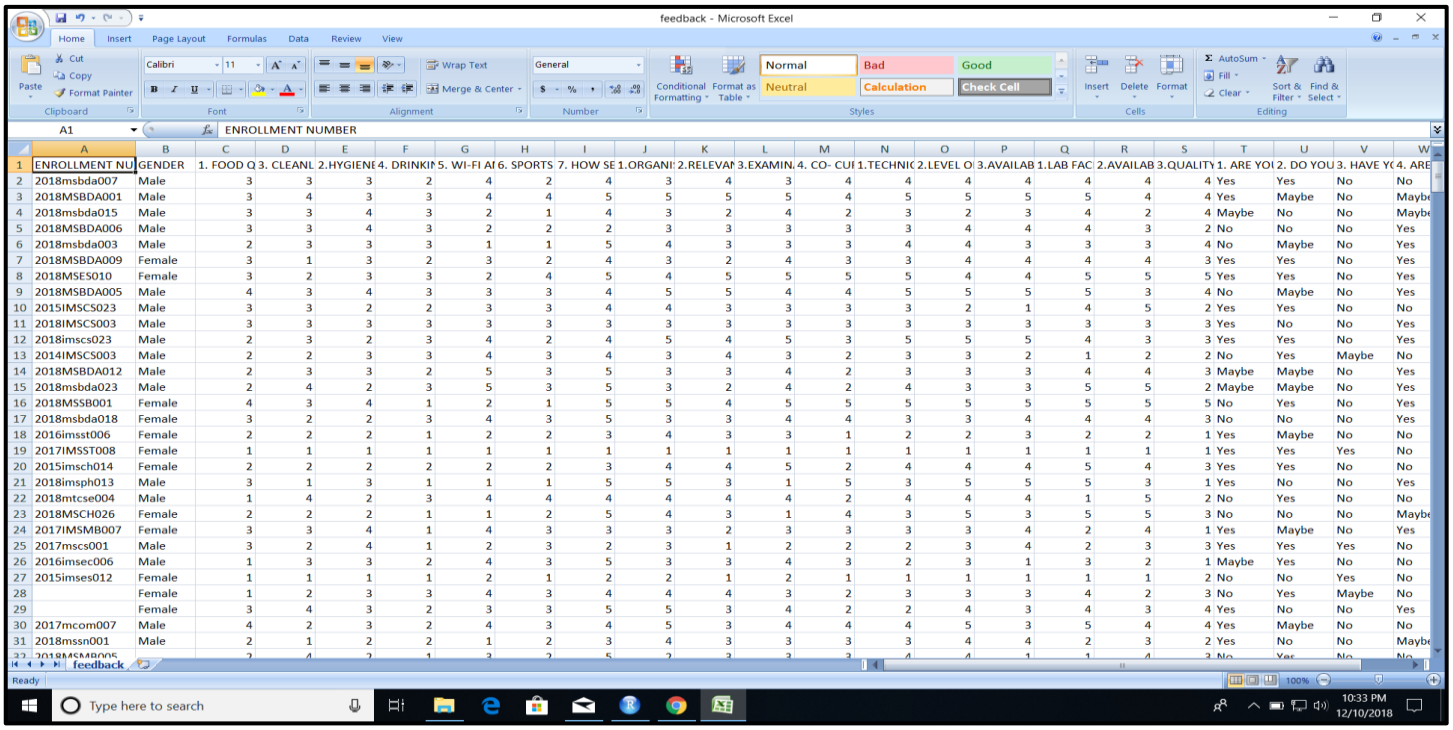


Timestamp						
11/2/2018 14:31:20	2018imsmb012	Male	2	2	2	
11/2/2018 14:31:27	2018IMSBMT015	Female	3	1	2	
11/2/2018 14:32:25	2018imsbmt006	Female	1	1	1	
11/2/2018 14:33:00	2017--008	Female	1	1	1	
11/2/2018 14:33:06	2018MSSN002	Female	3	2	3	
11/2/2018 14:33:46	2017macms007	Female	2	1	3	
11/2/2018 14:34:10	2017msta005	Female	2	2	2	
11/2/2018 14:34:14	2018MSYT007	Female	3	3	3	
11/2/2018 14:35:04	2017msch001	Female	2	2	3	
11/2/2018 14:35:23	2017msta002	Female	3	3	3	
11/2/2018 14:35:41	2018MSBYT004	Female	3	2	4	
11/2/2018 14:37:07	2018IMSBEC004	Female	3	1	2	
11/2/2018 14:37:13	2017msm003	Female	2	3	3	
11/2/2018 14:37:30	2017msw007	Female	3	3	3	
11/2/2018 14:38:30	2017msw001	Female	2	2	3	
11/2/2018 14:38:45	2018IMSBCH002	Female	4	3	3	
11/2/2018 14:39:41	2018imsbch007	Female	2	2	2	
11/2/2018 14:39:52	2017msm001	Female	3	3	2	
11/2/2018 14:39:57	2018MAEN001	Female	2	1	1	
11/2/2018 14:40:50	2018msta018	Female	4	3	3	
11/2/2018 14:41:20	2017msats003	Female	4	2	3	
11/2/2018 17:57:10	2018phdpharm001	Male	4	2	1	
11/2/2018 18:00:10	2015phdpharm001	Male	4	2	4	
11/3/2018 13:03:39	2014phdpharm08	Male	4	3	4	

DATA CLEANING (MANUALLY)

First,we delete the timestamp and delete the unwanted rows.





DATA CLEANING(IN R)

In order to do data cleaning in R, we import the data through this command.

```
> o_data<-read.csv("C:\\Users\\DELL\\Desktop\\o_data.csv")
```

So as to check whether our data consist some NA values we have a inbuilt function in R. If it shows "TRUE" then our data must contain NA values otherwise not.

```
> any(is.na(o_data))
[1] TRUE
```

Now to sum the NA values, we have another inbuilt function which adds up all the count of NA values.

```
> sum(is.na(o_data))
[1] 444
```

So to remove these ,we use another R command:

```
c1_data<-na.omit(o_data)
```

Now we again check for NA values in our data(c1_data):

```
> any(is.na(c1_data))
[1] FALSE
```

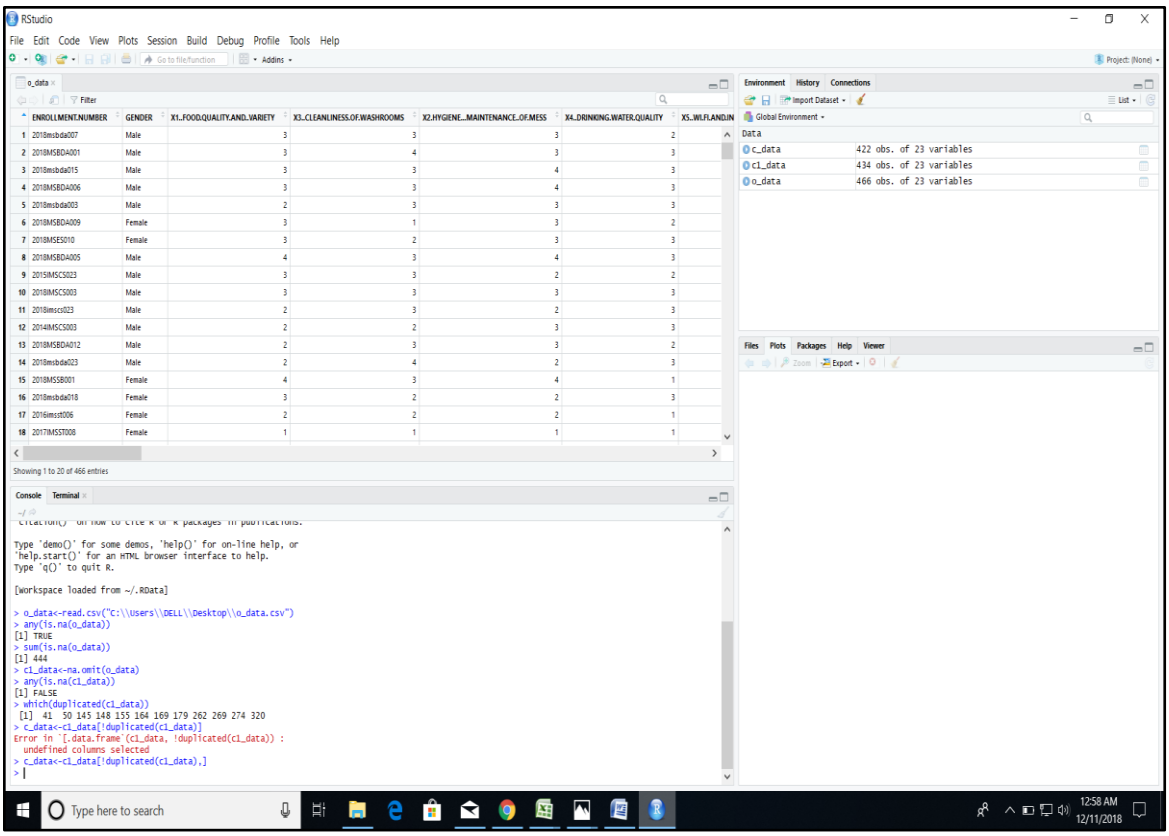
Now we check for any duplicate values via another R inbuilt function so it gives the number of duplicated rows as:

```
> which(duplicated(c1_data))
[1]  41  50 145 148 155 164 169 179 262 269 274 320
```

So as to remove these duplicated rows command is as follows:-

```
c_data<-c1_data[!duplicated(c1_data),]
```

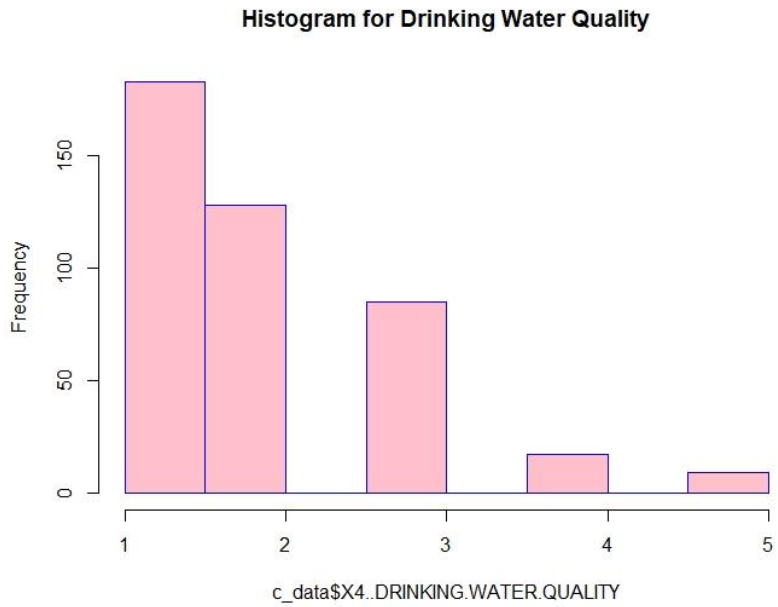
Hence we left with 422 rows with 23 variables as shown in figure:



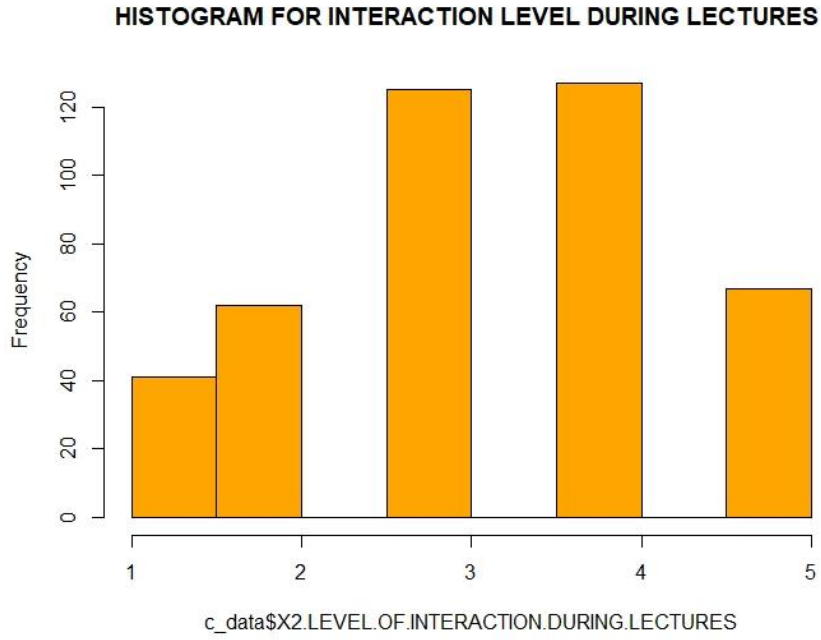
HISTOGRAM

A histogram is a plot to show the frequency of continuous variable but we have all the discrete values in our data.So in order to plot these we have:

```
> hist(c_data$X4..DRINKING.WATER.QUALITY,main="Histogram for Drinking Water Quality",border="blue",col="pink")
```



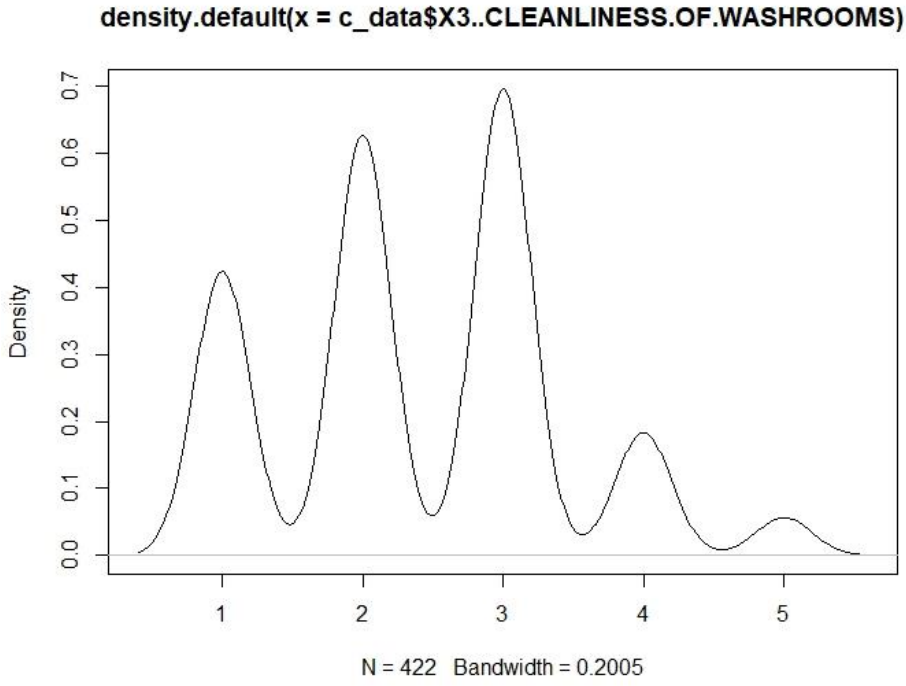

```
> hist(c_data$X2.LEVEL.OF.INTERACTION.DURING.LECTURES,main="HISTOGRAM FOR INTERACTION LEVEL DURING LECTURES ",border="black",col="orange")
```



DENSITY PLOTS

It is a much more effective way of showing the distribution of a variable.

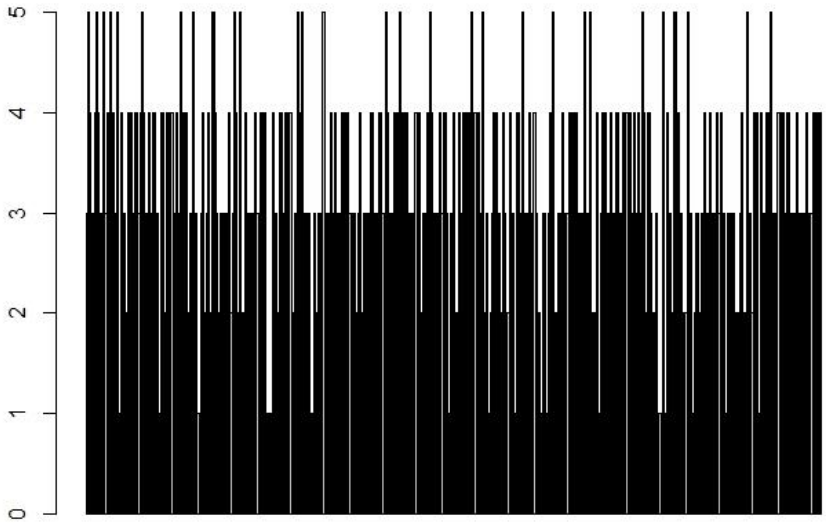
```
> plot(density(c_data$X3..CLEANLINESS.OF.WASHROOMS))
```



BAR PLOTS

The above two plots discussed is for continuous variable,so in order to plot graph for categorical variable we use barplots.

```
> barplot(c_data$X3.EXAMINATION.PATTERN.AND.GRADING.SYSTEM)
```



CONTINGENCY TABLE

Contingency tables (also called crosstabs or two-way tables) are used in statistics to summarize the relationship between several categorical variables. A contingency table is a special type of frequency distribution table, where two variables are shown simultaneously.

So here we are taking only two columns from our data in order to define a relationship between two variables.

Question 1: Is there a significant relationship between "DRINKING WATER QUALITY" and "HYGIENE MAINTENANCE OF MESS".

To take only two columns:

```
t1<-c_data[,5:6]
```

Now since we have very less responses in 1 and 5 categories so we merge 1 with 2 and 4 with 5 and make only 3 categories:

```
> t1$X2.HYGIENE...MAINTENANCE..OF.MESS[t1$X2.HYGIENE...MAINTENANCE..OF.MESS==2]<-1
> t1$X2.HYGIENE...MAINTENANCE..OF.MESS[t1$X2.HYGIENE...MAINTENANCE..OF.MESS==4]<-5
> t1$X2.HYGIENE...MAINTENANCE..OF.MESS[t1$X2.HYGIENE...MAINTENANCE..OF.MESS==3]<-2
> t1$X2.HYGIENE...MAINTENANCE..OF.MESS[t1$X2.HYGIENE...MAINTENANCE..OF.MESS==5]<-3

> t1$X4..DRINKING.WATER.QUALITY[t1$X4..DRINKING.WATER.QUALITY==2]<-1
> t1$X4..DRINKING.WATER.QUALITY[t1$X4..DRINKING.WATER.QUALITY==4]<-5
> t1$X4..DRINKING.WATER.QUALITY[t1$X4..DRINKING.WATER.QUALITY==3]<-2
> t1$X4..DRINKING.WATER.QUALITY[t1$X4..DRINKING.WATER.QUALITY==5]<-3
```

Now convert the data into table through table() function in R:

```
> addmargins(table(t1))
                                  X4..DRINKING.WATER.QUALITY
X2.HYGIENE...MAINTENANCE..OF.MESS   1   2   3 Sum
                                1   140  25   1 166
                                2   121  29  15 165
                                3    50  31  10  91
                                Sum 311  85  26 422


> A<-table(t1)
> A
                                  X4..DRINKING.WATER.QUALITY
X2.HYGIENE...MAINTENANCE..OF.MESS   1   2   3
                                1 140  25   1
                                2 121  29  15
                                3  50  31  10
```

Now we apply chi-square test to check the relationship:-

```
> chisq.test(A)

        Pearson's Chi-squared test

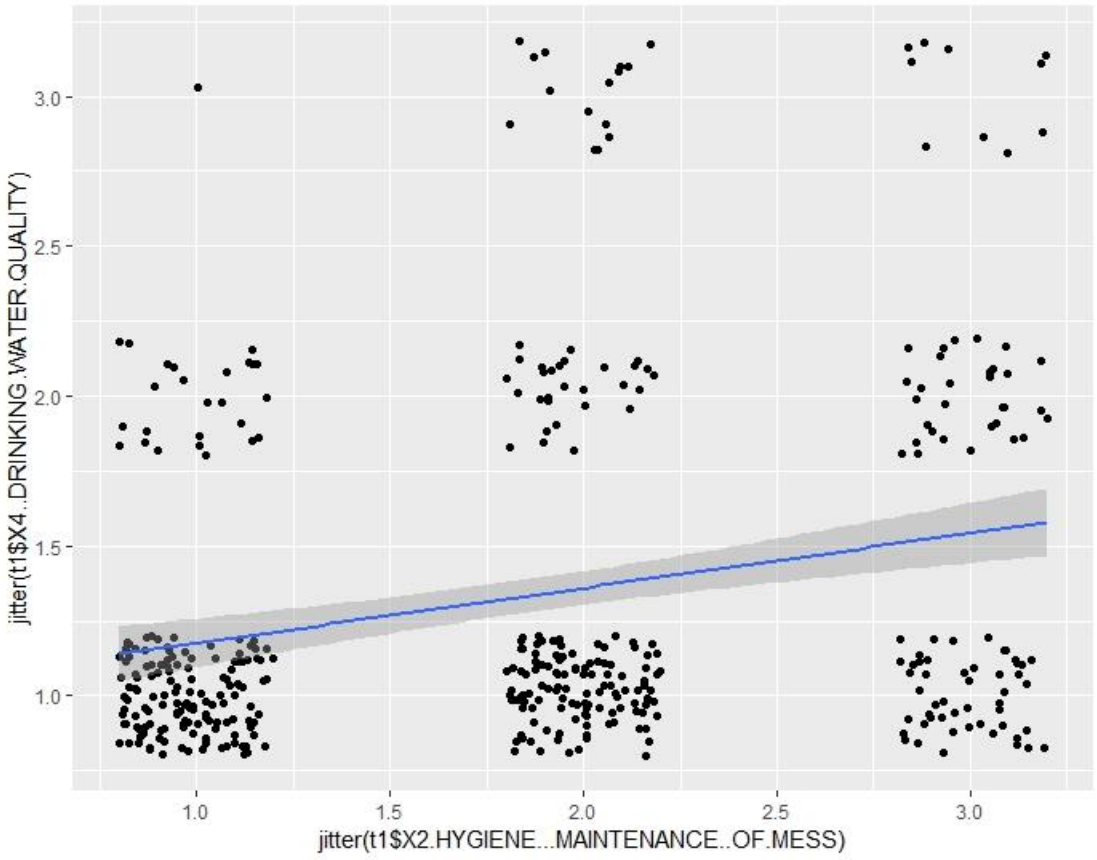
data:  A
X-squared = 32.389, df = 4, p-value = 1.593e-06
```

Since we get p<0.05 Hence these two variables are in fact dependent and the correlation between two variables is given by:-

```
cor(t1$X2.HYGIENE...MAINTENANCE..OF.MESS,t1$X4..DRINKING.WATER.QUALITY)[1]
0.2576383
```

Now in order to make scatter plot we use the following code:

```
> g1<-
        ggplot(t1,aes(jitter(t1$X2.HYGIENE...MAINTENANCE..OF.MESS),jitter(t1$X
4..DRINKING.WATER.QUALITY)))+geom_point()+geom_smooth(method="lm")
> g1
```



Question 2: Is there a dependency between Gender and the Awareness about the sparsh foundation?

We follow the same procedure for this also as we have seen in previous question.

To take only two columns:

```
> t2<-c_data[,c(2,20)]
```

Since the data in the data is in non_numeric form, we convert it into numeric form by using factor() function in R:

```
>t2$GENDER<-factor(t2$GENDER)
>t2$ X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS.ACTIVITIES.<-
factor(t2$ X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS.ACTIVITIES.)
```

Now convert the data into table form through table() function in R:

```
> addmargins(table(t2))
        X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS.ACTIVITIES.
GENDER   Maybe  No Yes Sum
  Female    30  42  92 164
  Male      31  95 132 258
  Sum       61 137 224 422

> B<-table(t2)
> B
        X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS.ACTIVITIES.
GENDER   Maybe  No Yes
  Female    30  42  92
  Male      31  95 132
```

Now we apply chi square test to check the dependency.

```
> chisq.test(B)

        Pearson's Chi-squared test

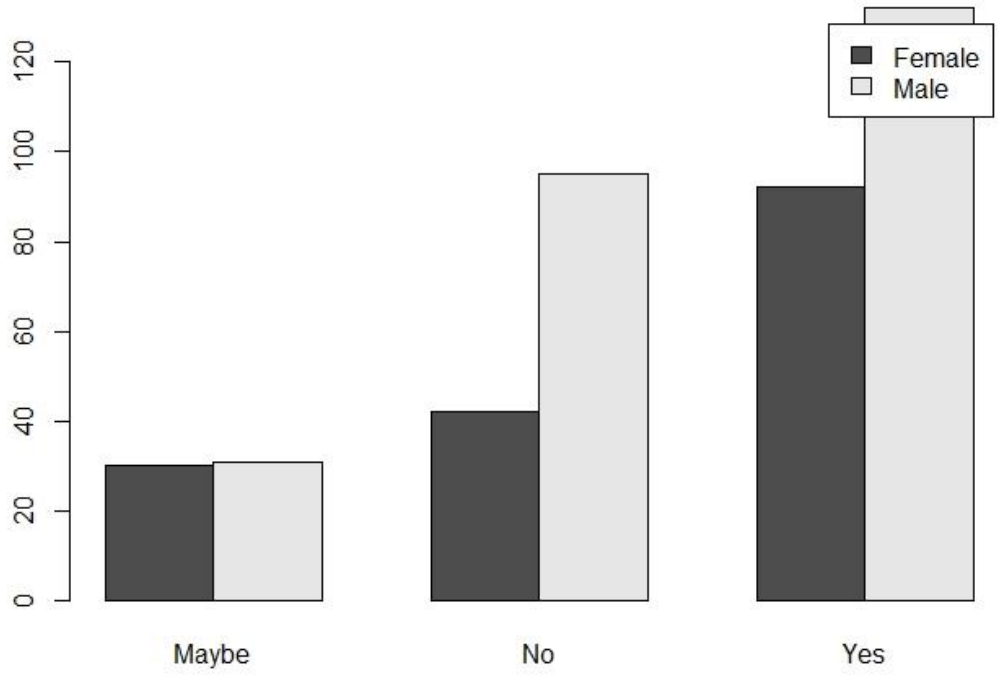
data:  B
X-squared = 7.0756, df = 2, p-value = 0.02908
```

Since the p-value<0.05 ,hence we conclude that these two variables are dependent on each other and the correlation is given by following R command:

```
> cor(rank(t2$GENDER),rank(t2$X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS
.ACTIVITIES.))
[1] -0.0119484
```

Here we know that both variables are non-numeric so to find out the correlation between these two variables we use rank().
We draw barplot for non-numeric data.

```
> barplot(B,beside = TRUE,legend=TRUE,)
```


Female
Male
0
20
40
60
80
100
120
Maybe
No
Yes

Question 3:We are going to check relation between Gender and cleanliness of washroom. We are taking null hypothesis as both female and male thinks that washrooms are clean in CURAJ campus.

We apply the same procedure :

```
> t3<-c_data[,c(2,9)]
```

Since the data is in non-numeric form so first we convert it into numeric form first:

```
        >t3$GENDER<-factor(t3$GENDER)
        t3$X7..HOW.SECURE.DO.YOU.FEEL.IN.CAMPUS.<factor(t3$X7..HOW.SECURE.DO.Y
OU.FEEL.IN.CAMPUS.)
```

Now reduce the 5 categories into 3:

```
> t3$X3..CLEANLINESS.OF.WASHROOMS[t3$X3..CLEANLINESS.OF.WASHROOMS==2]<-1
> t3$X3..CLEANLINESS.OF.WASHROOMS[t3$X3..CLEANLINESS.OF.WASHROOMS==4]<-5
> t3$X3..CLEANLINESS.OF.WASHROOMS[t3$X3..CLEANLINESS.OF.WASHROOMS==3]<-2
> t3$X3..CLEANLINESS.OF.WASHROOMS[t3$X3..CLEANLINESS.OF.WASHROOMS==5]<-3
```

Convert the following data into table:

```
> addmargins(table(t3))
        X3..CLEANLINESS.OF.WASHROOMS
GENDER     1   2   3 Sum
  Female  92  54  18 164
  Male   131  94  33 258
  Sum    223 148  51 422

> C<-table(t3)
> C
        X3..CLEANLINESS.OF.WASHROOMS
GENDER     1   2   3
  Female  92  54  18
  Male   131  94  33
```

Now we apply chi-square test on it:

```
> chisq.test(C)

        Pearson's Chi-squared test

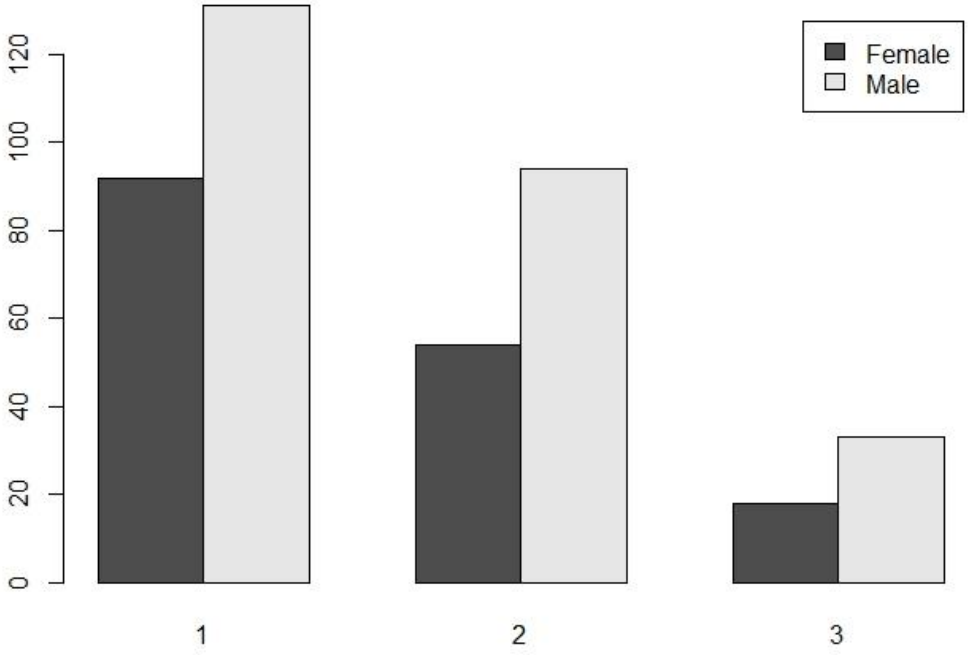
data:  C
X-squared = 1.1625, df = 2, p-value = 0.5592
```

Now here p-value>0.05 Hence we don't reject the null hypothesis i.e.,these two variable are independent of each other. Correlation is given by:

```
> cor(rank(t3$GENDER),rank(t3$X3..CLEANLINESS.OF.WASHROOMS))
[1] 0.0520023
```

Barplot for this:-

```
> barplot(C,legend=TRUE,beside=TRUE)
```


Female
Male
0
20
40
60
80
100
120
1
2
3

SUMMARY OF DATA IN R

```
> summary(c_data)


     ENROLLMENT.NUMBER    GENDER    X1..FOOD.QUALITY.AND..VARIETY
X3..CLEANLINESS.OF.WASHROOMS X2.HYGIENE...MAINTENANCE..OF.MESS
 2016imsch012 :  2           :  0   Min.   :1.000                  Min.
:1.000                  Min.   :1.000
 2017imsmb008 :  2     Female:164   1st Qu.:2.000                  1st
Qu.:2.000                  1st Qu.:2.000
 2017MSATS006 :  2     Male  :258   Median :2.000                  Median
:2.000                  Median :3.000
 2017mscs001  :  2                  Mean   :2.481                  Mean
:2.408                  Mean   :2.749
 2018IMSBMT012:  2                  3rd Qu.:3.000                  3rd
Qu.:3.000                  3rd Qu.:3.000
 2018IMSCH011 :  2                  Max.   :5.000                  Max.
:5.000                  Max.   :5.000
 (Other)      :410
 X4..DRINKING.WATER.QUALITY X5..WI.FI.AND.INTERNET.SERVICES
X6..SPORTS.AND.GYM X7..HOW.SECURE.DO.YOU.FEEL.IN.CAMPUS.
 Min.   :1.000              Min.   :1.000                   Min.   :1.000
Min.   :1.000
 1st Qu.:1.000              1st Qu.:2.000                   1st Qu.:1.000
1st Qu.:3.000
 Median :2.000              Median :3.000                   Median :2.000
Median :4.000
 Mean   :1.912              Mean   :2.701                   Mean   :2.284
Mean   :3.486
 3rd Qu.:3.000              3rd Qu.:4.000                   3rd Qu.:3.000
3rd Qu.:4.000
 Max.   :5.000              Max.   :5.000                   Max.   :5.000
Max.   :5.000

 X1.ORGANISATION.AND.COVERAGE.OF.SYLLABUS
X2.RELEVANCE.AND.REAL.WORLD.APPLICATION
X3.EXAMINATION.PATTERN.AND.GRADING.SYSTEM
 Min.   :1.00                               Min.   :1.000
Min.   :1.00
 1st Qu.:3.00                               1st Qu.:2.000
1st Qu.:3.00
 Median :3.00                               Median :3.000
Median :3.00
 Mean   :3.41                               Mean   :2.765
Mean   :3.14
 3rd Qu.:4.00                               3rd Qu.:3.000
3rd Qu.:4.00
 Max.   :5.00                               Max.   :5.000
Max.   :5.00

 X4..CO..CURRICULAR..ACTIVITIES X1.TECHNICAL.CONTENT.IN.TEACHING
X2.LEVEL.OF.INTERACTION.DURING.LECTURES X3.AVAILABILITY.OUTSIDE.CLASS
 Min.   :1.000                  Min.   :1.000                    Min.
:1.000                   Min.   :1.000
 1st Qu.:2.000                  1st Qu.:2.000                    1st
Qu.:3.000                       1st Qu.:2.000
 Median :3.000                  Median :3.000                    Median
:3.000                   Median :3.000
 Mean   :2.687                  Mean   :2.953                    Mean
:3.277                   Mean   :2.882
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 3rd Qu.:4.000                   3rd Qu.:4.000                     3rd
Qu.:4.000                           3rd Qu.:4.000
 Max.   :5.000                   Max.   :5.000                     Max.
:5.000                           Max.   :5.000

 X1.LAB.FACILITIES..EX..EQUIPMENT.
X2.AVAILABILITY.OF.BOOKS..E.RESOURCES..STUDY.MATERIALS..ETC.
 Min.   :1.000                     Min.   :1.000
 1st Qu.:2.000                     1st Qu.:2.000
 Median :3.000                     Median :3.000
 Mean   :2.976                     Mean   :3.021
 3rd Qu.:4.000                     3rd Qu.:4.000
 Max.   :5.000                     Max.   :5.000

 X3.QUALITY.OF.GUEST.LECTURES..WORKSHOPS..SEMINARS..ETC
X1..ARE.YOU.AWARE.ABOUT.SPARSH.FOUNDATION.AND.ITS.ACTIVITIES.
 Min.   :1.000                                                :  0
 1st Qu.:2.000                                          Maybe: 61
 Median :3.000                                          No   :137
 Mean   :2.682                                          Yes  :224
 3rd Qu.:3.000
 Max.   :5.000

 X2..DO.YOU.FEEL.GENDER.DISCRIMINATION.EXISTS.IN.CURAJ.
X3..HAVE.YOU.EXPERIENCED.HARASSMENT.IN.ANY.FORM..EX..PHYSICAL..VERBAL..ETC..I
N.CURAJ.
      :  0                                                   :  0
 Maybe: 75                                              Maybe: 30
 No   :175                                              No   :337
 Yes  :172                                              Yes  : 55


 X4..ARE.YOU.SATISFIED.WITH.THE.CCTV.MONITORING.IN..CURAJ.
      :  0
 Maybe: 73
 No   :180
 Yes  :169
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CONCLUSION

By analyzing the survey we have discovered the following conclusions:

>From the histogram of drinking water quality , most of the students rate it for 1 or2 out of 5.So,the drinking water quality is very bad and students are not satisfied in this concern.

>From the histogram of level of interaction during lecture, most of the students rate in 3-4 out of 5.So,we can think level of interaction during lecture is good and students are satisfied in this concern. It shows beneficial for all the students.

>From the density graph of cleanliness of washroom, vote an average remarks here.

>We have taken three null hypotheses:

1.Drinking water quality and hygiene maintenance of mess are independent of each other.

2.Gender and awareness of sparse foundation is not correlated to each other.

3.Both male and female students think that washrooms are clean in curaj.

>Applying chi-square test ,it is proved that drinking water quality and hygiene maintenance of mess are not independent .They are dependent on each other. We have shown also the correlation between them to prove it.

>By chi-square test, it is proved that gender and awareness of sparse foundation are correlated to each other.

>By checking relation between gender and cleanliness of washroom ,we accept that both male and female students think that washrooms are clean in curaj.we have tested it by by chi-square test and accept this hypothesis.

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