SECI2143 PROBABILITY AND STATISTICAL DATA ANALYSIS

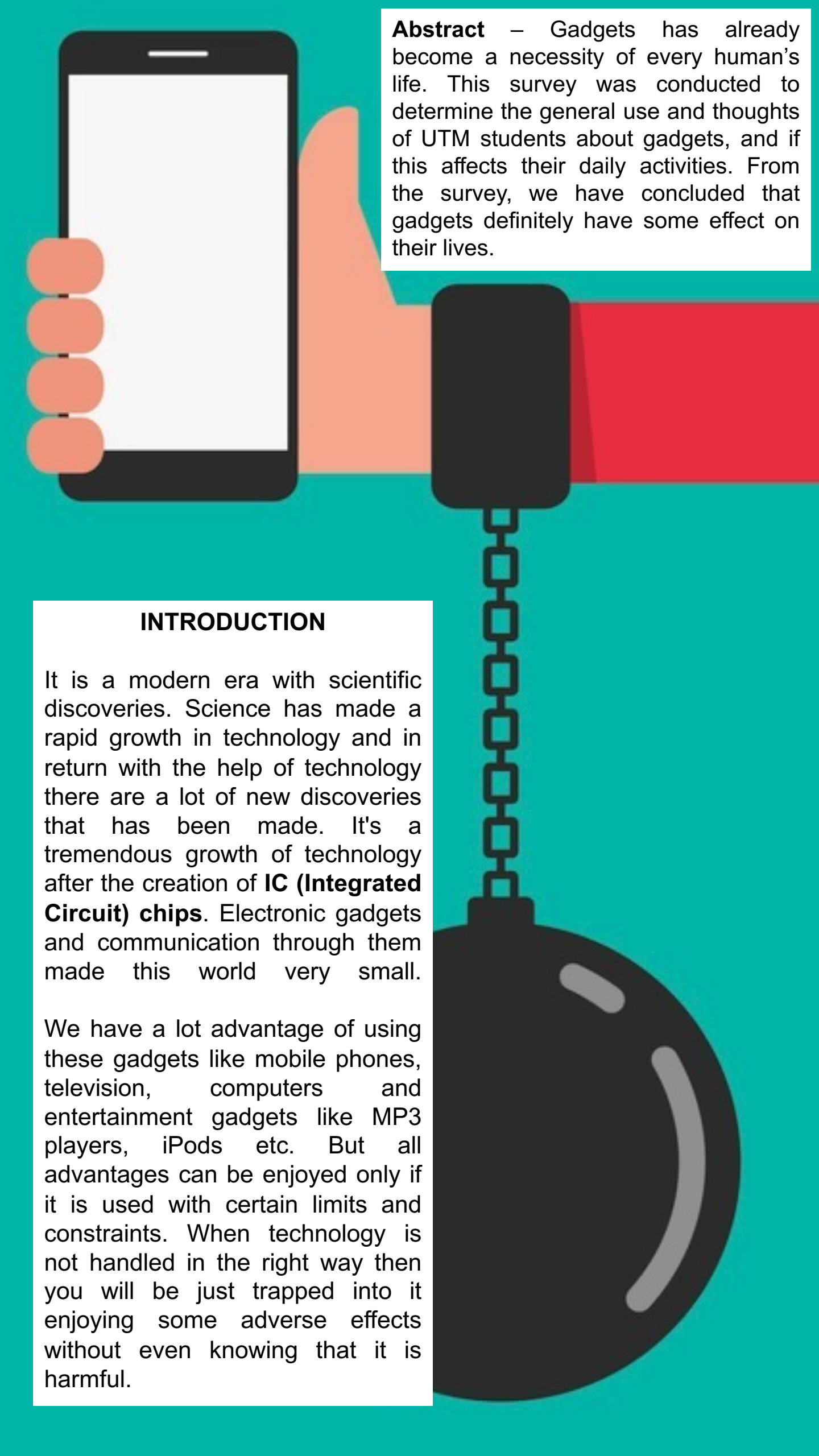
PROJECT 1 – DESCRIPTIVE STATISTIC

GADGETS GOOD OR EVIL?!

Name : 1) Lokessh A/L Pathmanatan
2) Nursyahidatul Asyiqin binti Yusof
3) Irma Zafirah binti Mohd Ikram
4) Izzatun Nadiah binti Abdul Rahman

Section : 09

Abstract – Gadgets has already become a necessity of every human's life. This survey was conducted to determine the general use and thoughts of UTM students about gadgets, and if this affects their daily activities. From the survey, we have concluded that gadgets definitely have some effect on their lives.

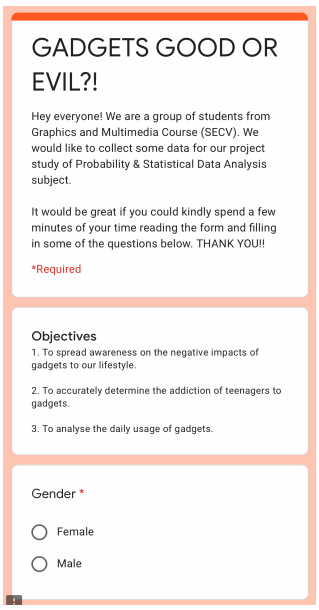


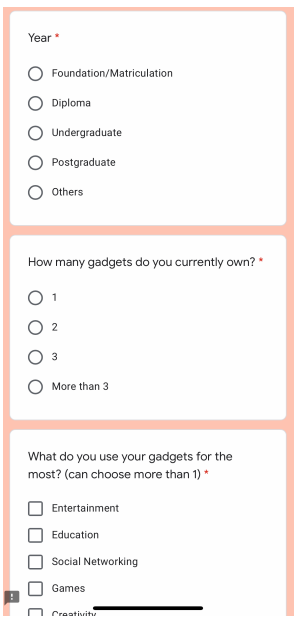
INTRODUCTION

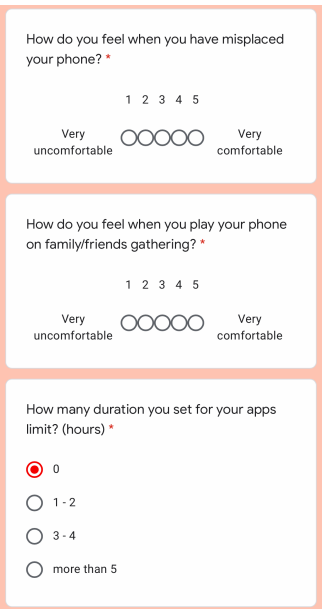
It is a modern era with scientific discoveries. Science has made a rapid growth in technology and in return with the help of technology there are a lot of new discoveries that has been made. It's a tremendous growth of technology after the creation of **IC (Integrated Circuit) chips**. Electronic gadgets and communication through them made this world very small.

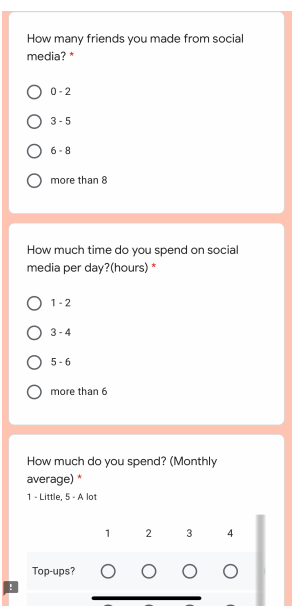
We have a lot advantage of using these gadgets like mobile phones, television, computers and entertainment gadgets like MP3 players, iPods etc. But all advantages can be enjoyed only if it is used with certain limits and constraints. When technology is not handled in the right way then you will be just trapped into it enjoying some adverse effects without even knowing that it is harmful.

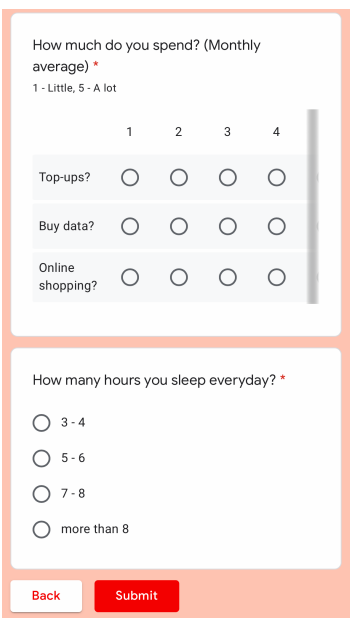
We have collected all our data by using an online survey, which was in the method of Google Forms. We spread the forms among the students of UTM through mediums such as WhatsApp and Telegram. We also did some general research on this topic through other social media platforms, and also by asking around some lecturers and adults throughout UTM. I have inserted the forms and the results from 70 students down below.



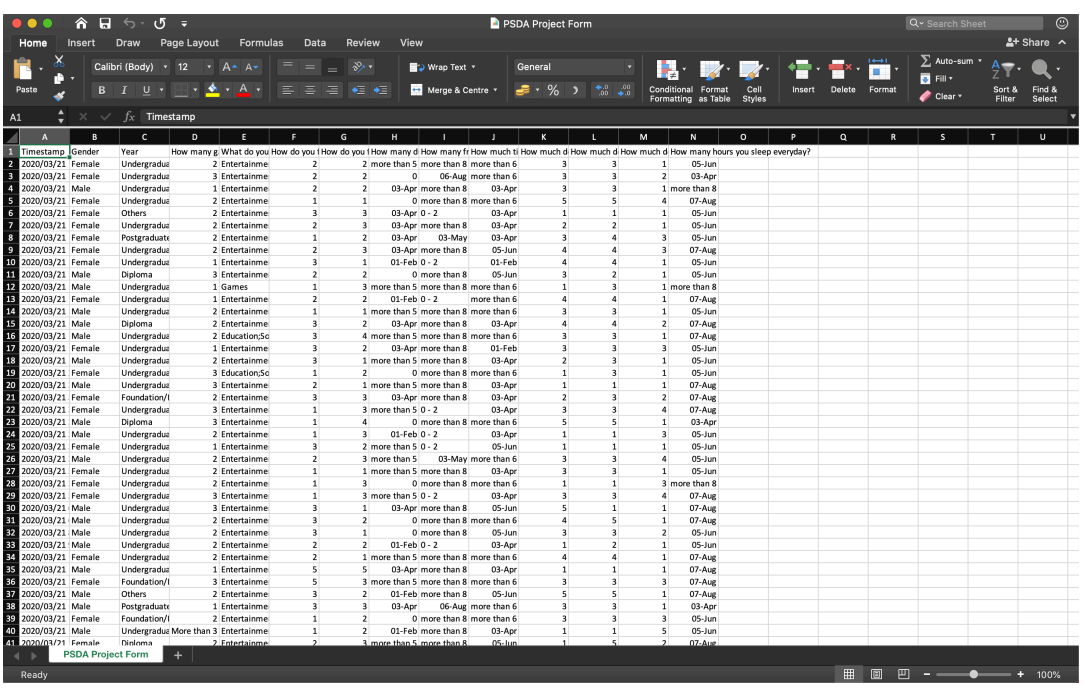








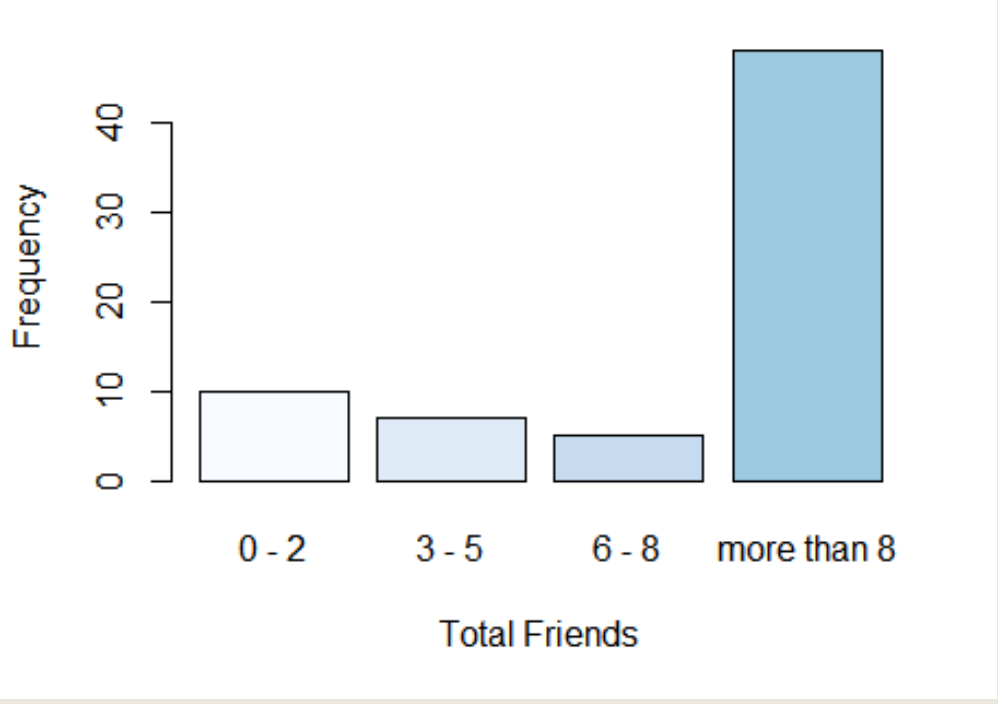
Picture 1 – 5 : “GADGETS GOOD OR EVIL?!” Google Form



Picture 6 : The results in the form of Microsoft Excel

RESULTS AND DISCUSSION

NUMBER OF FRIENDS FROM SOCIAL MEDIA



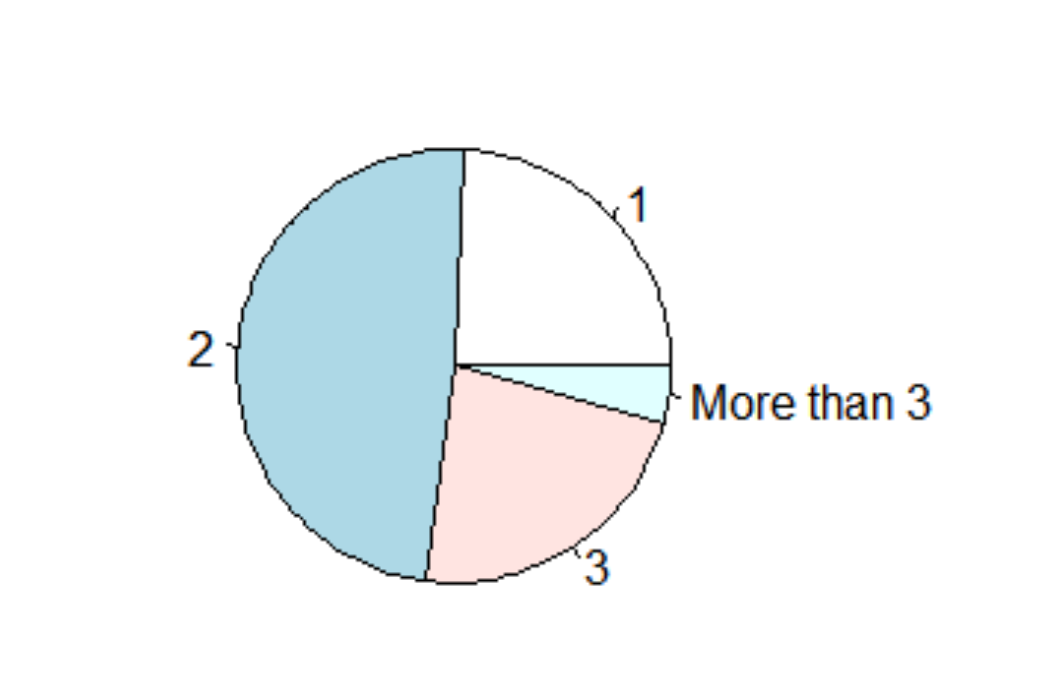
Total friends	People	Percentage, %
0 - 2	10	14.3
3 - 5	7	10
6 - 8	5	7.1
More than 8	48	68.6

Bar chart : Relationship between total friends and frequency

The above graph is a bar chart graph. The graph is plotted to show the frequency of the total number of friends made by the students from using social media on their gadgets. The total friends are between 0 – more than 8. The chart clearly shows that most of the students (68.6%) have made more than 8 friends in social media. The least amount (7.1%) have only made between 6 – 8 friends.

RESULTS AND DISCUSSION

NUMBER OF GADGETS OWNED

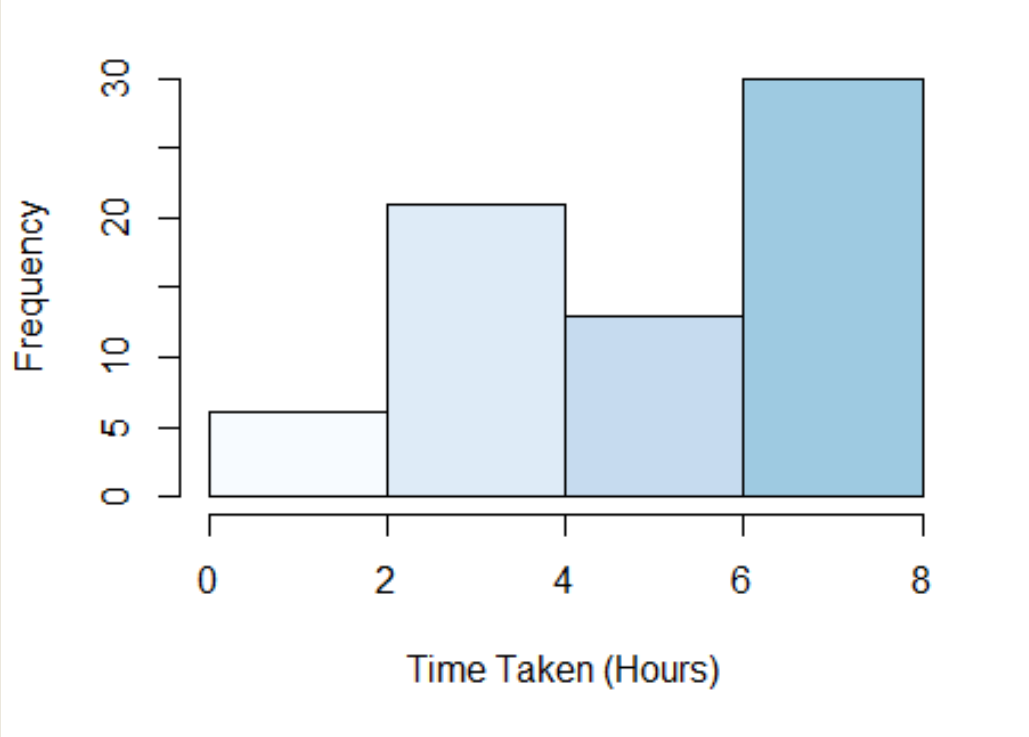


Devices (owned)	People	Percentage, %
1	17	24.3
2	34	48.6
3	16	22.9
More than 3	3	4.2

The above pie chart shows the number of gadgets owned by the students at UTM. The most number of devices owned is 2 devices, which is by 34 students (48.6%). This is because most students have a phone and laptop as an educational necessity. The least number of devices owned is more than 3 devices, which is by only 3 students (4.2%).

RESULTS AND DISCUSSION

TIME SPEND ON SOCIAL MEDIA



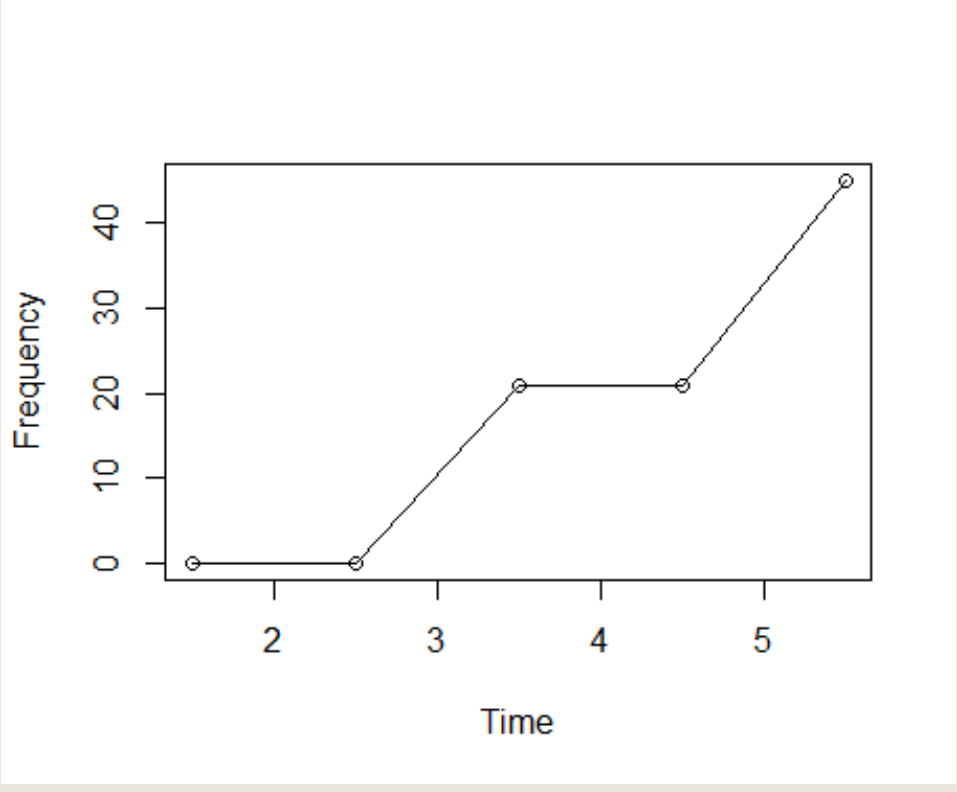
Time spent (hours)	People	Percentage, %
0 - 2	6	8.6
2 - 4	21	30
4 - 6	13	18.6
6 - 8	30	42.8

Histogram : The time spent by students on media platforms

The above histogram shows the time spent by the students in all types of social media platforms, on a daily basis. The duration is between 0 – 8 hours, or even more than 8 hours. If the time is 0 hours, it means the students never use social media at all. The histogram clearly shows that most of the students use social media between 6 – 8 hours, or more as it is the highest frequency. Based on our observation, the high use of social media daily does have an effect on the students daily life.

RESULTS AND DISCUSSION

APP LIMITS

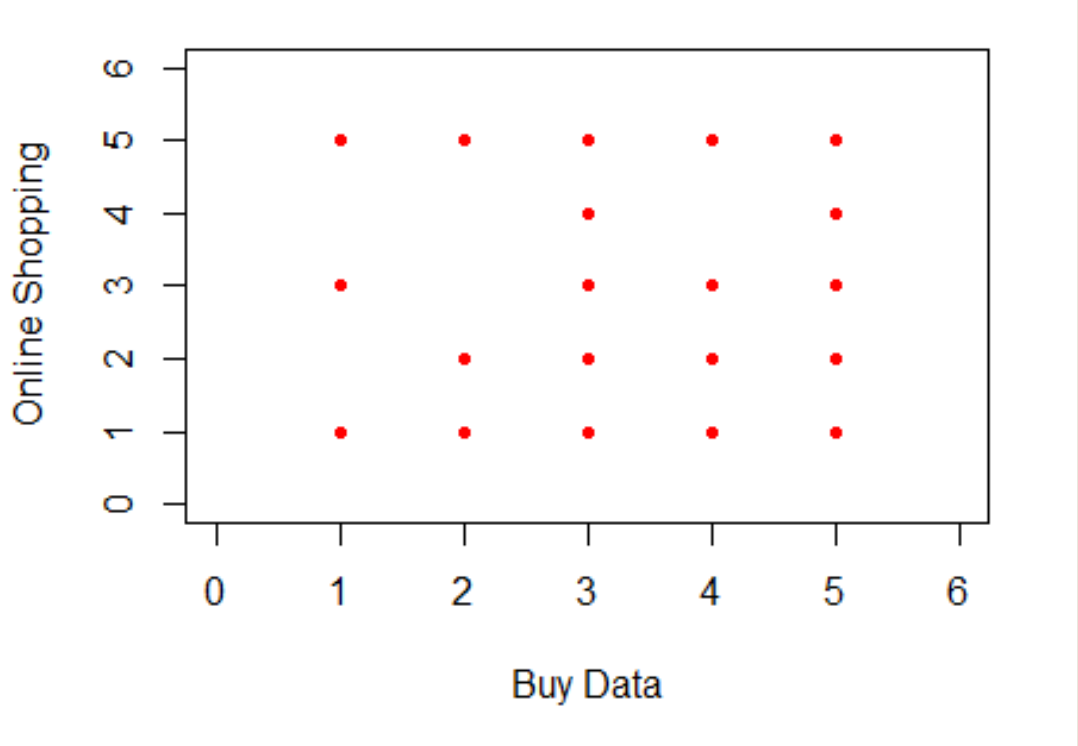


Duration (hours)	People	Percentage, %
0	13	18.6
1 - 2	12	17.1
3 - 4	21	30
> 5	24	34.3

The above frequency distribution graph shows the amount of limits set by the students for their social media app usage. The highest limit set is more than 5 hours, 34.3% (24 people) maybe because it is a very bug distraction to their daily activities. The least limit set is between 1 – 2 hours, 17.1% (12 people). Besides, limit of 0 hours had 18.6% (13 people) and limit between 3 – 4 hours had 30% (21 people). Based on our observation, most students really need to set app limit for them to focus on other activities.

RESULTS AND DISCUSSION

MONTHLY AVERAGE SPENDING MONEY

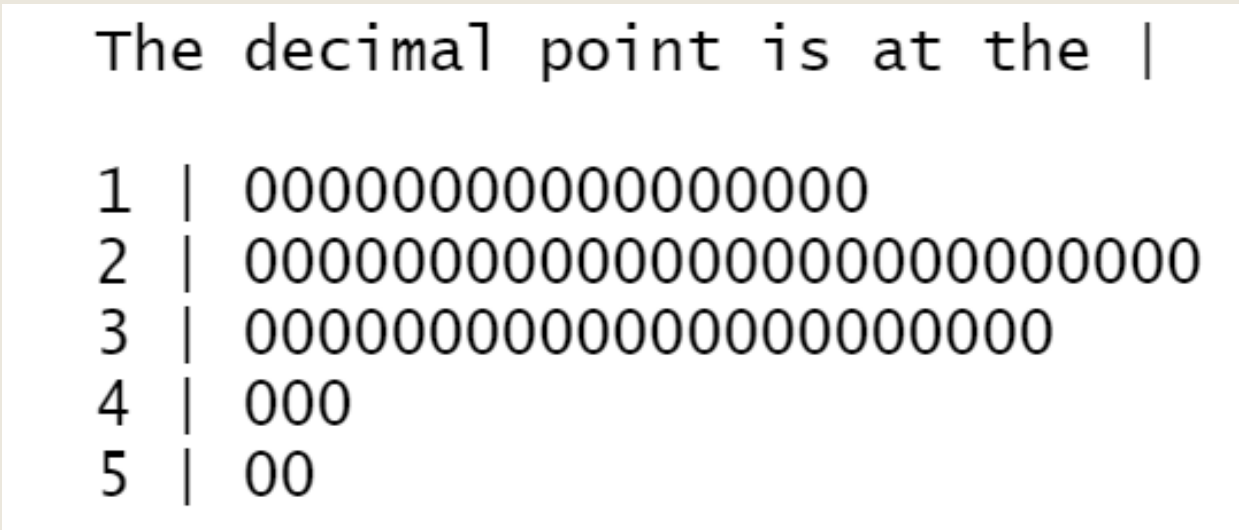


Scatterplot : average money spent online by students

The above scatterplot shows the average amount of money spent by the students to buy monthly data and online shopping. The data value is between 0 – 6, which is between a little and a lot. The graph clearly shows that about 75% of students use their monthly allowance to buy between average and a lot of data, compared to about 55% of students who use their monthly allowance to do between average and a lot of online shopping.

RESULTS AND DISCUSSION

MISPLACING GADGETS

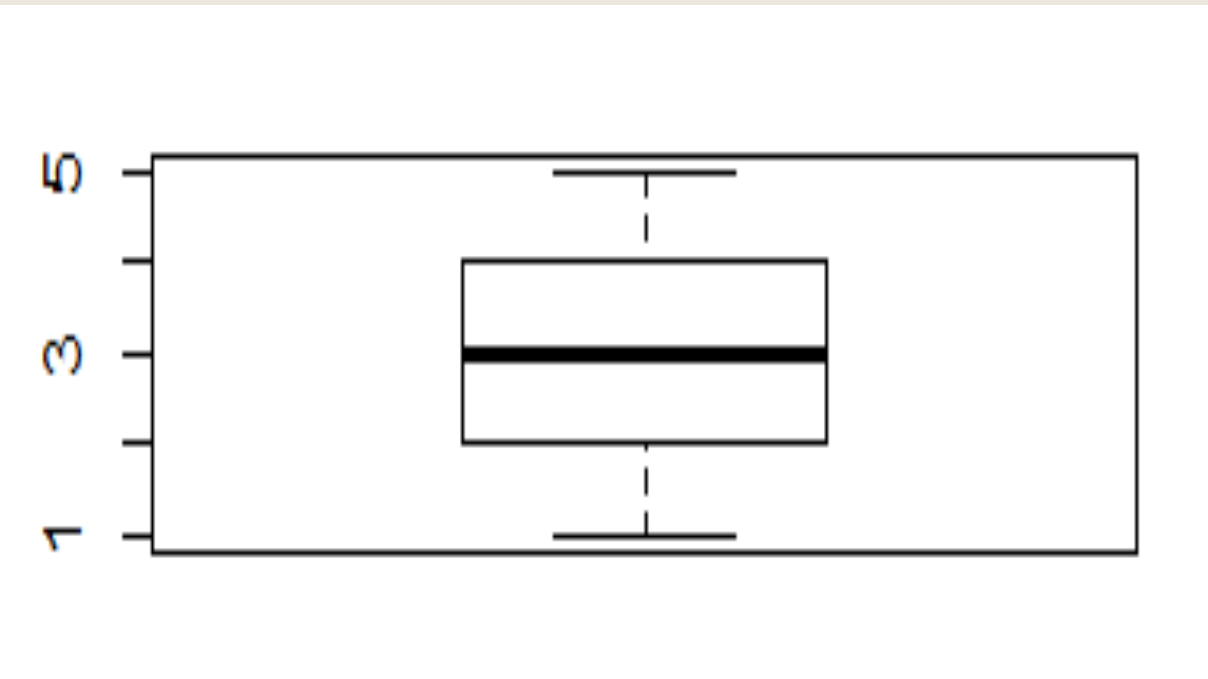


Key : 1 | 0 means 1.0

The above stem-and-leaf plot shows the feelings of students when the misplaced their phone at any point of time. The value 1 – 5, shows the feeling of very uncomfortable to very comfortable. According to the graph, most of the students (45 people) are least uncomfortable when they have misplaced their phone. There are also a few students (5 people) who are comfortable and do not panic when they have misplaced their phone. An average amount of students (22 people) who are neutral when they misplaced the phone.

RESULTS AND DISCUSSION

BUYING DATA



Data (1 - 5)	Percentage, %
1	24.3
2	37.1
3	31.4
4	4.3
5	2.9

The above boxplot shows the number of students who have used their monthly allowance to buy data. The data value is between 1 – 5, which is between a little and a lot. The minimum number of people is approximately 3 (2.9%) who have bought a lot of data with their money. Whereas the maximum number of people is approximately 30 (37.1%) who have bought limited data with their money. According to the box plot graph, the interquartile range is 2.0. The Q1 is 2.0, Q2 (median) is 3.0 and Q3 is 4.0. The minimum value is 1.0, whereas the maximum value is 5.0.

CONCLUSION

In a nutshell, we have concluded that UTM Students do depend a lot on their gadgets on a daily basis, to get things done. Students who use their devices more, tend to set more app limits as it is more distracting to them. Students also spend a lot of time using their phones everyday. This can be proven because 42.9% (30 people) spend between 6 – 8 hours a day on social media. About 68.6% (48 students) use social media on their gadgets and made more than 8 new friends. Students also spend a lot money on buying data, since most of the works nowadays have to be downloaded, and even submitted online because its simple and efficient. We can also see that around 33% of students feel uncomfortable when they have misplaced their phone, as it is such a necessity for them. I can definitely say now that gadgets plays such a huge role in a students life in this 21st century. It has its pros and cons, and each student must learn them in order to use the gadget to its max potential in a way that benefits all parties.

APPENDIX

For more information, you may use the link below for the Google Form :

https://docs.google.com/forms/d/e/1FAIpQLSe6FgFYquirDn8SPWZItGdvr25gvgKEogkqszXnZyBavRT4gQ/viewform

APPENDIX

1 . Friends in Social Media

```
table (PSDA_Project_Form_Responses_$`How many friends you made from social media?`)
barplot (table(PSDA_Project_Form_Responses_$`How many friends you made from social media?`))
barplot (table(PSDA_Project_Form_Responses_$`How many friends you made from social media?`),
        xlab = "Total Friends", ylab = "Frequency",
        main = "Number of Friends from Social Media")
barplot (table(PSDA_Project_Form_Responses_$`How many friends you made from social media?`),
        xlab = "Total Friends", ylab = "Frequency",
        main = "Number of Friends from Social Media", col=blues9)
```

2 . Gadgets owned

```
table (PSDA_Project_Form_Responses_$`How many gadgets do you currently own?`)
pie (table(PSDA_Project_Form_Responses_$`How many gadgets do you currently own?`))
pie (table(PSDA_Project_Form_Responses_$`How many gadgets do you currently own?`),
     main = "Total Number of Gadgets")
```

3 . Time spent on social media

```
TimeTaken<-read.table("TimeTakenOnSocialMedia.txt")
TimeTaken
summary(TimeTaken)
hist(TimeTaken$V1)
hist(TimeTaken$V1, 4)
hist(TimeTaken$V1, 4, col=blues9, main="Time Taken On Social Media", xlab="Time Taken (Hours)") #until here for histogram graph
TimeTaken2<-(TimeTaken$V1)
breaks<-seq(3.500, 7.500, 1.000 )
```

4 . App limits

```
AppsLimit<-read.table("Apps Limit.txt")
AppsLimit
summary(AppsLimit)
hist(AppsLimit$V1)
hist(AppsLimit$V1, 3)
hist(AppsLimit$V1, 3, col=blues9, main="Duration Set for your Apps
Limit (hours)"
     , xlab="Time Taken (Hours)") #until here for histogram graph
Frequency<-(AppsLimit$V1)
Time<-seq(1.5000, 5.5000, 1.000 )
Frequency.cut<-cut(Frequency, Time)
Frequency.freq<-table(Frequency.cut)
Frequency<-c(0, cumsum(Frequency.freq))
plot(Time, Frequency)
lines(Time, Frequency)
```

5 . Average monthly spent

```
head(PSDA_Project_Form_Responses_)
plot(PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Buy data?]`,
     PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Online shopping?]`)
plot(PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Buy data?]`,
     PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Online shopping?]`,
     xlab = "Buy Data", ylab = "Online Shopping", main = "Monthly
Average Spending Money")
plot(PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Buy data?]`,
     PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Online shopping?]`,
     xlab = "Buy Data", ylab = "Online Shopping", main = "Monthly
Average Spending Money",
     xlim=c(0,6), ylim = c(0,6))
plot(PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Buy data?]`,
     PSDA_Project_Form_Responses_$`How much do you spend?
(Monthly average) [Online shopping?]`,
     xlab = "Buy Data", ylab = "Online Shopping", main = "Monthly
Average Spending Money",
     xlim=c(0,6), ylim = c(0,6), pch=20, col='red')
```

6 . Feelings when misplaced gadgets

```
rate <- read.table("RateFeeling.txt")
rate
rate = scan("RateFeeling.txt")
stem(rate, scale=0.5)
```

7 . Buying data

```
spent <- read.table("BuyData.txt")
spent
boxplot(spent)
summary(spent)
```