



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF ENGINEERING

SCHOOL OF COMPUTING

(NETWORK & SECURITY)

SECI/SCSI 2143

PROBABILITY & STATISTICAL DATA ANALYSIS

SECTION 04

PROJECT 1

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INTRODUCTION

In the early February, we have been informed that we will be conducting a project where we need to choose a proper case study among UTM students and make a thorough survey. After listing out all the cases, we decide to study about how student spend their money in university per month. The main reason of why we choose this topic for our project is because it is the most common situation that every students go through. Since our topic are quite general, we list out few categories that are common in student's lifestyle. We want to find out at which categories the students spend their money the most. The categories are groceries, food and beverage, transportation, learning material, leisure, laundry, mobile data and other expenses. All the categories mentioned are the most common lifestyle among students. In our questionnaire, we collect the data using survey method. We shared a form where our respondent will fill the form and we collect it as our data. Besides, we also apply three method to of measurement, nominal, ordinal and ratio scale.

CONTENT

This project is about the survey on how students in University Technology Malaysia (UTM) Skudai spend their money monthly. All the categories listed are based on student's daily basis activity. First and foremost, we collect the data for the groceries based on the amount of money they spend and how often they buy groceries. For the next category, food and beverage, we collect the data according to the amount of money they spend during breakfast, lunch, dinner and snacks respectively. Next, there are two sub-categories under vehicle, students with vehicle and students without vehicle that use public transportation such as e-hailing, university and public buses. The data we collect from those with vehicle are based on how much they spend for fuel, washing vehicle, service and others. Meanwhile, data for students that use public transportation are based on the amount of money they spend for e-hailing or buses. The fourth category is learning material because as university students, it is obvious that we are committed with studying, assignments and project.

Besides that, despite hectic schedule, students can never miss spending time with their friends. They often go to cinema, bowling, karaoke or any healing places such as beaches and funfair to relieve stress. Thus, we collect the data based on how often they spend their leisure time and their expenses for hang out per month. Apart from that, living in modern era leads everyone including students to own a mobile phone as it is important for daily necessities. There are two type of data provided, postpaid and prepaid. Each data type use money to activate it so it is important to collect data from students based on their data type and the amount of money spend for it. Last but not least, we collect the data based on how often and how much they spend in laundries. We also collect the other data of students that spend their money on others categories that we do not mention.

CONCLUSION

We got 81 responses from our Google form that we shared yesterday. Most of our respondent is a female with percentage 58%. We get 74 degree, 1 masters, 3 diploma, and 3 foundation respondent. 50 of them is first year student. We got respondent from 13 School, but the most respondent is from School of Computing and School of Mechanical Engineering. Almost all of our respondent is living inside UTM, only 2 of them living outside UTM Campus.

Based on our survey, 80 out of 81 UTM students spend their money for “Food and Beverage” categories. The second most categories student expenses is in “Transportation” categories, if we looked at our data 60 out of 81 UTM students spend their monthly expenses for transportation. In this categories also, we divided the question into 2 part, first part is “Students who owned vehicle” and second one is “Students who not owned vehicle”, from our data we can conclude that most of our respondent is not own a vehicle for their daily needs. Our data shows 54 out of 81 students not owned a vehicle. Students who not own a vehicle spend their money for “e-hailing” the biggest number they spend for e-hailing is up to RM150, but most of the students spend at RM20. Meanwhile, student who owned a vehicle spend they monthly expense mostly for their vehicle fuel, 1 person said she spend her money for fuel is RM400. The third most categories they spend monthly is “Mobile Data”, 66.7% of them using prepaid mobile data, but people who use postpaid data is spend more than prepaid user, postpaid user can spend their money up to RM150, meanwhile prepaid user is until RM60. Next categories is “Groceries” only 20 of our respondent is buy groceries more than 2 times in a month, mostly they spend for groceries is RM50 but there is 1 person spend up to RM1000 in their groceries for 3-4 times in a month. And then next categories is “Laundry” 73 out of 81 respondent is washing their clothes 1-2 times in a week and most of them spend RM2 for laundry their clothes. The sixth categories is “Leisure” not so many respondent often going hangout for their leisure time the data shows only 23.5% students going out for more than 7 times in a month, if we looked into our respondent’s data they spend their money mostly for food and beverages during their hangout time. The seventh categories is “Learning Material” for this categories only 20 students spend their money to printing lecture notes, project and others lecture essential. The last one is

“Others” categories, for this categories mostly student’s answer is “No” but mostly for “Yes” answer students spend around RM50 for this categories.

We can sum this up with conclusion that most of our UTM student respondent is spend their money mostly for “Food and Beverage” categories. This is a normal thing, since food and beverage is human main daily needs for surviving in life. Also as a student, this is important to get enough food and beverage because we need energy to finish all of our assignment. And is a normal thing that “Transportation” is in the second position, since our school or faculty not near of our hostel we are need to move from one place to another place so its so reasonable if student who not owning a vehicle using university bus and spend their money in e-hailing.

REFERENCES

QUESTIONNAIRE

➤ GENERAL QUESTION :

1. Gender
 - Male
 - Female
2. Level of study
 - Foundation
 - Degree
 - Master
 - PhD
3. What year are you currently in?
 - Year 1
 - Year 2
 - Year 3
 - Year 4
4. State your faculty.
 - Faculty of Science
 - Faculty of Built Environment and Surveying
 - Azman Hashim International Business School
 - School of Computing
 - School of Civil Engineering
 - School of Electrical Engineering
 - School of Mechanical Engineering

- School of Chemical and Energy Engineering
- School of Biosciences and Medical Engineering
- School of Education
- School of HR Development and Psychology
- Others

5. Residency

- Outside UTM (Apartment / House / etc)
- In UTM (College/ KLG/ etc)

6. At which categories do you spend your money per month?

Groceries

- Food and beverage
- Transportation
- Learning material
- Leisure
- Mobile data
- Laundry
- Others

➤ **GROCERIES :**

7. How often you buy groceries in one month?

- 1-2 times in a month
- 3-4 times in a month
- More than 4 times

8. How much do you spend for your groceries per month (State the average amount.
E.g : 50)

- Ans : _____

➤ **FOOD AND BEVERAGE :**

9. How often do you eat in a day?

- 1-2 times a day
- 2-3 times a day
- More than 5 times a day

10. State your expenses for breakfast (RM)

- Ans : _____

11. State your expenses for lunch (RM)

- Ans : _____

12. State your expenses for dinner (RM)

- Ans : _____

13. State your expenses for snacking (RM)

- Ans : _____

➤ **VEHICLE :**

14. Do you own a vehicle?

- Yes (will be directed to question 15 - 19)
- No (will be directed to question 20 - 22)

15. State your vehicle

- Motorcycle
- Bicycle
- Car
- Others : _____

16. State you expenses on fuel (RM)

- Ans : _____

17. State you expenses on service (RM)

- Ans : _____

18. State you expenses on washing vehicle (RM)

- Ans : _____

19. State you expenses on others (RM)

- Ans : _____

20. Which one from the option below do you use?

- Walking
- E-hailing
- University buses
- Mass transportation
- Carpool

21. State your e-hailing expenses (e.g : Maxim, Grab, MyCar, etc)

- Ans : _____

22. State your bus card expenses (Muafakat etc)

- Ans : _____

➤ **LEARNING MATERIAL :**

23. Do you spend your money for learning material?

- Yes
- No

24. State your average amount on printing lecture notes/past year questions (RM)

- Ans : ____

25. State your average amount on project/ assignment cost per month (RM)

- Ans : ____

26. State your expenses on others (RM)

- Ans : _

➤ **LEISURE :**

27. How often hangout with your friend?

- Rarely (less than 7 times in a month)
- Often (more than 7 times in a month)
- Never

28. How much you spend for food and beverages per month (e.g : Coffee, Donut, etc)

- Ans : ____

29. How much you spend for Transportation per month (e.g : Fuel, Maxim, Grab, etc)

- Ans : ____

30. How much do you spend for Cinema per month

- Ans : ____

31. How much do you spend for Shopping per month (e.g : Clothes, Skin care, etc)

- Ans : ____

32. How much do you spend for others

- Ans : ____

➤ **MOBILE DATA :**

33. What kind of mobile data do you use?

- Prepaid
- Postpaid

34. State you cost for prepaid (RM)

- Ans : ____

35. State you cost for postpaid (RM)

- Ans : ____

➤ **LAUNDRY :**

36. How do you often laundry in a week?

- 1 - 2 times
- more than 2 times

37. State total amount of laundry for one week

- Ans : ____

➤ **OTHER EXPENSES :**

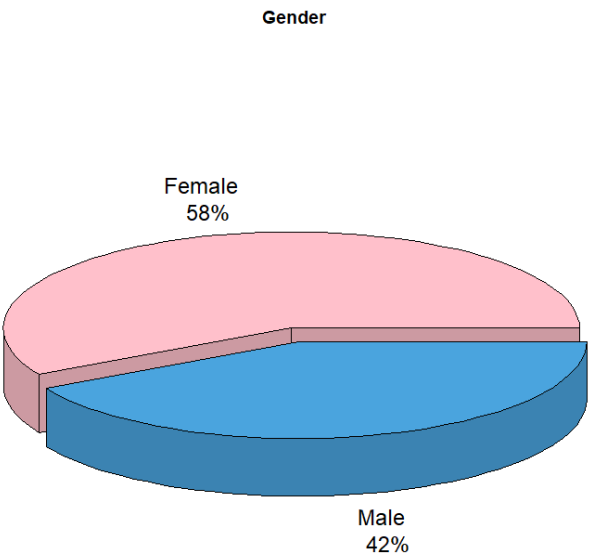
38. Is there any others expenses?

- Yes
- No

39. State your others expenses

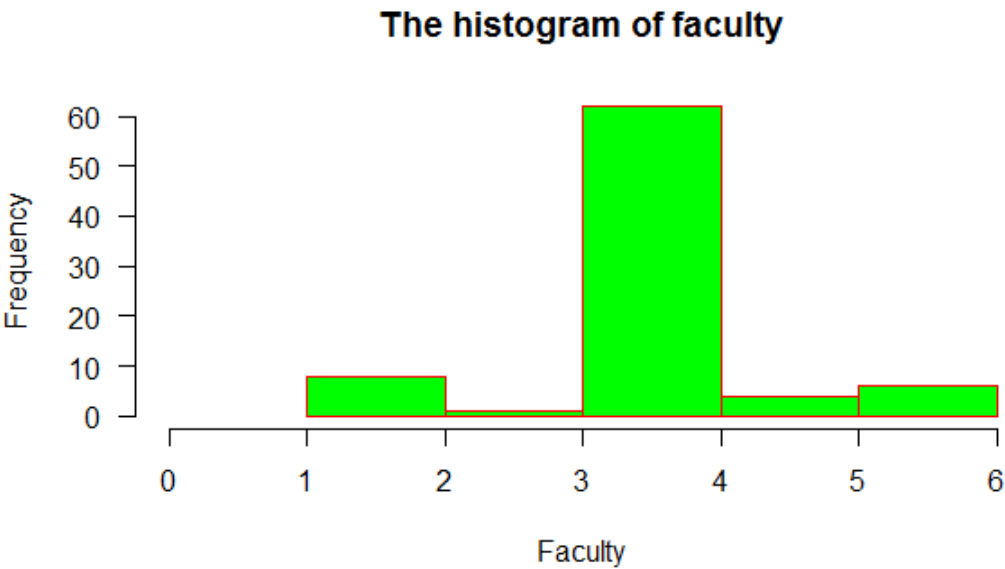
- Ans : ____

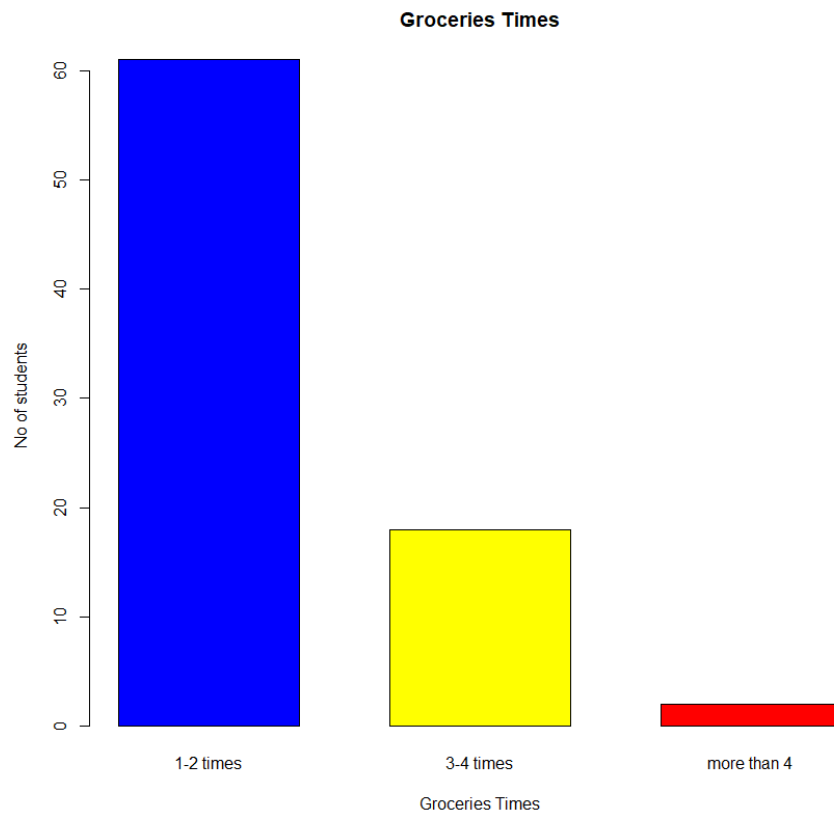
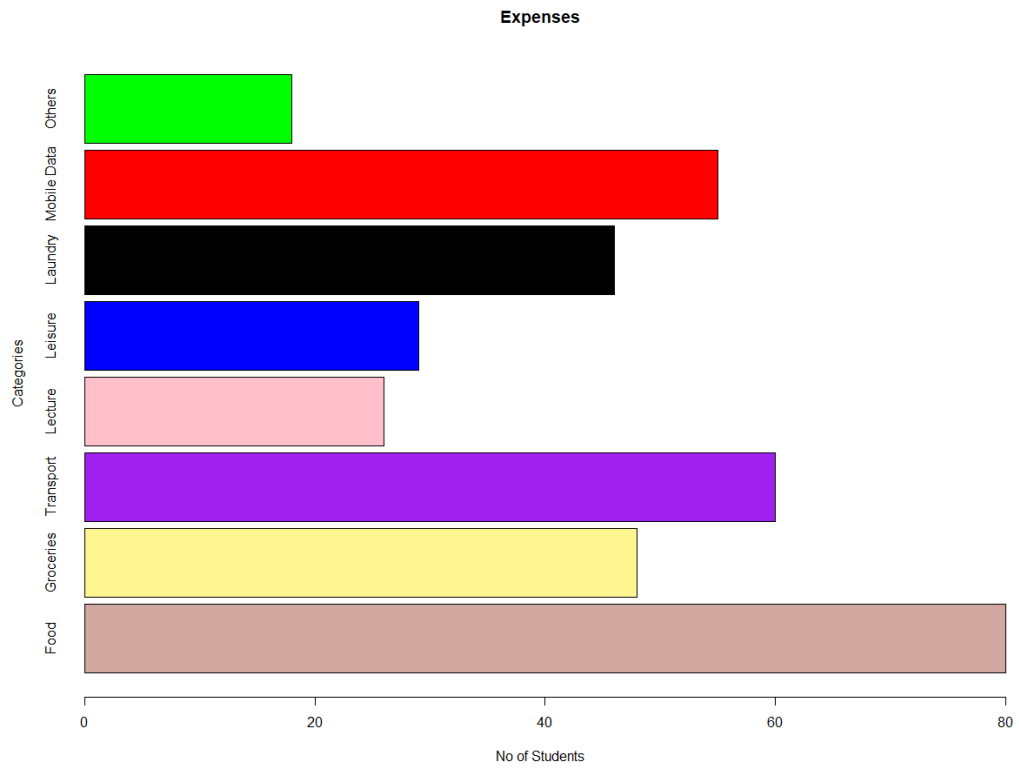
GRAPH



Frequency year of study

Year 1	Year 2	Year 3	Year 4
50	8	17	6





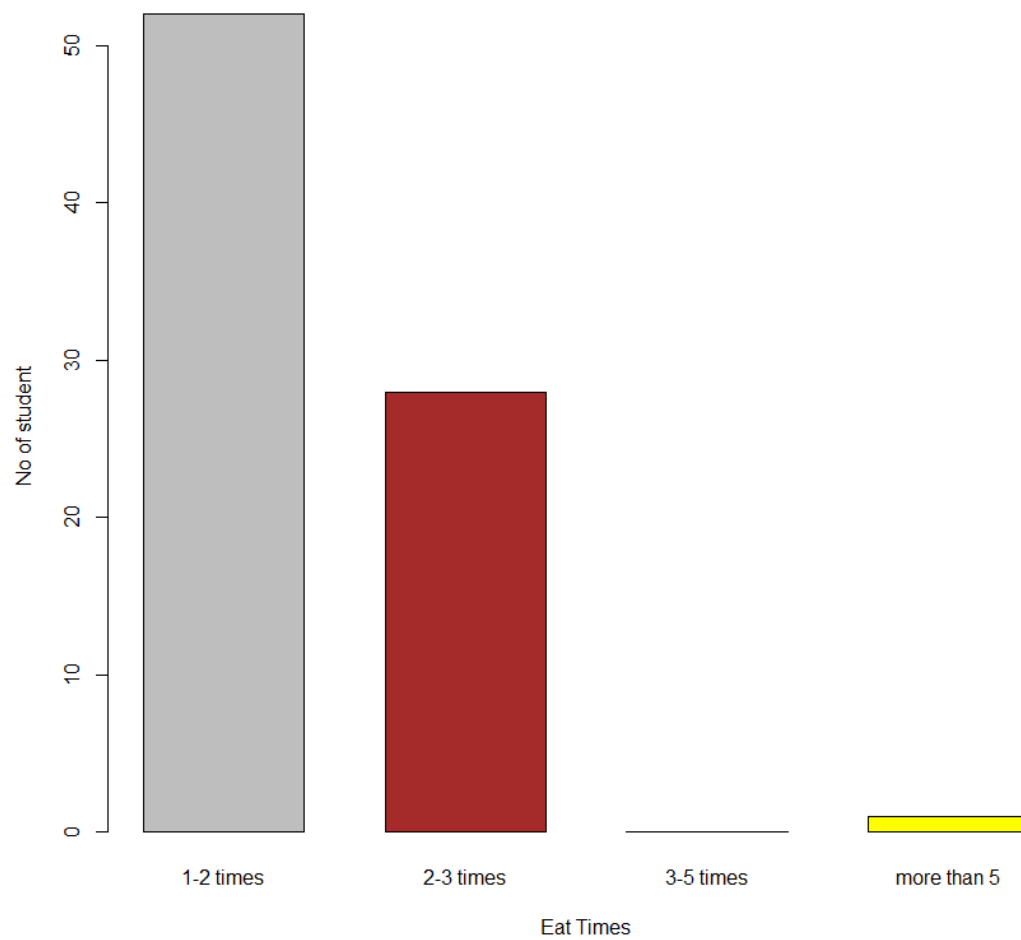
Groceries Expenses

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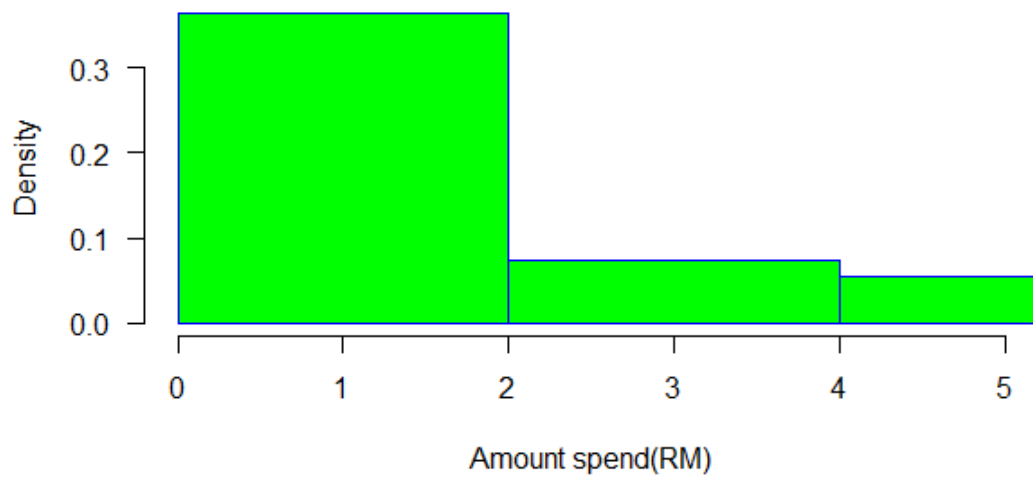
```
0 | 0111222222333334445555555555555555556666777777778
1 | 0000000000000005555555
2 | 000000
3 | 0
4 | 
5 | 
6 | 
7 | 
8 | 
9 | 
10 | 0
```

Key: 1 | 0 = 100

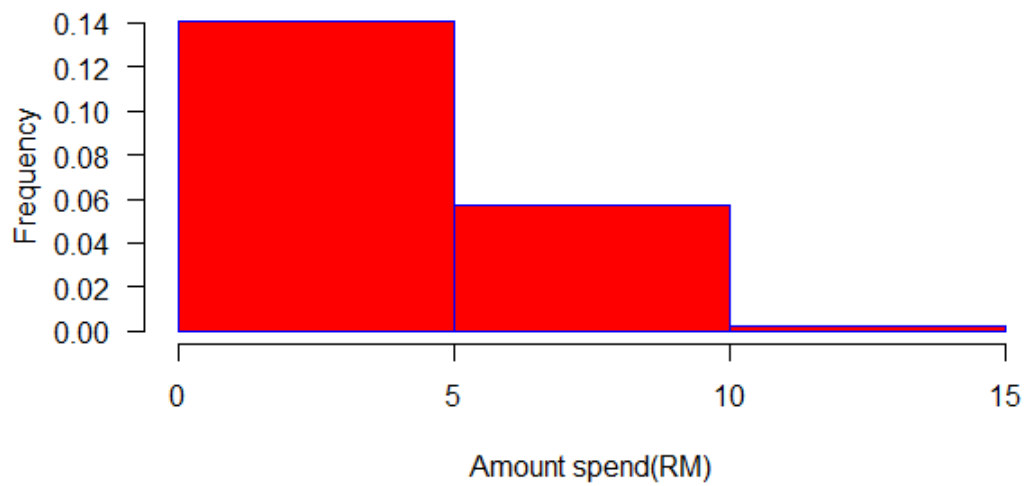
Eat Times



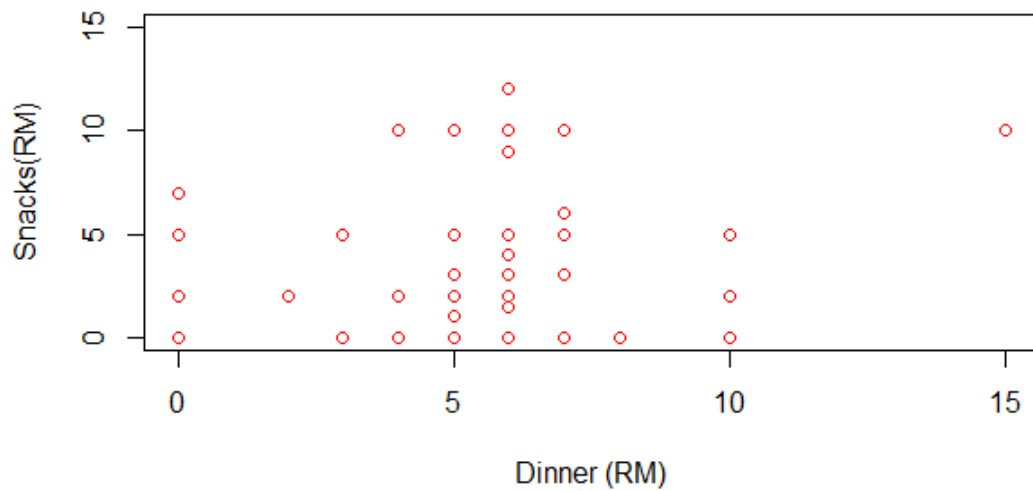
Histogram for Breakfast



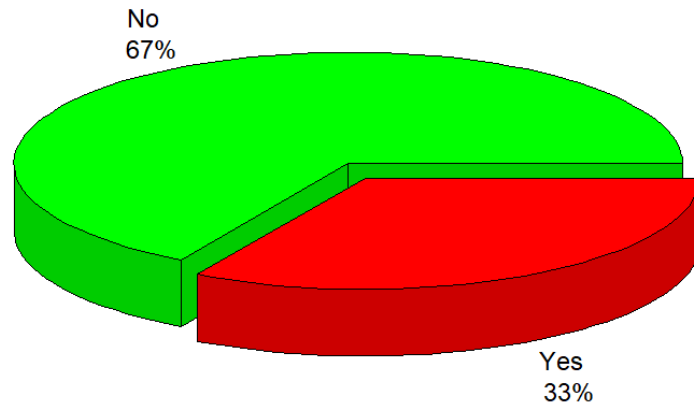
Histogram for Lunch



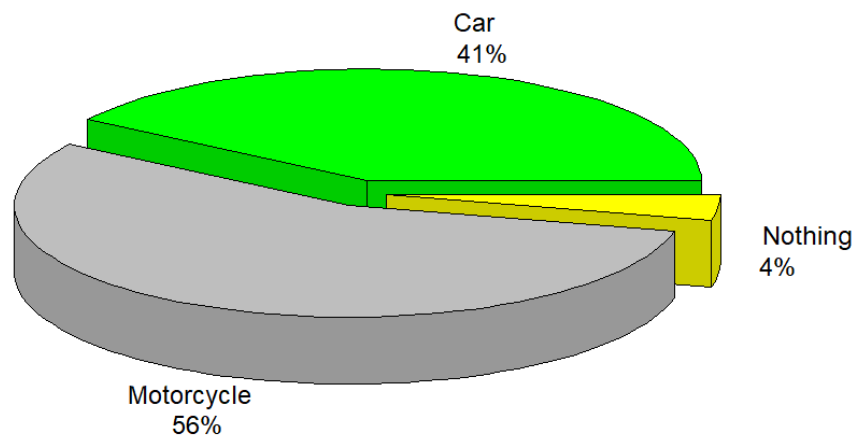
Scatterplot Dinner and Snacks



Do you own a vehicle?



Vehicle



Frequency amount of money spend on fuel (per month)

0	2	10	15	20	24	25	30	32	45	60	70	100	159	180	200	400
2	1	1	3	2	1	2	2	1	1	1	1	5	1	1	1	1

Frequency amount of money spend on service (per month)

0	1	15	20	25	30	40	50	90
17	1	1	2	1	1	1	2	1

Frequency amount of money washing vehicle (per month)

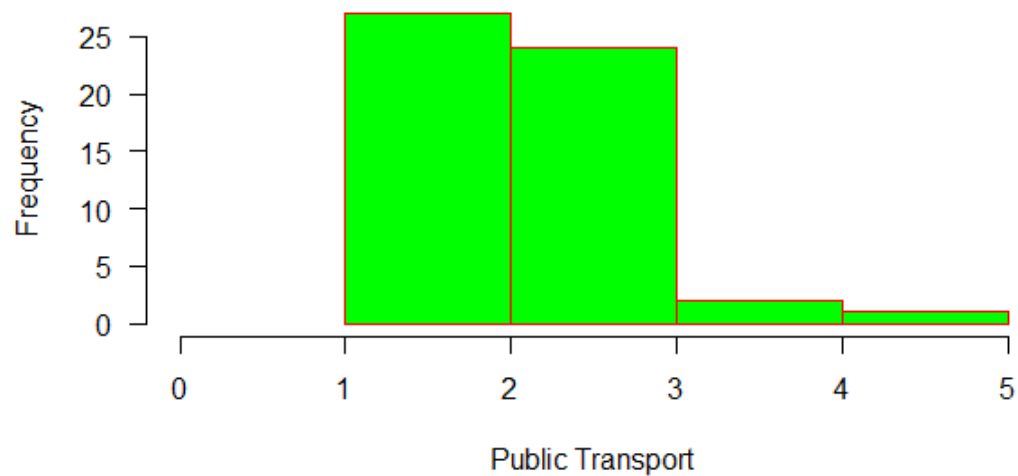
0	1	4	5	8	10	14	15	20	24
15	2	1	1	1	2	2	1	1	1

Frequency distribution of others in vehicle (per month)

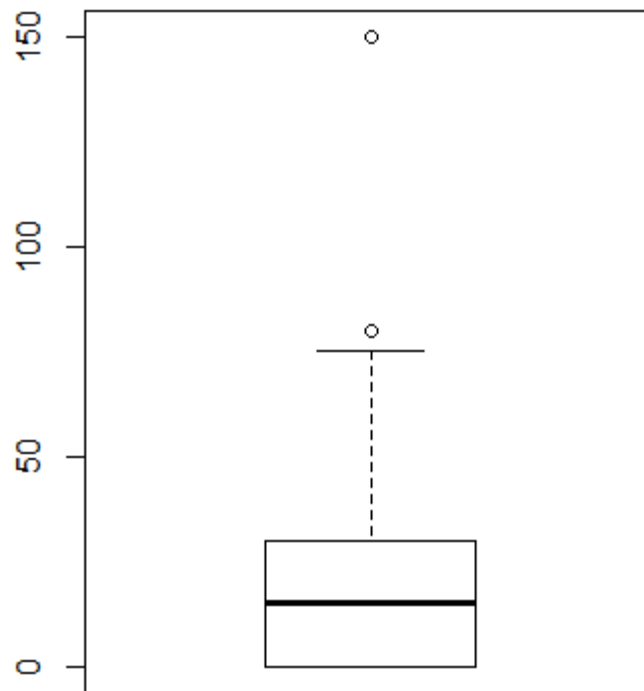
0	50	60	700
16	1	1	1

Non-Vehicle Option

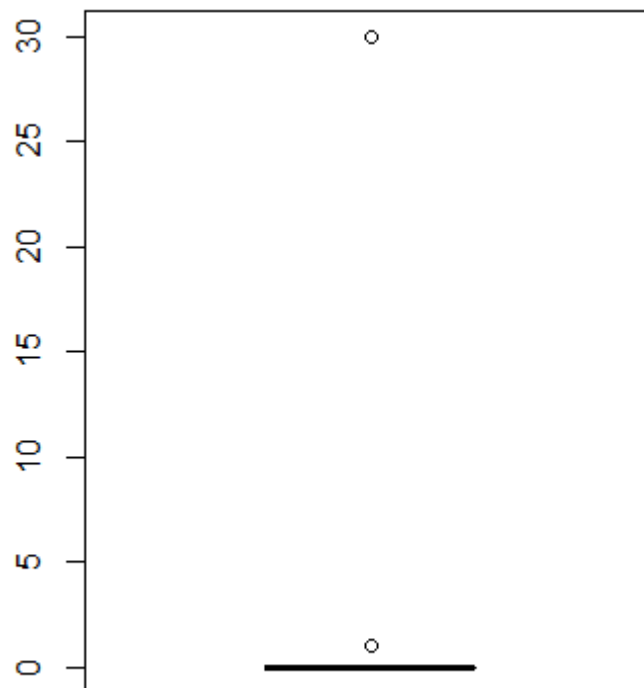
The histogram of public transport



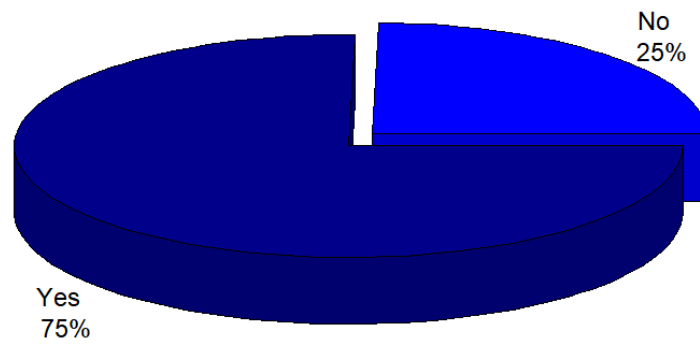
E-Hailing Expenses



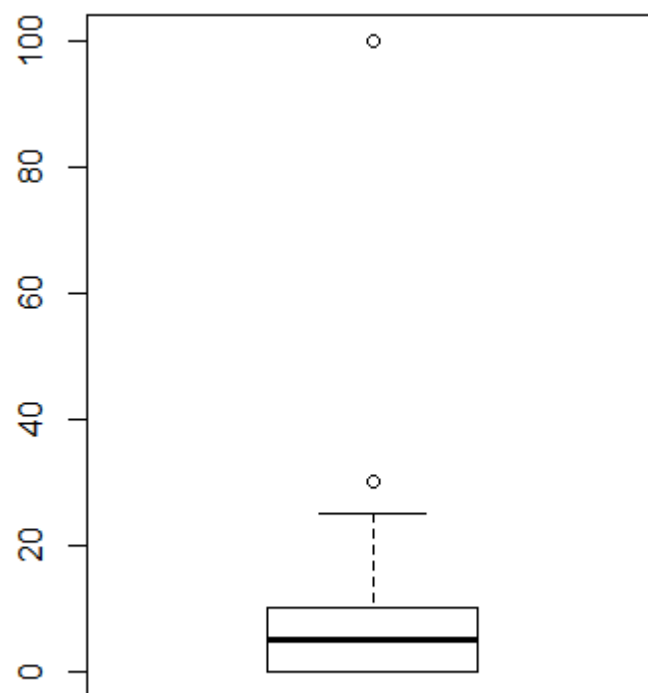
Bus Card Expenses



Lecture Notes



Lecture Notes Expenses



Project Expenses

The decimal point is 1 digit(s) to the right of the |

[illegible]

Key: 1|0 = 10

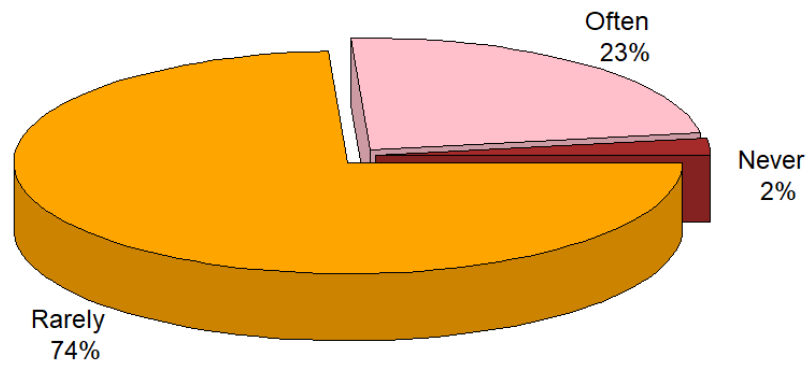
Other Expenses in Learning

The decimal point is 1 digit(s) to the right of the |

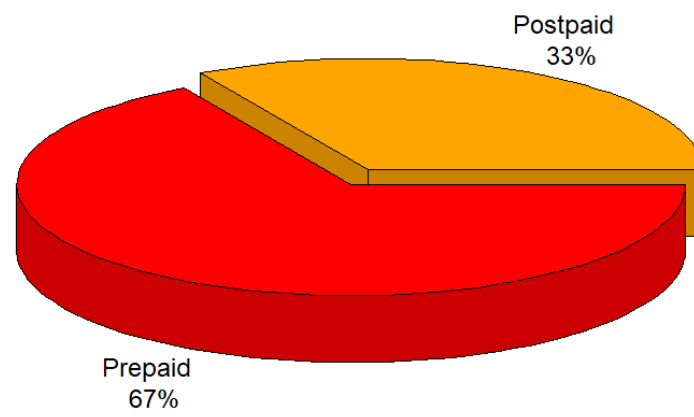
[illegible]

Key: $0|5 = 5$

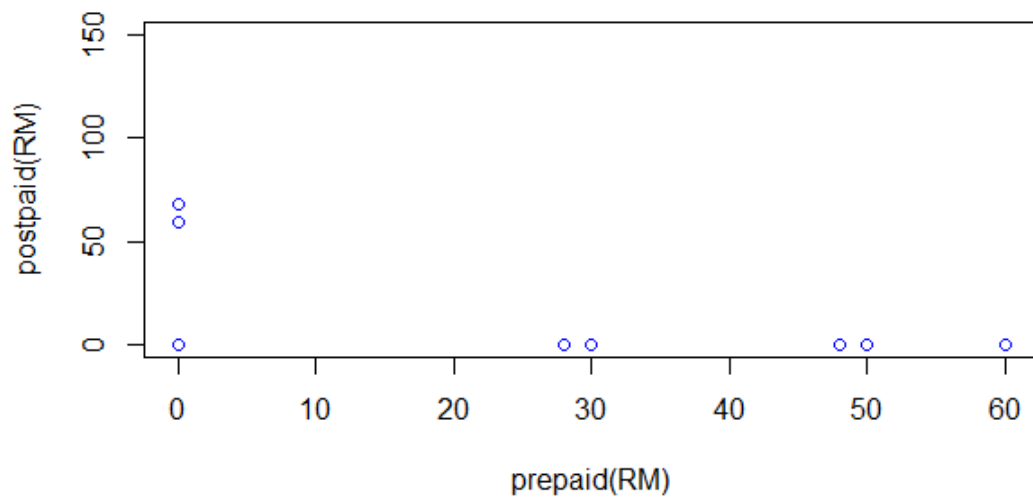
Hangout's times



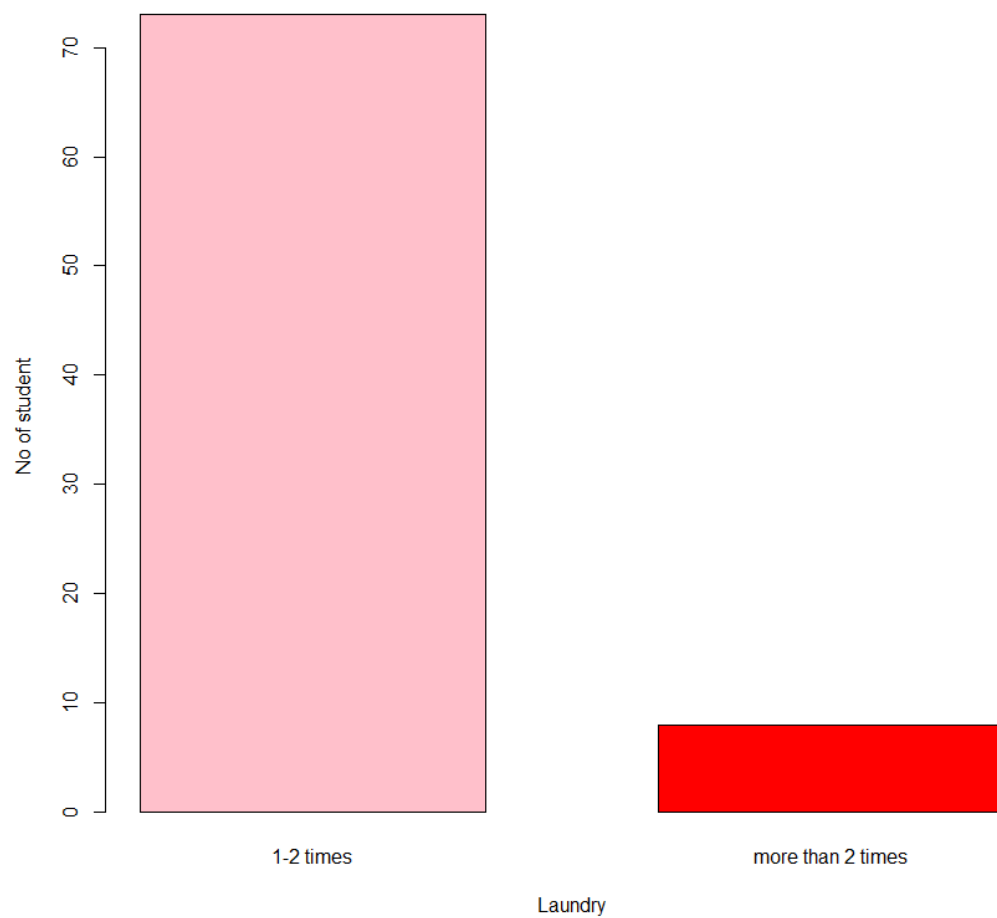
Mobile User



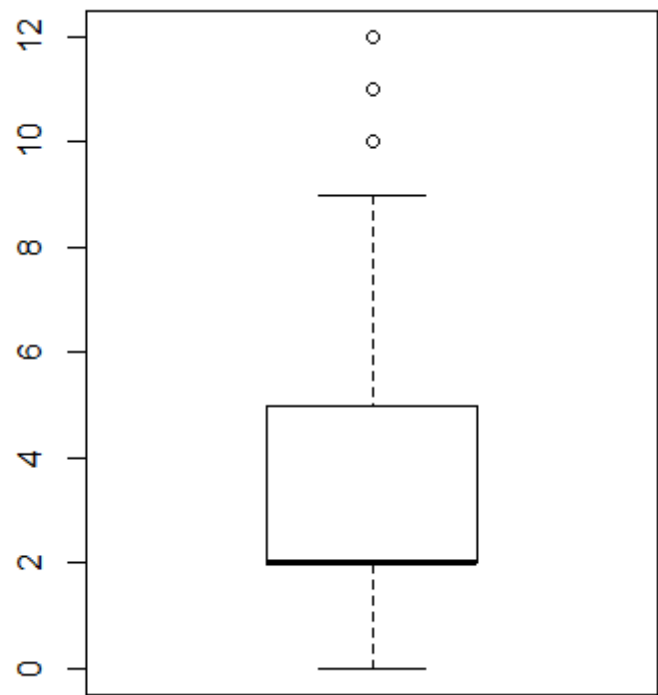
Scatterplots of Prepaid and Postpaid



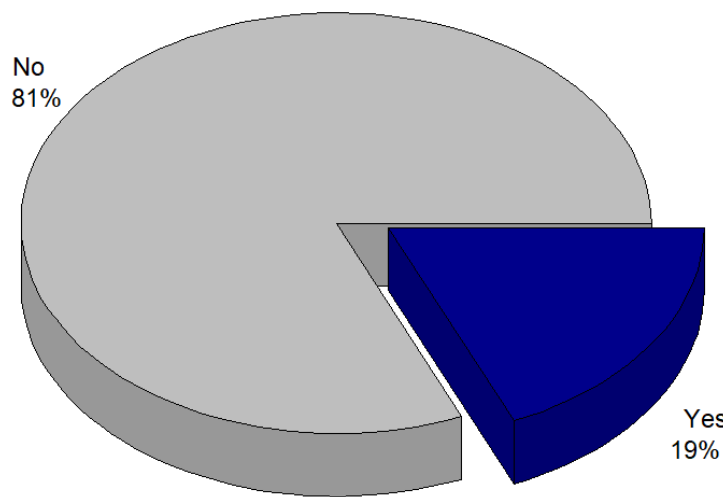
Laundry



Laundry Expenses



Others Expenses



Other expenses aside of categories listed

