UNIVERSITI TEKNOLOGI MALAYSIA

JOHOR BAHRU (UTM JB),

81300 JOHOR BAHRU,

JOHOR

SCHOOL OF COMPUTING

FACULTY OF ENGINEERING

TOPIC: Usage of E-Wallet Among UTM Students in Daily Life

Name	Chan Yi Lin	A19EC0185
	Lim Sin Jie	A19EC0073
	Tan Chiaw Torng	A19EC0167
	Soo Toh Xin Hui	A19EC0164
Course Code & Name	SECI2143 Probability and Statistical Data Analysis (PSDA) Section 06	
Lecturer	Dr. CHAN WENG HOWE	
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Introduction

Nowadays, e-Wallet service has become a popular trend in this society and most of the shops, and even the hawkers, provide payment option by using e-Wallet. This is because using e-Wallet is more convenient and safer than bringing cash. However, the usage of e-Wallet in UTM is considered as limited compared to other places in our daily lives. Therefore, our group had conducted a survey with the topic of "The Usage Of E-Wallet Among UTM Students in Daily Life". The main objective of this project is to study the dependency of UTM students on e-Wallet in terms of the number of students who have e-Wallet and the usage of e-Wallet in the monthly expenses. This is to investigate the potential of e-Wallet to become the main method of payment among UTM students in the near future.

Methodology

This survey aimed to receive responses from UTM students. An online survey was conducted through the usage of Google Form. 80 students from UTM had participated and given their responses in this survey. A list of 12 questions were prepared by our group members which included gender, age, course, frequency of usage of e-Wallet, types of e-Wallet used, rate of satisfaction with e-Wallet, monthly expenses using e-Wallet, overall monthly expenses, reload amount in e-Wallet, reasons of usage and reviews on e-Wallet.

The data collected was then extracted in Excel and imported into R studio. R programming language was used to analyze, summarize and present data using graphical representations in the forms of bar chart, boxplot, histogram, frequency distribution, pie chart, scatter plot and stem-and-leaf plot.

The followings are the nominal scale variables that will be used in our data analysis:

1. Gender: Either Male or Female
2. Course: The course of the respondents (e.g. SECJ)
3. E-Wallet type: The type of e-Wallet used by students (Grab pay, Touch 'n Go, etc.)
4. Reasons: The reasons why students use e-Wallet (Convenient, Cashless, etc.)

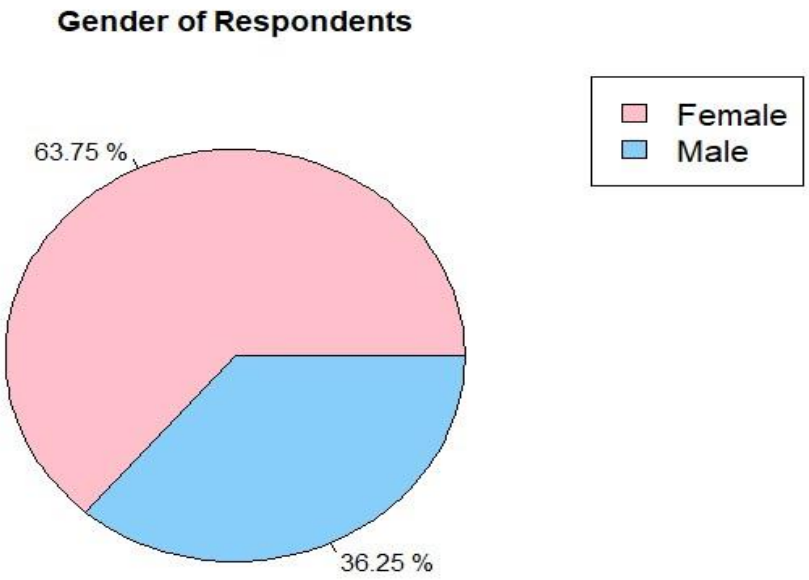
The following are the ordinal/interval scale variables that will be used in our data analysis:

1. E-Wallet usage frequency: How often do students use e-Wallet (Never to Seldom)
2. Satisfaction: How satisfied are students with e-Wallet (1 (very dissatisfied) to 5 (very satisfied))
3. Degree of agreement: How students agree with e-Wallet is the best mode of payment (1 (strongly disagree) to 5 (strongly agree))
4. Tendency to recommend: How likely students recommend their friends or family to use e-Wallet (1 (very unlikely) to 5 (very likely))

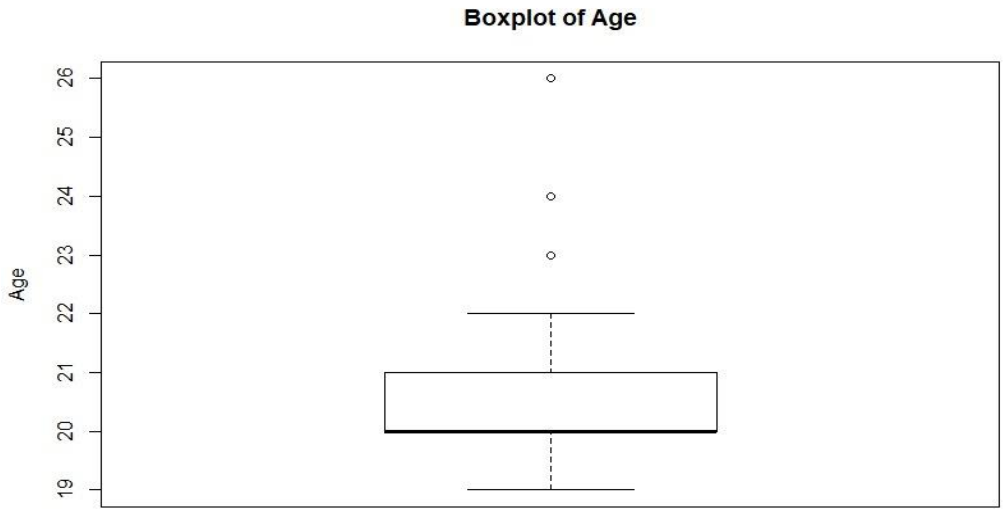
The following are the ratio scale variables that will be used in our data analysis:

1. Age: The age of respondents
2. E-Wallet monthly expenses: The monthly expenses using e-Wallet
3. Overall monthly expenses: Overall monthly expenses with and without using e-Wallet
4. Reload amount: How much do students usually reload e-Wallet

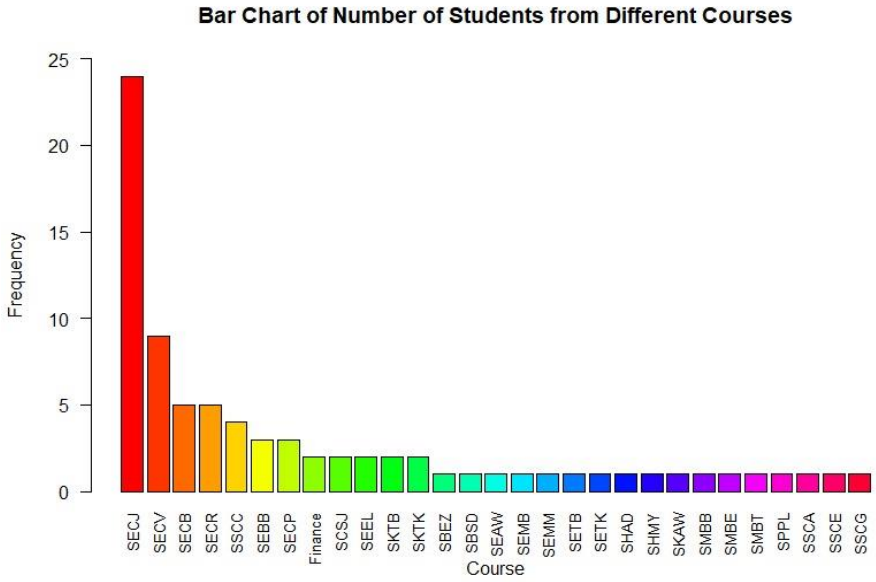
Data Analysis and Result



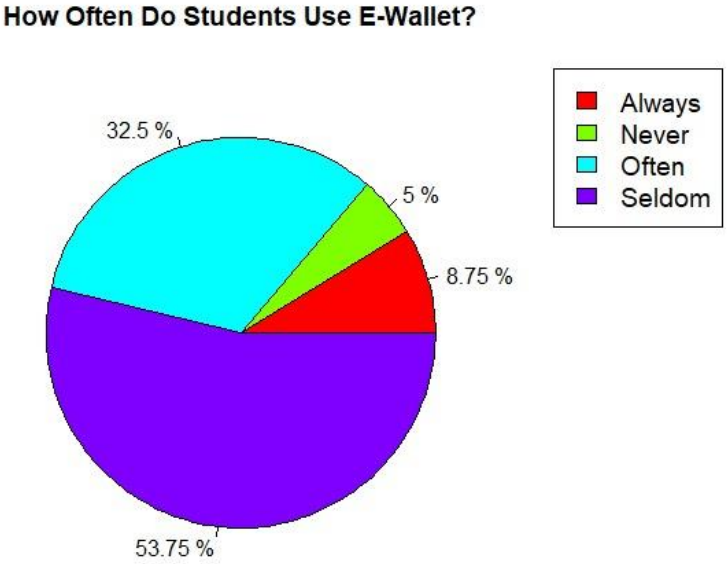
The pie chart above shows that among 80 students in this survey, the majority of the students are females in which there are 51 female students (63.75%). Also, there are 36.25% of male students (29).



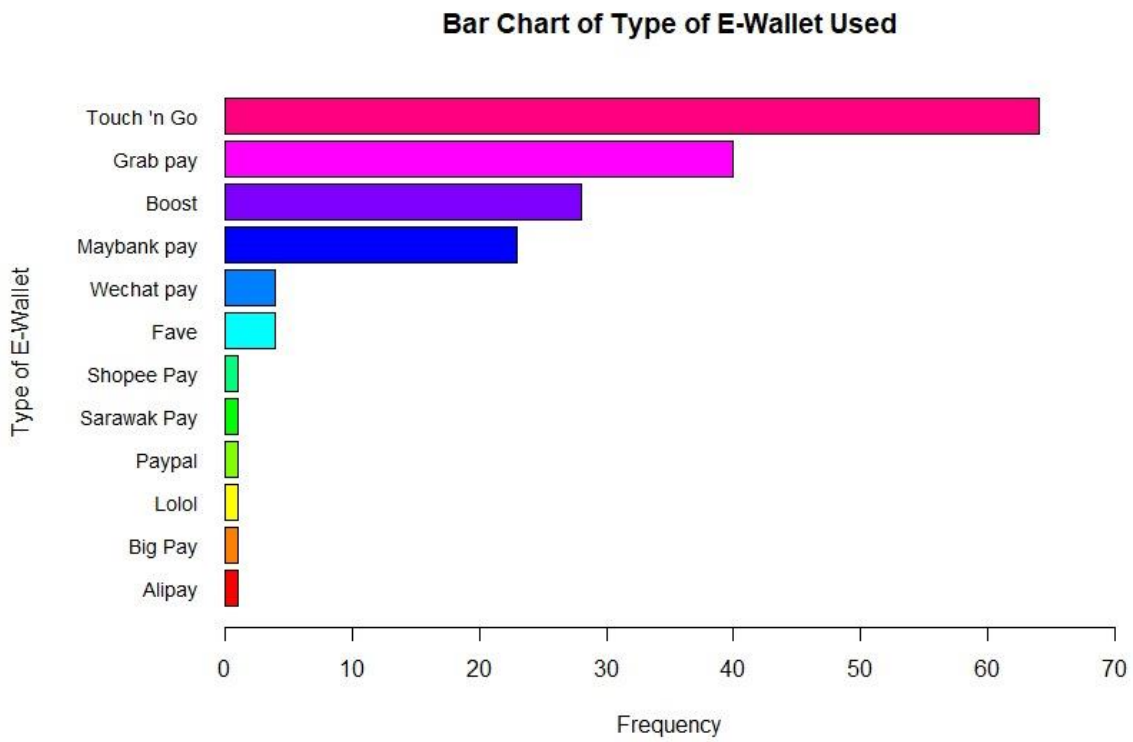
The boxplot above shows the age of respondents. From the boxplot, we know that first quartile and median are the same with the age of 20 while the third quartile is age 21. The youngest respondent is 19 years old while the largest age of respondents is age 26. The data distribution is positively skewed. Hence, it is clear that most of our respondents are around 20 years old with frequency of 43.



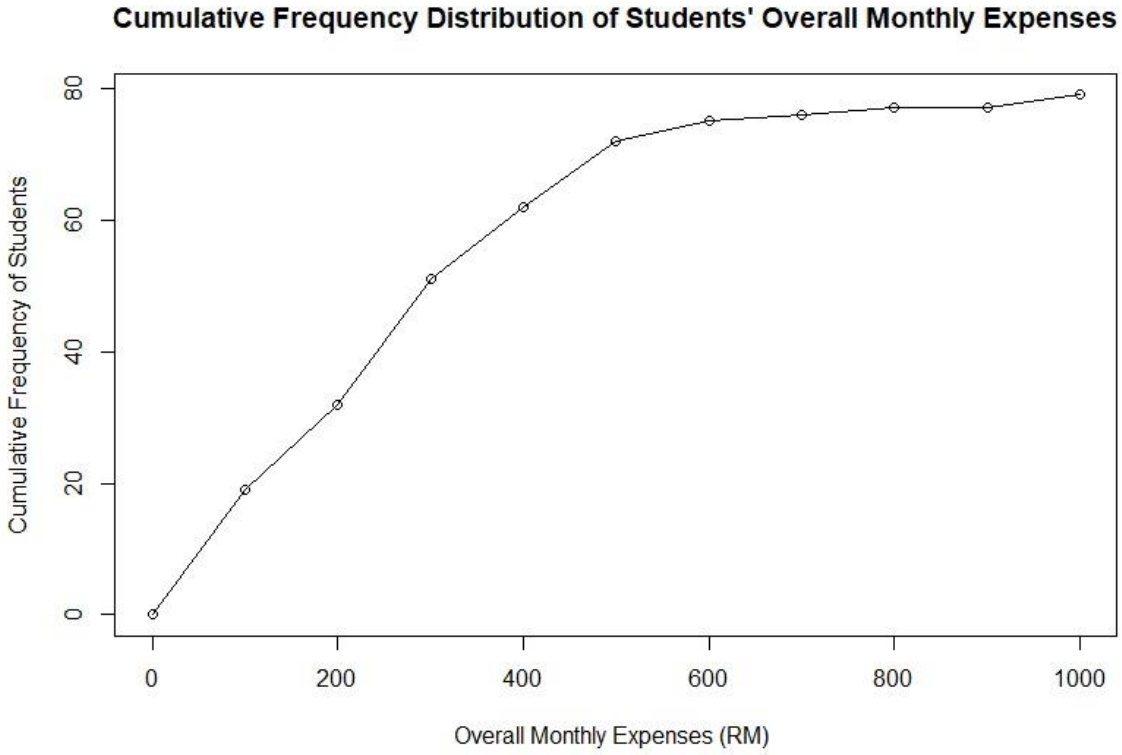
The bar chart shows the number of students from different courses. Altogether, there are 29 courses that the students are currently studying. Among these courses, SECJ has the highest number of students with a record of 24 respondents followed by SECV (9 respondents), SECB and SECR (5 respondents), SSCC(4 respondents), SEBB and SECP(3 respondents), Finance, SCSJ, SEEL, SKTB, SKTK(2 respondents).Lastly, SBEZ, SBSD, SEAW, SEMB, SEMM, SETB, SETK, SHAD, SHMY, SKAW, SMBB, SMBE, SMBT, SPPL, SSCA, SSCE and SSCG share the same least record of 17 respondents which is one student for each course.



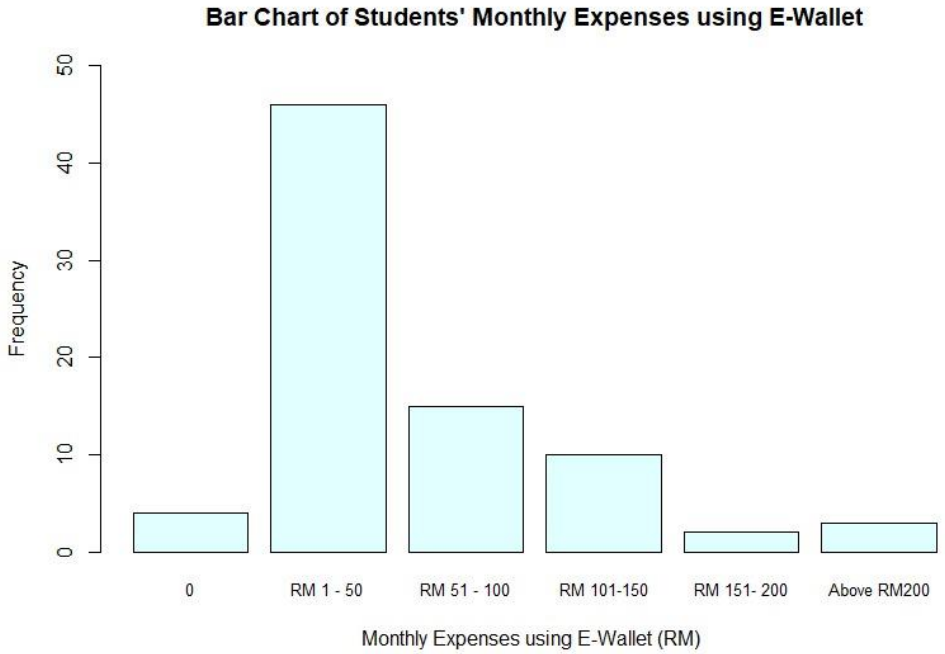
The pie chart shows the frequency of usage of e-Wallet among UTM students. Majority of the students (43 respondents) state that they seldom use e-Wallet. Besides, 26 respondents often and 7 respondents always use e-Wallet. Only 4 respondents never use e-Wallet which are the least. Therefore, we can conclude that most of the students are starting using e-Wallet before but still many of them seldom use it in their daily lives..



The bar chart shows the 12 types of e-Wallets used by the students. Touch ’n Go records the highest amount of usage among the students which are 64 respondents followed by Grab pay (40 respondents), Boost (28 respondents), Maybank pay (23 respondents), WeChat pay (4 respondents) and Fave (4 respondents). The e-Wallets which are least used by the students are Shopee pay, Sarawak pay, Paypal, Lolol, Big Pay and Alipay with a record of only 1 respondent. This bar chart shows a wide acceptance of students on various types of e-Wallets. Among all the e-Wallets introduced to the students, Touch ’n Go, Grab pay, Boost and Maybank pay are the most popular e-Wallets.



The cumulative frequency of ogive above shows the students' overall monthly expenses. The steeper the slope, the higher the frequency of the students in the corresponding range of monthly expenses among the students. Therefore, it is clear that most of the students (20 respondents) spend within RM100 per month. This is followed by RM201-RM300 (19 respondents) with a slight difference of 1 respondent. Other than that, 13 of the respondents claim that they spend RM101-RM200 in their overall monthly expenses, also, 11 respondents with RM301-RM400, 10 respondents with RM401-RM500 and only 7 of them spend over RM500 per month. This shows that students in UTM are rational and practice prudent spending in their monthly expenditure with less than RM300 per month.



The bar chart shows the students' monthly expenses using e-Wallet. Most of the respondents (46 respondents) use RM1 – RM50 per month, followed by RM51 – RM100 (15 respondents), RM101-RM150(10 respondents), RM0 (4 respondents), above RM200 (3 respondents) and the least is RM151- RM200 (2 respondents). Generally, students' monthly expenses using e-Wallet are less than RM50 per month (50 respondents). This is probably because most of the arcades and shops in UTM do not accept payment using e-Wallet. Therefore, most of the students are used to paying by cash.

From both graphs above, we can conclude that the students in UTM spend around 17 % of monthly expenses using e-Wallet.

The Amount usually Reloaded by Students

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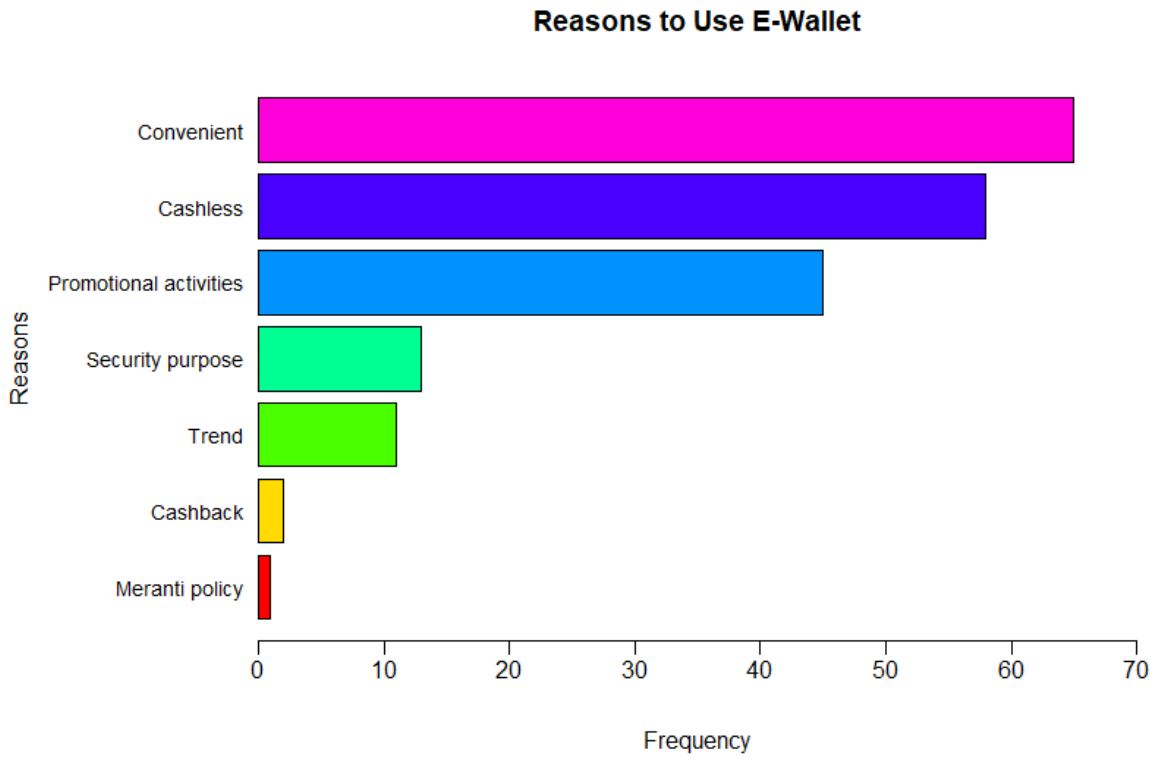
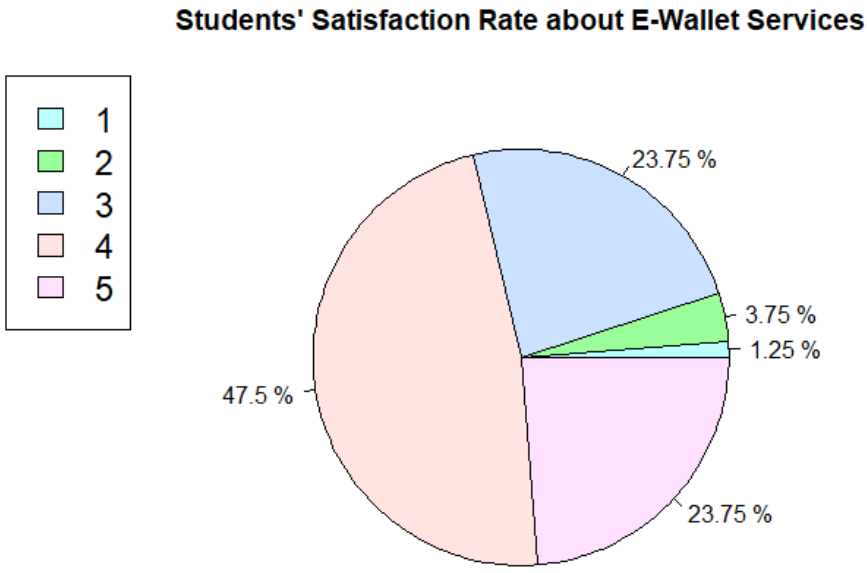
The decimal point is 1 digit(s) to the right of the |

 0 | 00000000000000
 2 | 00000000000000000000000000
 4 | 000000000000000000000000000000
 6 |
 8 |
10 | 0000000
12 |
14 |
16 |
18 |
20 | 0
```

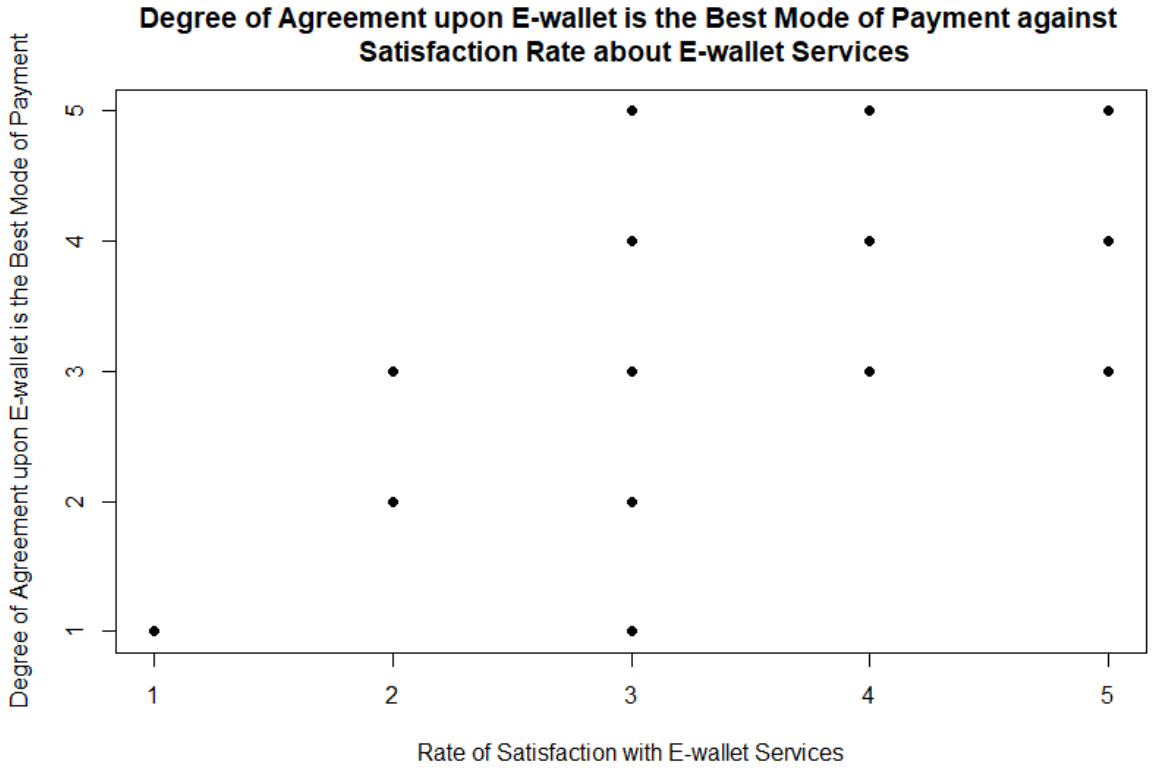
The stem-and-leaf plot shows the amount usually reloaded by students in ringgit Malaysia. For instance, 20|0 means RM200 and 4|0 means RM40. Most of the students (31 respondents) usually reload RM40 each time, 27 students with RM20, 7 students with RM100, 1 student with RM 200 and 14 students seldom or never reload their e-Wallet. This data proves that only a small portion of students usually make payment using e-Wallet.



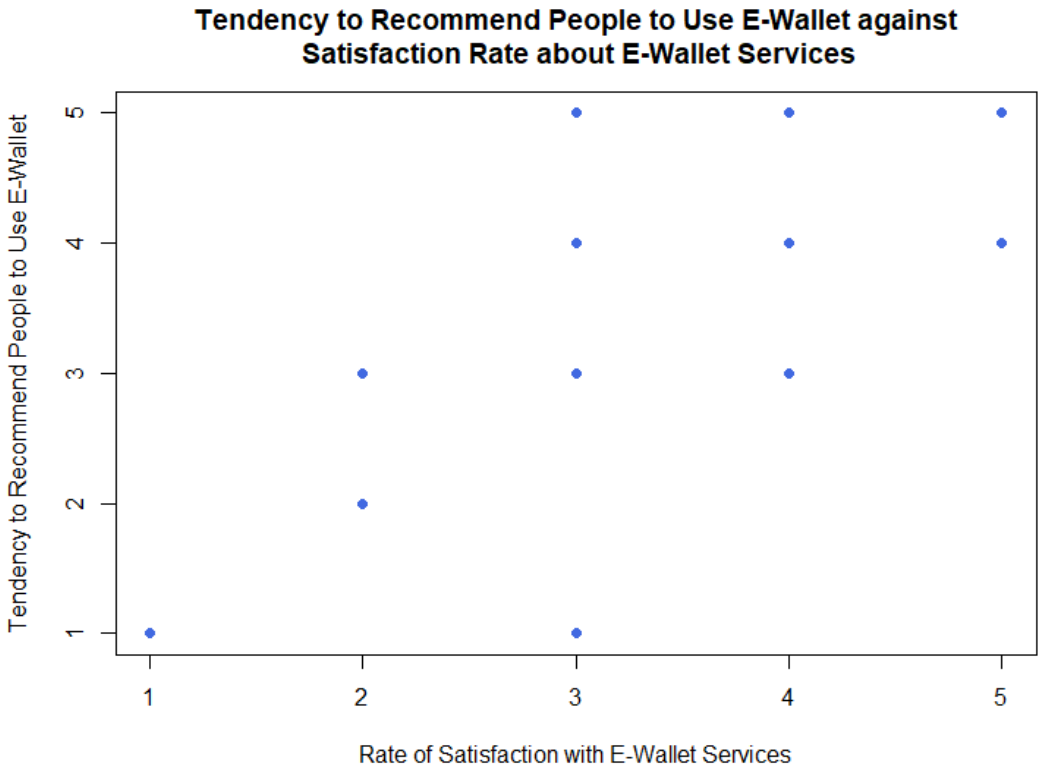
The horizontal bar chart above shows the reasons of using e-Wallet by UTM students. Beside four respondents who never use e-Wallet, majority of them (65 respondents) claim that they use e-Wallet because of convenience. This is followed by other reasons such as cashless (58 respondents), promotional activities (45 respondents), security purpose (13 respondents), trend (11 respondents), cashback (2 respondents), Meranti policy (1 respondent). In conclusion, there are 3 main reasons that encourage students to use e-Wallet which are convenience, cashless and promotional activities such as vouchers or discounts given for those who use a certain type of e-Wallet. This may be due to the ATM machines are quite far away from some of their colleges. The existence of e-Wallet has indeed saved their times and efforts from walking a long distance to the ATM machine.



The pie chart above shows students' satification rate about e-Wallet services which 1 represent very dissatisfied and 5 represent very satisfied. The majority of the students (38 students) had rated 4. Besides, the number of students who rated 3 and 5 are same which are 19 of them. Other than that, there are only 3 students rated 2 while there is only 1 student who rated 1 which is the least in this pie chart. From this pie chart, we can find that the satisfaction rate about e-Wallet services among UTM students is quite high.



The scatter plot above shows how the satisfaction rate about e-Wallet services affects the degree of agreement upon e-Wallet is the best mode of payment. For the rate of satisfaction with e-Wallet services, scale 1 represents very dissatisfied, 2 represents dissatisfied, 3 represents neutral, 4 represents satisfied while scale 5 represents very satisfied. Meanwhile, for the degree of agreement on "E-Wallet is the best mode of payment", scale 1 means strongly disagree, 2 means disagree, 3 means neutral, 4 means agree and scale 5 means strongly agree. The data shows that those who are very satisfied with e-Wallet services with scale 4 and 5 would have higher degree of agreement (between scale 3 and 5) that e-Wallet is the best mode of payment. For those who is not satisfied (scale 1 -2) with e-Wallet services will disagree with e-Wallet being the best mode of payment (scale 1 – 3). Therefore, we can state that the higher the rate of satisfaction with e-Wallet services, the higher the degree of agreement upon e-Wallet is the best mode of payment.



The scatter plot shows the tendency of students to recommend e-Wallet to others against the satisfaction rate about e-Wallet services. For the rate of satisfaction with e-Wallet services, scale 1 represents very dissatisfied, 2 represents dissatisfied, 3 represents neutral, 4 represents satisfied while scale 5 represents very satisfied. On the other hand, the higher the scale, the higher the tendency of students to recommend e-Wallet to others (Scale 1 means very likely and scale 5 means very unlikely). The data shows that those who are very satisfied with e-Wallet service with scale 5 are more likely to recommend e-Wallet to others (scale 4 and 5). For those who is strongly dissatisfied (scale 1) with e-Wallet service are very unlikely to recommend it to others. In short, the higher the rate of satisfaction with e-Wallet services, the higher the tendency to recommend it to others.

Conclusion

In this project, we have practiced the knowledge and techniques of subject Probability and Statistic Data Analysis. We understand and implement four levels of data measurement which are nominal, ordinal, interval and ratio data. Besides that, we analyze, summarize, conclude and present data in graphical representations by using R to ensure a clear and precise data is delivered. This is essential to achieve the objective of this project which is to study the dependency of UTM students on e-Wallet as well as to investigate the potential of e-Wallet to become the main method of payment among UTM students in the near future.

From the analysis of data obtained in the survey, we have noticed that e-Wallet is relatively new to UTM students. It is because the rate of using e-Wallet is lower than cash payment as most of the students claim that they seldom use it and their expenditure using e-Wallet occupy only a very small portion in their overall monthly expenses. As such, we know that the dependency of UTM students on e-Wallet is relatively low.

However, it is undeniable that e-Wallet has a great potential to become a common mode of payment among UTM students. This is evident as many of them had already started using it and gave positive reviews regarding e-Wallet. For instance, on average, students in UTM are satisfied with the e-Wallet services. According to the data analysis, their high rate of satisfaction corresponds to their high degree of agreement on the statement "E-Wallet is the best mode of payment". They have also realized there are lots of benefits using e-Wallet services as e-Wallet offers more convenience to them, so they would be willing to recommend it to others. Another evidence to support the high potential of e-Wallet services is that UTM students are adopting a wide variety of e-Wallet services which means that they maintain an open mindset to try different kinds of e-Wallets. On top of that, there is the Meranti policy which has been implemented at Meranti Arcade in UTM which encourage students to use e-Wallet to pay for their food.

Still, the development of e-Wallet services in UTM faces a few obstacles. One of the examples is that many of the shops and arcades in UTM have no such devices or policies to implement e-Wallet payment.

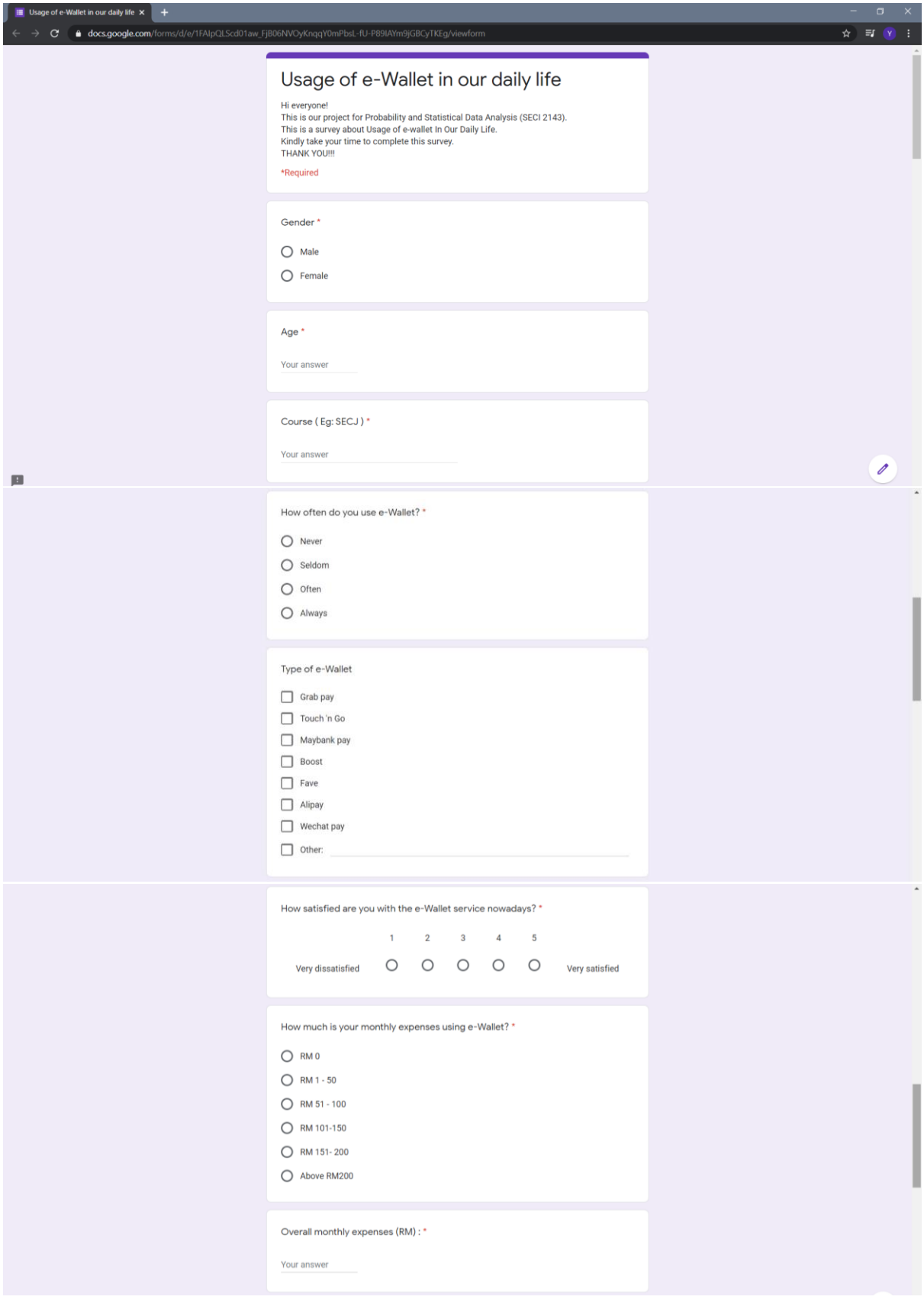
In order to achieve the aim to generalize the usage of e-Wallet among UTM students, all the business owners in UTM and the school authorities should show their cooperation by preparing the devices and allowing students to use e-Wallet as their method of payment. In this way, we can boost the development of e-Wallet in UTM by promoting cashless community in the campus so that all students can benefit from this service.

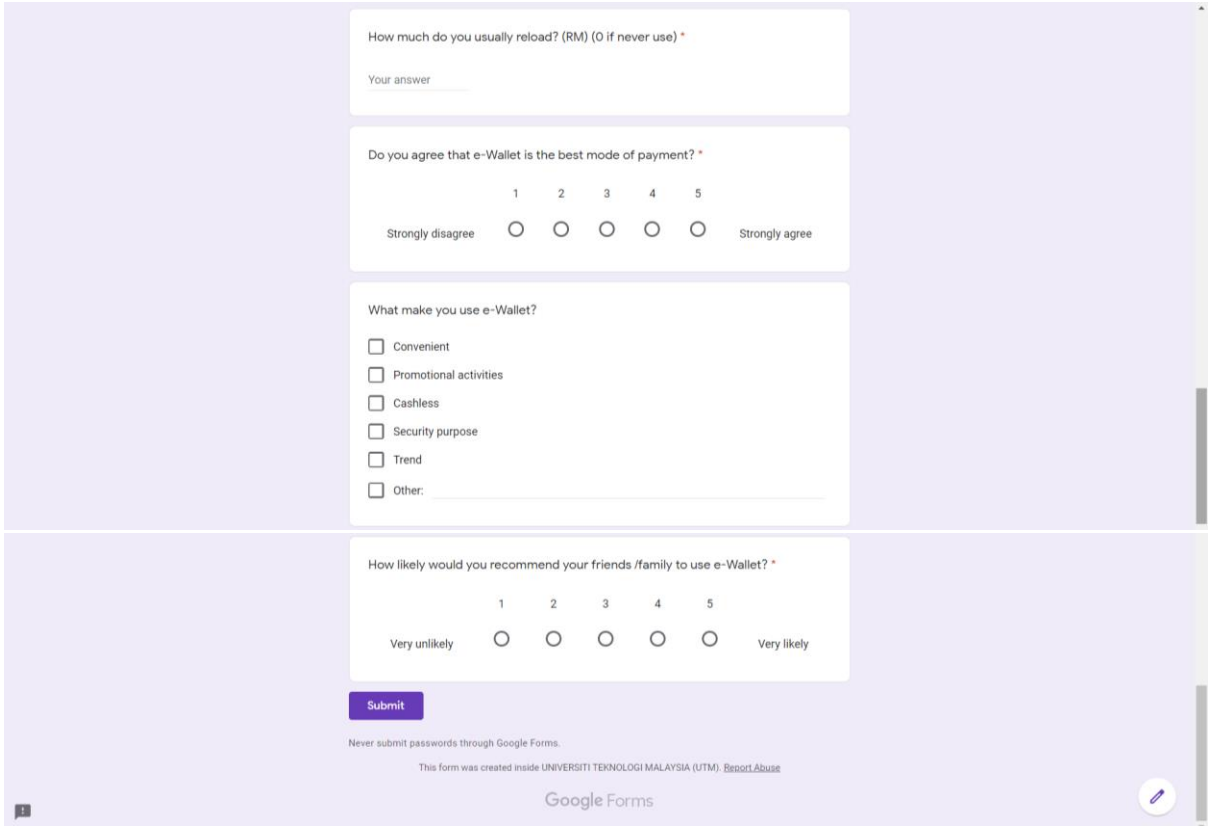
Reflection

During this project, our group had a deep understanding of statistical data analysis. We had learned to choose a specific concept of the project according to the problem statement. Besides, we had learned to produce a survey form by using Google Form. With this, we had been more understanding of how to differentiate the types of data. During the data analysis process, we had a chance to practically use R which is a programming language for statistical and graphical data. This made us not only just have the knowledge about the data analysis and plotting the graph using R but also the knowledge to computerize the data which will make the data and graph to be more accurate. We had also had some insights into which type of data should be analyzed using which type of graph. This experience is like doing a lab experiment in a science subject. We believe that after we learned these topics in practice, we will be able to use the knowledge in our future to achieve our milestones in the career pathway.

Appendix

https://docs.google.com/forms/d/e/1FAIpQLScd01aw_FjB06NVOyKnqqY0mPbsL-fU-P89IAYm9jGBCyTKEg/viewform




How much do you usually reload? (RM) (0 if never use) *
Your answer
Do you agree that e-Wallet is the best mode of payment? *
1 2 3 4 5
Strongly disagree
Strongly agree
What make you use e-Wallet?
Convenient
Promotional activities
Cashless
Security purpose
Trend
Other:

How likely would you recommend your friends /family to use e-Wallet? *
1 2 3 4 5
Very unlikely
Very likely
Submit
Never submit passwords through Google Forms.
This form was created inside UNIVERSITI TEKNOLOGI MALAYSIA (UTM). Report Abuse
Google Forms