

# Banking App Report: FOLD – Group 03/02 – Assignment 1

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## ABSTRACT

This report will illustrate the development of designing a user interface and system for a banking app. To develop the app, brainstorming, questionnaire survey and competitive analysis are the three methods used. In the first stage, research on other banking apps with the three methods helps to develop what is the main focus for our banking app. Brainstorming is where we combine ideas together, discussing which methods and ideas should be used for this project. Competitive Analysis allows us to research different apps and compare their pros and cons. Surveys are used to ask people questions that would help us create the app interface. Then analyse the target audience in order to determine the direction of the system. Based on the analysis and use cases, the main aim of this project is to design a simple and intuitive user experience for users while concentrating on the security of the system. However, the limitations will occur on some of the functions such as fingerprint and iris scanner, the fees and delay on the transfer, the company's willingness to cooperate by sharing stock for investment etc..

## Keywords

Mobile Banking, Brainstorming, Competitive Analysis, Surveys, Users

## INTRODUCTION

The usage of Mobile Banking these past few years has escalated quickly as people adjusted into online and mobile banking systems. Mobile Banking also known as M-banking, has become essential for people to process a financial transaction flexibly. According to Hayikader et al. (2017, p.36), with the rapid development of technology, people are more convenient doing their financial services over mobile. The International Journal of Bank Marketing (Laukkanen, 2017, p.1042), stated that M-banking is the intermediary between the bank and the customer. It comes through a device such as a cellphone and a smartphone. This alteration system has become more beneficial toward clients, which saves their time and efficiency (Laukkanen, 2017, p.1042). However, there are complications regarding the security and its user-friendly. Some users find it hard to use mobile banking because of the complexity and the design outline of the app. One of the problems that users encounter are

colors and sections. Colors utilized in the M-banking application could clash with one another which makes it hard to identify each of the elements. As for the problems with security, some users do not feel secure on the M-banking app. M-banking is generally established by SMS and Wireless Application Protocol (WAP). Through both of the systems, users could let hackers discern their bank account (Hayikader et al., 2016, p.36). Although these days, mobile banking uses two-authentic verification but it does not determine the account is guaranteed.

This report will examine four background works from different mobile banking applications. Then, it will elaborate on the three methods and its result. The methods that will be further discussed are brainstorming, competitive analysis (comparing/ analyzing competitors application), and surveys. Lastly, it will conclude the outcome from the result that we obtained.

Our motivation behind making a banking app user interface is to make an app that is convenient and easy to use, and has all the utilities needed, where users do not have to go to an actual bank to complete. Therefore, if the user is having a busy day, then one tap on the phone can complete all the tasks.

## BACKGROUND WORK

### Revolut

Revolut is a banking app launched in the UK, but provides their services globally (2021, Revolut). It offers various services from personal banking to wholesale banking such as multiple currencies exchange, junior saving, budgeting and analytics, international transfer, investing options like cryptos, stocks etc., early salary, global insurance, online payments for business and so on (2021, Revolut). Revolut aims to improve the user experience for their users from traditional banking. The main elements people can observe while using the Revolut app are 'simple' and 'clear'. The interface is simply designed with mostly white, whitesmoke and blue, which construct a nice and clear interface. Moreover, they organise the app by dividing them into three main sections. The title of each section is placed at the top of the screen with a large font size. More specifically, it

contains lots of icons and illustrations in order to make every function easier for users to understand.

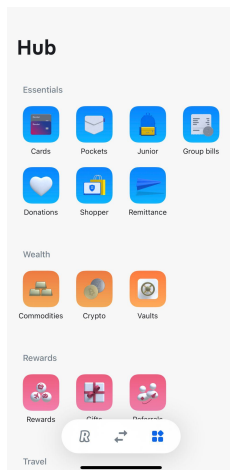


Figure 1. Revolut app interface

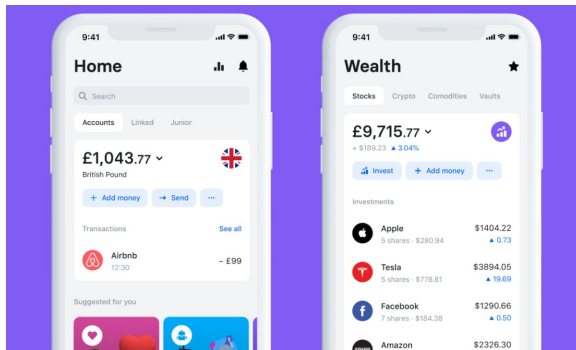


Figure 2. Revolut app interface

### Bca Mobile

PT Bank Central Asia Tbk, also known as Bank Central Asia (BCA) is an Indonesian bank founded by Sudono Salim on 21 February 1957. BCA is regarded as the largest privately-owned bank in Indonesia with total assets of over 95 billion dollars. By 2021, BCA has over 1,242 branches and 17,721 ATMs (2021, BCA).

In 2011, BCA released their mobile banking app known as BCA mobile. An app created based on one simple idea: Convenient banking at your fingertips. Their banking app is promoted as being simple and convenient. They contain most of the common features found in banking apps including QR code transfer, cardless payments, balance checks and top ups.

However, further reviews suggested that their banking app needs improvement in several aspects. (Yogirlz, 2021) research on twitter, google play and app store reviews concluded that many users experience discomfort from their

convoluted usability, difficulty in accessing information and colour gradation.



Figure 3. BCA app interface

### Commonwealth Bank

It provides financial services to Australia and New Zealand. The bank offers many resources, including business and offshore services, and insurance aid for car, health, income protection and travel. Its options are not limited, allowing users to achieve transactions, own savings and foreign currency accounts, as well as deposits, loans, credit card, international payments and trade. By 2021, they have a total of 875 branches and 2,492 ATMs (Company Profile & Facts - Yahoo Finance, 2021). Their mobile banking app has a yellow interface. It has 5 panels, each showing a different feature. The app can calculate how much income and output is done per month, showing your multiple accounts. The saver's account allows users to deposit money every month, while giving back interests.

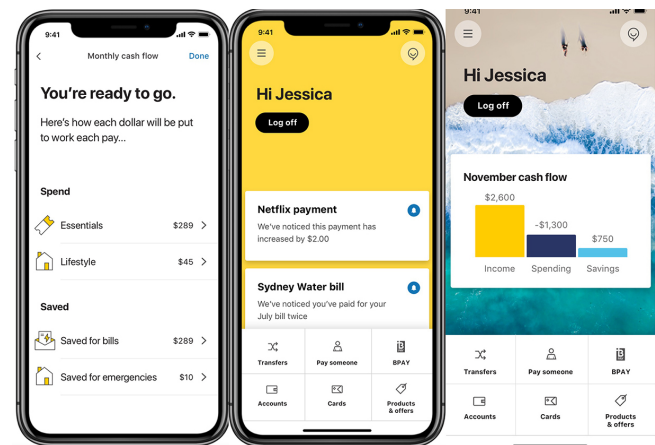


Figure 4. Commonwealth bank app interface

This picture is an old layout with 6 panels. The second user interface shows reminders for bills, the first and third shows how much the user has saved, used and their incomes per month.

## Stash

Stash is a financial technology and financial services company based in New York, NY. The company provides both web platforms and mobile apps. One of the most prominent features offered by Stash is their personal finance that includes features for saving, investing, and budgeting to help user's better manage their money (2021, Stash). Stock saving programs let users separate a user's bank account based on different designated purposes which is customizable for each user. Furthermore, They also track real time transactions and sort spending into categories. Complementing this feature, they also allow users to set monthly spending for your stock back card, and let user's know when they are getting close to the limit (2021, Stash). . Their investing feature comprises stock- Back Card which is a debit card that rewards user's with matching pieces of stock based on the purchases made (2021, Stash). Therefore user's get a percentage of purchases back in stock with no effort required, as they invest it automatically.



Figure 5. Stash's stock back card

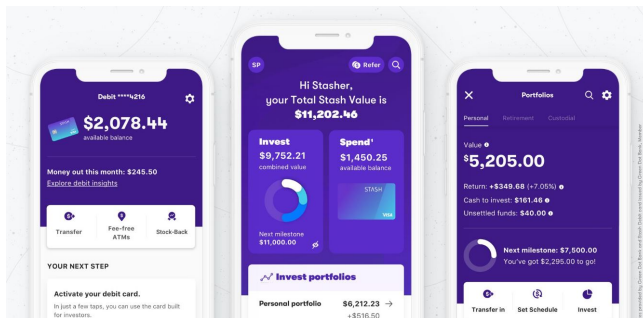


Figure 6. Stash app interface

## DESCRIPTION OF YOUR METHOD/SYSTEM

Our group decided on three main methods to use in the testing of this project. The first method we used was brainstorming. Brainstorming allows individuals to share and explore ideas in a group setting. The ideas can then be refined with the various opinions of the other individuals giving insight to individuals. This method is highly popular in generating ideas as there is a preconception of a group generally being able to generate more concepts than a single person (Brown & Paulus, 2002, p.209). According to Liedtka & Ogilvie (2011, p.103), it is fundamentally

impossible to progress current theories without the introduction of new and fresh ideas. Furthermore, to maximize the effectiveness of this method, we combined individual and group brainstorming allowing us to maximize the benefits while minimizing the factors that may inhibit productivity as a group overall (Brown & Paulus, 2002, p.210). As a result, our group as a whole developed a better understanding of the task we were given and devised other methods for the sake of testing. We then collected this information by recording it in bullet points on a shared document so that we all had a clear idea of the design.

Another method used was surveys. A survey is a type of research involving the gathering of data from a sample of individuals to gain more knowledge on a specific subject (Cambridge dictionary). In the modern era, the most common procedure is to use an online questionnaire or form which can be filled out by the surveyees. But, due to a lack of incentive, Singer & Ye(2013, p.113) determined that there were many 'nonresponses' from the survey participants. They soon discovered that in order for them to receive more responses from the participants, emphasizing the benefits for a large number of people instead of the respondent was a key factor (Singer & Ye, 2013, p. 114). Thus, in our own surveys, we made sure to highlight the altruistic reasons over the egoistic ones so that the responses would be more plentiful and detailed. Our group used an online form with specific questions and answers for the survey. We then sent them to individuals in our target audience including the tutorial's facebook group. The results were displayed clearly in a graph provided by the website 'forms.app' which allowed for an apparent understanding of our target audience's needs and wants.

The final method we used in the testing of this project is known as competitive analysis. Competitive analysis is often the cornerstone of an efficient and strategic design (Zahra & Sherry, 1993, p.7). The most common procedure is to compare the numerous attributes of a competitor's service or product using navigation, features, visuals, content, and usability as a basis for comparison. Subsequently, it should assist the designers better understand how they can introduce a unique aspect into their products while ensuring their customers' satisfaction. As such, this is one of the most practical methods for testing in terms of developing an appropriate strategy for a firm or designer (Bloodgood & Bauerschmidt, 2002, p.418). Our group applied this method through discussing and researching various other apps and platforms designed by major corporations such as Commonwealth Bank and Revolut. We compared numerous models using the results of our survey and also through discussing with each other. As a result, we were collectively able to formulate the best features and determine what aspects of a banking system/app were necessary while also including some new and innovative elements to improve the overall user experience. This was done through discussing various applications and systems that we had experience with and identifying their unique features and weaknesses so we could incorporate them into our own design. Once again, the data was recorded in a shared document in the form of photos and annotations.

## Methods for design

For the design section, three methods will be used. The first one is wireframe. This is done by drawing out the screens and their task flow. This will show the creators of the app how functions work, the design, the layout, color, and style. The second method is error analysis. This method can be done simultaneously with all the other methods as it is done to find errors. The last method is a competitive usability benchmark, where we do a few tasks on the different apps in the background work, to compare and contrast these apps.

## RESULTS

### Brainstorming

To develop a banking app, we gather as an individual to brainstorm how we want to compose it. Some of our ideas are its security, design, and features that will show in the application. Interactive homepage design, QR code payment, monthly subscription list, and different money streams in one account are some inputs that our group has made. This brainstorming helped us to narrow our options on what feature should be input in the banking app. Therefore, we conclude to be focusing on two main aspects, which are security and user-friendly design. Moreover, we hold a survey based on the result of our brainstorming. Our survey basis is on the relevant features. Some of the features that we came up with after we combined our ideas are QR code payments, transfer through phone contacts, transfer in different currencies, saving options in one account, investment, monthly subscription, and promotion page.

### Competitive Analysis

COMPETITOR ANALYSIS COMPARISON CHART							
	BEST FEATURE	BEST FOR	SUPPORT	DESIGN	FREE PLAN	CONS	AVAILABLE COUNTRIES
BCA Mobile	Cardless payments	Security	Call, chat, email	Simple	✓	Only basic features, not user friendly	ID
Revolut	Links all bank accounts	Budgeting & Analytics	Chat	Minimalistic, playful	✓	Limited fee cash withdrawals	Eu, Aus, Sg, Jpn, Swiss, USA
Commonwealth	Cardless payments	Savings	Call, chat	Fun, minimalistic	✓	Uncategorised transaction	Aus, NZ, UK, USA
Bank of America	Virtual Assistant	Security	Call, chat, email	Intuitive, user-friendly	✓	No interest	USA
Starling Bank	Financial analytics	Budgeting & Analytics	Call, chat, email	Modern, timeless	✓	Unavailable without internet	UK
Ally Mobile	Savings Account	Savings	Call, chat, email	Clean, user-friendly	✓	No ATM access	USA

Figure 7. competitive analysis comparison chart

### Survey

We conducted two surveys for our market research survey. In our initial survey, we collected data from 36 people, focusing on user's preferable banking app design and improvements. However, the data we collected was not sufficient in collecting information required for our system requirements which led us to create another survey on 56 people. This survey focuses more on banking apps usability

and system requirements. For the results we will be using results from our 2nd survey.

Our survey of 56 customers age 18 and older found:

- 60% of respondents prioritize security, while 40% prioritize usability
- 66% of respondents wants overseas transfer, investment and budgeting analysis features in their banking app
- 54% of users do not want two-step verification in their banking app

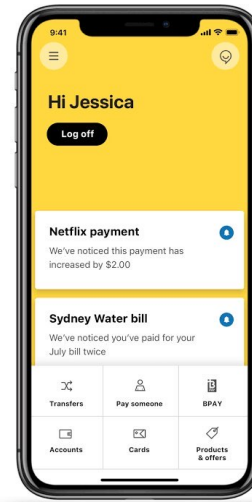


Figure 8. Commonwealth bank app interface

Most of our results are as expected (users find their banking app convoluted) and some were less predictable (almost half of the respondents do not want two-step verification).

Our survey on banking app features give us the following results:

### 1st survey:

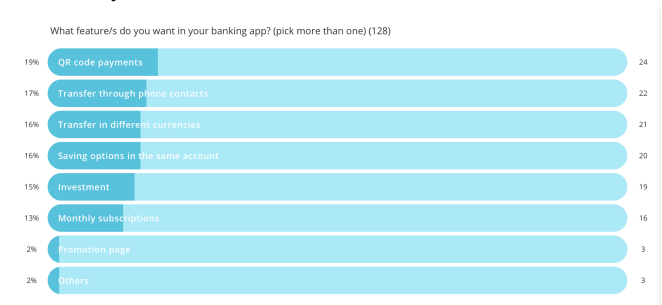


Figure 9. survey result

## 2nd survey:

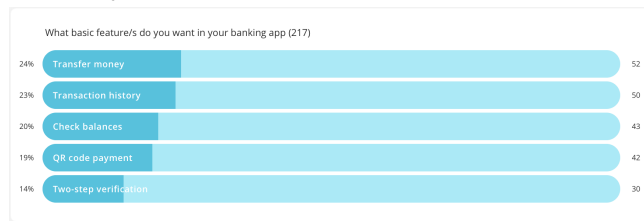


Figure 10. survey result

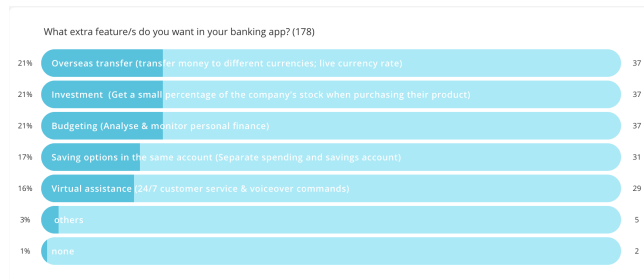


Figure 11. survey result

What do you want to improve from your current banking app? :

It would be convenient if the app adds features like oversee transfer and would also be lovely to have investment features

Figure 12. survey response

What do you want to improve from your current banking app? :

It would be convenient if the app adds features like oversee transfer and would also be lovely to have investment features

Figure 13. survey response

What do you want to improve from your current banking app? :

24/7 customer service with multiple languages

Figure 14. survey response

What do you want to improve from your current banking app? :

To buy cheaper foreign currency

Figure 15. survey response

This result was the basis of our mobile banking app features. We decided upon brainstorming that we will incorporate 9 of the top results from both our surveys (QR code payments, transfer through phone contacts, transaction histories, check balances, overseas transfer, saving options, investment, budgeting, virtual assistants). Data from the responses showed that in general users were satisfied with these features in addition to the basic banking app features.

## Respond towards survey about problems user's encounter:

What problem/s have you encounter while using your current banking app? :

Can't contact customer service

Figure 16. survey response

What problem/s have you encounter while using your current banking app? :

Quite hard to identify the elements that BCA provide in the application

Figure 17. survey response

What problem/s have you encounter while using your current banking app? :  
When I was in another trying to login to the app, I was failed to do it since I got a different phone number then which I signed up with. I wasn't able to get the verification code after contacting the 24/7 customer service.

Figure 18. survey response

What problem/s have you encounter while using your current banking app? :

Ga bs cek mutasi bank lebih dari 7hari

Figure 19. survey response

Based on the survey, we observed that the major problem revolved around limitations in checking transactions history, contacting customer service, and navigation around the app. Thus, we created a solution based on these problems including the virtual assistant feature and checking transaction history without any limitations.

## Use Cases

Our ideal use case for this app is for someone in our target audience who would like to carry out one of the numerous functions supported by our app. For example, they want to transfer money to someone who uses a different bank or to someone overseas. In this ideal scenario, they would want to use their mobile device for ease of access and convenience. Another use case could also be transferring money into a savings account or checking account balances in the app. The most important aspects of our system are security and convenience. Accomplishing these tasks quickly and efficiently is what sets our system apart from other competitors. In this specific project, we have 3 examples for use cases, John, Dave and Aleena.

## Target Audience: 17-50

## Personas

1. John is a 19 years old new international student at the university of Melbourne. He lives alone, far away from his family in a new city. John meets 3 new friends who will study at the university of Melbourne too. They met up for lunch. As John is currently very occupied in the process of moving in, he forgot that the deadline of his tuition payment is today. However, it is night already and all the banks are closed. He remembered that one of his friends gushed about a new banking app that could transfer money with different currencies which is perfect for his situation as he needs to wire money from his country's currency to the Australian dollar. Therefore, he decided to set up the mobile bank and pay his tuition fees.

2. Dave is a 30 year old financial manager for a large company. He uses banking apps quite frequently as part of his job and always thought that the features of an app are important for him. Since he grew up with the internet, Dave expects every interaction he has with an app to be fluid and easy like Amazon. He hates using apps that are confusing and not user-friendly.



Recently, he got engaged with his fiancée, Catherine and was planning to save up some money for his marriage next year. Dave decided to consult his colleagues on ideas to save up more money. One colleague suggested that he put 30% of his monthly salary into a savings account while another suggested for him to create a passive income by investing in stocks. Just as he was on his way home from work, Dave saw a street advertisement regarding a new banking app with saving and investment features. It caught his attention immediately and decided to give the app a try. As he opened the app, he saw lots of features such as discount deals, a savings account as well as an investment section. Although he was initially unsure on how to use these features, the app gave him really clear instructions on what to do. After getting his monthly salary Dave decided to put 30% of it in the savings account he just made, just like his colleague suggested. After a year of putting his salary in the banking app, he managed to save up to his target of \$15,000. The app was able to help him control his spendings, which was really helpful in reaching his marriage budget.

3. Aleena is a 20 year old local student studying at the University of Melbourne in her second year and also working part time in a cafe every weekend. In her spare time, Aleena is a very outgoing person who loves to hang out with her friends. Nonetheless, as a student she needs to save up money for rent and tuition fees, so she used to keep track of every expense in her daily life. Due to the examination week, she has been occupied by work and school, she hasn't checked her bank account for days. One day after hanging out with friends, Aleena opened her bank app in order to pay the money to her friend for dinner. However, she couldn't remember what some transactions were. Aleena complained about the app to her friend, and the friend recommended another banking app which could be more user friendly. Subsequently, Aleena was surprised to find out that the app will automatically record every single transaction of the account and categorise them into different types of spending. It saves lots of time for Aleena instead of recording the transactions one by one by herself.

## System Requirements

### Security:

To ensure user's safety, our mobile banking app used two step verifications. To access the app, there will be a choice of iris scan or touch id that will enable you to open the app. The biometrics iris recognition system uses pattern recognition technology to achieve accurate human verification and authentication by utilizing an individual's retina. Fingerprint scanners work by capturing the pattern of ridges and valleys on a finger which is then processed by the device's analysis software comparing it to the registered fingerprints. Both of these features are available when accessing the app to provide options suitable for users in

different situations. After accessing the app, users will need to enter a 6-digit code when making a transaction. To prevent spyware and malware, the number pad will be randomized each time when making a transaction. The terminology is virtual keyboard. This reduces the chance of hackers mapping the password. After successfully making a transaction, users will be notified with a real time text alert to notify a customer of account activity to prevent fraud. The intelligent bot will also send an alert if there is any suspicious behavior or transaction based on analyzing history transactions.

### Feature and Function:

#### 1. QR code payments

Mobile banking app is completed with QR code payment features, enabling fast and efficient transactions in online or offline stores without any contact.

#### 2. Transfer through phone contacts

This feature syncs the contact list of users to the banking app, thus enabling users to transfer just by tapping the person's profile instead of typing down their bank account numbers.

#### 3. Transactions histories

Allow users to check their transaction histories on a daily, weekly, monthly, or yearly basis based on their preferences.

#### 4. Check balances

Allow users to check their total balances or balances per category based on the budget that they set.

#### 5. Overseas transfer

Overseas transfer features enable users to transfer to any bank worldwide in various currencies. A live exchange currency allows users to secure the best exchange rates available on the date of transaction. In addition, our intelligent bot is also designed to analyze and predict the time when your designated currency is at the lowest rate. User's will also get a notification when the chosen rate drops and will advise you to make the transaction at that time.

#### 6. Investment

Through our extensive partnership worldwide, this curated system allows users to invest while spending money. Every purchase that users make will account for a small percentage of that company's stock. For example, when spending money at platforms like Netflix, Spotify, Starbucks, Coles, Amazon, etc., you will receive a small percentage of stocks of that company. User's are also given the upper hand to choose to control the stocks that they received or to let the intelligent bot analyze and grow the capital. The profit that is generated will be located in your savings account under the tab investment, allowing users to track how much they have generated with their spending.

#### 7. Saving options in the same account

This feature separates one account into two different sections, spending and savings. It is also equipped with an automated saving feature that will round up any purchases to the nearest dollar and deposit the spare change into your savings accounts. Users are also provided with the

opportunities to personalize their saving accounts to different sections, depending on their goals. For instance, a user can create 3 sections for their savings like vacation, dream house, and retirement. Thus, enabling them to allocate their money based on their personal preference and enables them to easily track their current savings amount for each situation. Users can also simply change their saving sections and allocate the money into other sections or spending accounts when they need the urge to.

#### 8. Budgeting

This feature is curated to monitor and analyze personal finance, thus providing individualized insights, adjustable budgets, and subscription monitoring. It allows users to create and set a daily, weekly, or monthly budget for themselves based on total spending or even spending per category. All your purchases are also categorized to monitor what you're spending the most money on. Furthermore, the app generates tailored insights into your expenditure to assist you in spending wisely, saving more, and paying off debt. To ease user's complications, our app is designed to pay recurring bills automatically which helps avoid late fees. Furthermore, it also offers warnings for upcoming bills and bank fees. This feature also allows users to connect with other credit or debit cards that they have, therefore allowing them to monitor all their total spendings.

#### 9. Virtual assistants

Virtual assistant lets you perform banking tasks like making transfers, paying bills and checking balances through talk and type commands. Thus, this feature provides more in-depth and thorough assistance. Moreover, virtual assistants are also programmed to answer broad inquiries about the bank and its services, as well as issues that users encounter in different languages. Virtual assistants are also equipped to schedule a face-to-face appointment in the nearest bank branch allocating you to a certain time and day based on your availability. Therefore, it reduced the need to queue long lines, saving user's time and energy.

## DISCUSSION

Limitations and improvement:

1. Fingerprint and iris scanner are not accessible in all smart phones.
- A possible issue that may arise in the current era is the lack of security measures on the devices that the application is installed on. Whilst most recently produced smartphones contain some sort of biometric security option, not all of them are privy to these innovative aspects. Older devices are also unlikely to be able to use biometrics as they physically do not contain the hardware necessary. As a result, only including biometrics as a form of accessing personal data for the system would create a lot of issues for us and our clients. In order to resolve this challenge, we have decided to include another form of security that is usable on any device with a touchscreen. By using a

relatively old yet secure method such as a passcode, we are able to bypass these issues. This is because any device that our application can be installed on is guaranteed to have a touchscreen which implies that they are able to enter a passcode. Moreover, biometrics such as fingerprint, face and eye scanning will all still be included as options in our application so that individuals with more updated devices are able to take advantage of them.

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2. Overseas transfer may run into these problems:
  - Getting account details wrong:  
Many overseas money transfers require routing numbers and bank accounts for both the sender and receiver, however these details are not always simple. The formats of bank accounts numbers vary by country and this may be an issue. To solve this issue, the user can choose the bank they want to transfer to from a list. Then, the user will be asked to enter the account number twice, this will make sure that the user has typed it in correctly twice. Another way to improve is by using QR code, this QR code contains the information needed in the form, thus preventing the need to fill forms.
  - They may experience a delay:  
Transferring money internationally may not always go at the same speed. Some banks may offer more than one payment method and delivery options which may influence the speed of the transfer. Knowing our options in terms of providers, delivery speed and cost will help prevent excessive delay in our overseas transfer.
  - Excess fees:  
There are two main costs when sending international money transfers. The service fee charged by the providers and the money you pay to change dollars to the currency of the country you're paying to, which depends on the foreign exchange rate we are using. We should consider the exchange rates we are using, depending on whether or not we will be taking profit from it.

3. - Transfer through phone contacts

People might change their phone number or they have multiple phone numbers. The solution for the system could be linking the phone number with the account details such as account number, name. When people change their phone number, the system will automatically update it by recognizing the account details. Therefore, users could still transfer money to the contacts even if others change their number.

4. The investment function may have limitations in the first stage. As a newly launched banking app, the willingness for the local company to cooperate with the system might be low. Especially for the firms to share a small percentage of their stocks. In order to increase the willingness for companies to

cooperate, they could get the lower rate while transferring money by using the app.

5. Virtual assistant didn't have the answer to all the questions. The fact is even if we predicted 90% of the questions that our consumers will ask, there is still a chance that the concerns they have might not be able to be answered by the virtual assistant. For example, there could be issues with the system or features where the consumer cannot scan their qr code. Virtual assistants can help by giving basic information. It does have a lot of benefits like making appointments, giving aid in different languages.
6. Virtual assistants are not completely perfect, therefore users occasionally need to repeat themselves to make them understand what they are actually implying. We can try and solve this issue by collecting more data related to the matter over time. Moreover, as technology progresses, we can include artificial intelligence into the assistant so that it will have the ability to learn and better understand the user. This should also result in the assistant being more capable in terms of carrying out specific user requests.

## ACKNOWLEDGMENTS

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## REFERENCES

1. BCA - BCA mobile' [www.bca.co.id](http://www.bca.co.id), accessed August 25, 2021, from <<http://www.bca.co.id/en/Individu/layanan/e-banking/BCA-Mobile>>.
2. Bloodgood, J., & Bauerschmidt, A. (2002). Competitive Analysis: Do Managers Accurately Compare Their Firms To Competitors? <i>Journal of Managerial Issues,</i> <i>14</i>(4), 418-434. Retrieved August 23, 2021, from <http://www.jstor.org/stable/40604402>
3. Brown, V., & Paulus, P. (2002). Making Group Brainstorming More Effective: Recommendations from an Associative Memory Perspective. <i>Current Directions in Psychological Science,</i> <i>11</i>(6), 208-212. Retrieved August 23, 2021, from <http://www.jstor.org/stable/20182814>. Making Group Brainstorming More Effective: Recommendations from an Associative Memory Perspective. <i>Current Directions in Psychological Science,</i> <i>11</i>(6), 208-212. Retrieved August 23, 2021, from <http://www.jstor.org/stable/20182814>
4. COMMONWEALTH BANK OF AUSTRALIA (CMWAY) Company Profile & Facts - Yahoo Finance. <https://finance.yahoo.com/quote/CMWAY/profile/>. Accessed 24 Aug. 2021.
5. Hayikader, S., Hadi, F. N. H. binti A., & Ibrahim, J. (2016). Issues and Security Measures of Mobile Banking Apps. *International Journal of Scientific and Research Publications*, 6(1).
6. Laukkanen, T. (2017). Mobile banking. *International Journal of Bank Marketing*, 35(7), 1042-1043. <https://doi.org/10.1108/ijbm-10-2017-0218>
7. Liedtka, J., & Ogilvie, T. (2011). BRAINSTORMING. In <i>Designing for Growth: A Design Thinking Toolkit for Managers</i> (pp. 103-112). New York; Chichester: Columbia University Press. Retrieved August 23, 2021, from <http://www.jstor.org/stable/10.7312/ried15838.12>
8. SINGER, E., & YE, C. (2013). The Use and Effects of Incentives in Surveys. <i>The Annals of the American Academy of Political and Social Science,</i> <i>645</i>, 112-141. Retrieved August 23, 2021, from <http://www.jstor.org/stable/23479084>
9. Start saving and banking. Stash. (n.d.). <https://www.stash.com/online-banking>. Accessed August 24, 2021.
10. 'Why international money transfers run into problems' 2016, *Punch Newspapers*, accessed August 26 2021, from <<https://punchng.com/international-money-transfers-run-problems/>>.
11. Yogiriz 2021, 'UI/UX Case Study : BCA M-Banking', *Medium*, accessed August 25, 2021, from <<https://medium.com/@yogiriz/ui-ux-case-study-bca-m-banking-e09ea5526a79>>.
12. 'Revolut - Revolut mobile' [www.revolut.co](http://www.revolut.co), accessed August 25, 2021, from <<https://www.revolut.com/financial-statements>>.
13. Zahra, S., & Sherry S. Chaples. (1993). Blind Spots in Competitive Analysis. <i>The Academy of Management Executive (1993-2005),</i> <i>7</i>(2), 7-28. Retrieved August 23, 2021, from <http://www.jstor.org/stable/4165119>

## APPENDIX

First survey results:

<https://my.forms.app/report/611a18e4c73a7d3ac8d3a6b7>

Second survey results:

<https://my.forms.app/chiaranathania12/market-research-survey-1/report>

Brainstorming ideas:

[https://docs.google.com/document/d/1pR2nDKGzMtI0pZ9\\_xPMcxaRSpDaP\\_jbiyWPpPt-0fgs/edit](https://docs.google.com/document/d/1pR2nDKGzMtI0pZ9_xPMcxaRSpDaP_jbiyWPpPt-0fgs/edit)



