APPLICATION DEVELOPMENT RECOMMENDATIONS WRAPPING BASED ON TYPE OF MYERS BRIGGS ON ANDROID-BASED UCLASSIFY API

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ABSTRACT

A lot of things that can be done when someone reveals the form of attention and affection, and anything will be done by someone with the intention of making those we love feel impressed. One of them is by giving a gift or gifts. Each one has a personality in the form of an overall attitude, expression, feeling, temparmen, characteristic and also the behaviour of a person. The attitude of feeling expression will be tempramen & manifested in one's actions when confronted to a particular situation. Everyone has a tendency of continuous behavior that apply consistently in the situation he was in face, so so characteristic of his personality. Each personality has something stuff gladness.

Provide a unique and creative gifts based on the nature of someone could certainly give the impression for people who will be given gifts, unique in terms of form and content of wrapping and also the goods in accordance with the personality of a person. But most people still often confusion in determining the prize/gift in accordance with the personality of a person.

Of the problems that have been described researchers build applications Application Smartgift with the main feature of the application is looking for a gift for the sale of goods at a time can directly place an order online at stores that already exists dibukalapak.com determination of the type of goods for gifts based on personality types MBTI prospective recipients of the gifts. By using a tweet on twitter using the gift recipient candidates Twitter API, then Tweet it will be sent to the API uClassify for MBTI personality types were analyzed.

Keywords: API, Wrapping uClassify, MBTI, Twitter API

1. INTRODUCTION

A lot of things that can be done when someone reveals the form of attention and affection, and anything will be done by someone with the intention of making those we love feel impressed. One of them is by giving a gift or gifts. Gifts are usually given at a certain moment of the day or special events such as birthdays, weddings, valentine's day, and other special days as a form of attention and affection toward the people closest to you or a loved one, usually a gift given in the form of goods or objects have a fondness of the people will be given a gift like giving flowers, perfume, clothing, jewelry, accessories, electronics and more. This is certainly already is common. Packaging of the gift itself is also no changes from year-to year, gifts are included in the cardboard box or paper then wrapped with wrapping paper. Give a gift in a way like this have become common and the need for a new thing in giving gifts or gifts, whether from the shape of the packaging is also the contents of the gift.

Each one has a personality in the form of an overall attitude, expression, feeling, temparmen, characteristic and also the behaviour of a person. The attitude of feeling expression will be tempramen & manifested in one's actions if in hadapkan to a specific situation. Everyone has the behavior tendencies of baku/continuously valid consistently in the situation he was in face, so so characteristic of his personality. Each personality has something different favorite item and every individual has ownership of the goods is very important for identity and their lives, and people who consider the ownership of the goods is a secondary thing [1].

Provide a unique and creative gifts based on the nature of someone could certainly give the impression for people who will be given gifts, unique in terms of its form and content and also gift items sesusai with the personality of a person. But most people still often confusion in determining the prize/gift in accordance with the personality of a person. The items to be given, it could be a good fit or not fit with someone because you don't know the person who will be given a prize/gift kesukannya what it looks like. And most people also have difficulty buying and wrapping the gift in which.

Based on data obtained from a questionnaire that has been disseminated via social media, apparently from 41 responses that

have a twitter account is 97.6% or 1 person who does not have a twitter account. And as evidenced by the 40 responses from the question "is there never give a gift or a gift for someone?" 97.5% answered Yes and 2.5% answered no. Which means most people who fill out the questionnaire often give gifts or prizes. the next question is "are you finding constraints when determining gifts/prizes in accordance with the personality of the person who will give the prize?" and 90% of the 40 responses answered Yes and 10% not answering.

Of the problems that have been described peniliti Application Smartgift application built with the main feature of the application is looking for a gift for the sale of goods at a time can directly place an order online at stores that already exists dibukalapak.com. where the site Bukalapak is a trusted online shopping site in Indonesia that sells various products required the entire community of Indonesia. Along with the development of the technology, the more activity is done digitally, more convenient and practical, including activities for purchases now languid done digitally, whether through computers, laptops, and Smartphones that can accessible anytime and anywhere. Bukalapak present as a trusted online stores with consumer systems to consumers. This allows anyone to sell and also buy products easily online. Selling online means of Bukalapak has a vision to be the number one marketplace in Indonesia with a mission to empower SMES across Indonesia. Every person in Indonesia can market products unggulannya in Bukalapak by opening the online store with a generous selection of shopping system unit and also wholesale [2].

Another feature is the determination of the type of goods for gifts based on personality types MBTI prospective recipients of the gifts. By using a tweet on twitter using the gift recipient candidates Twitter API, then Tweet it will be sent to the API uClassify for MBTI personality types were analyzed. The output of the MBTI personality type uclassify is. Then the system will find items that match the personality types MBTI prospective recipients of such gifts. The system will also show the recommended goods.

MBTI MBTI instrument has fundamental differences with the other personality is the instrument that the MBTI Instrument designed for applying the basic theory of psychology of Jung. So to understand it, we must also understand the theory. MBTI instrument contains 4 main index were sourced from the preferences of the psychology of Jung, namely: 1. Extraversion – Introversion (E – I) 2. Sensing – Sensing (S – N) 3. Thinking – Feeling (T – F) 4. Judging – Perceiving (a – P) E-Index I is designed to figure out the energy in one's self; Extrovert or introvert. Extrovert energy appears to be from someone's orientation on the environment outside of himself, while energy introvert looks of the orientation of a person in the world in myself [1].

Based on the above background, the reason how to design application Smartgift in order to be one technology that can provide the information directly. And as the giver of the information regarding the seller's prize.

Based on the problems examined then the intent of the research is to produce an smartgift application that helps search for android-based gift shop and the goals you want to achieve in this study is:

a. Make gift recommendations application based on the personality of the person, so that makes it easy to give recommendations in determining the prize.
b. Provide information through the API wrapping sellers online sales bukalapak, so that makes it easy to search the gift.

2. CONTENTS RESEARCH

2.1 Theoretical basis

The cornerstone of the theory on writing this thesis will explain about theories that relate to the application of Smartgift.

2.1.1 Android

Android is a mobile operating system that grows in the middle of another operating system that is evolving today. Other operating systems such as Windows Mobile, i-Phone OS, Symbian and many more also offers a wealth of content and the keoptimalan runs on top of existing hardware devices. However, the operating system runs with prioritizing core applications that are built on its own regardless of the considerable potential of third-party applications. Therefore, the existence of limited distribution of third-party applications for their platforms [2].

2.1.2 Myers-Briggs Type Indicator (MBTI)

MBTI stands for Myer Briggs Type Indicators that have been developed by a woman named Katherine Cook Briggs and her daughter named Isabel Briggs Myer. MBTI is a personality test that revealed the most accurate and easy to use. MBTI scales have 4 trend where:

a. Extrovert vs Introvert.
b. Sensing vs Intuition.
c. Thinking vs Feeling.
d. Judging vs Perceiveing.

While the type itself is divided into 16 sections are clarified and more detail. Each nature will be described in the following article [1].

2.1.3 Uclassify

uClassify is a free learning machine that provides a web service API to simplify where and in making and using pengklasifikasi text. There are seventy-two text classification. Of them as development needs anilisis on the construction of the smartgift application to determine the prize based on the personality of the MBTI. use the analysis of Myers Briggs Attitude, Myers Briggs Judging Function, Myers Briggs Lifestyle, Myers Briggs Perceiving Function, the following explanation of the analysis which will be in use.

a. Myers Briggs Attitude

Analysis of the dimension of Extraversion/Introversion personality types according to the Myers-Briggs personality model. The analysis is based on the writing style that determine personality type based on self assessment questionnaire. The text of the training manual is selected based on the author's understanding of the personality and style of writing (see Jensen & DiTiberio, 1989). Currently only works for text United Kingdom language.

c. Myers Briggs Judging Function

Determine the dimensions of thinking/feeling personality types according to the Myers-Briggs personality model. The analysis is based on the writing style that determine personality type based on self assessment questionnaire. The text of the training manual is selected based on the author's understanding of the personality and style of writing (see Jensen & DiTiberio, 1989). Currently only works for text United Kingdom language.

d. Myers Briggs Lifestyle

Determine the dimensions of the evaluator/Perceiving of personality type, according to the Myers-Briggs personality model. The analysis is based on the writing style that determine personality type based on self assessment questionnaire. The text of the training manual is selected based on the author's understanding of the personality and style of writing (see Jensen & DiTiberio, 1989). Currently only works for text United Kingdom language

e. Myers Briggs Perceiving Function

Determine the dimensions of the Sensing/iNtuition of personality type, according to the Myers-Briggs personality model. The analysis is based on the writing style that determine personality type based on self assessment questionnaire. The text of the training manual is selected based on the author's understanding of the personality and style of writing (see Jensen & DiTiberio, 1989). Currently only works for text United Kingdom language

2.1.4 *Web Service*

Web service is a software system designed to support interoperability and interactions between systems on a network. The Web service is used as a facility provided by a web site to provide the services (in the form of information) to the other system, so that other systems may interact with the system through the service (service) provided by a system that provides a web service. Web service data store information in XML format, so that this data can be accessed by other systems even though different platforms, operating systems, as well as language compilers [11].

Web service aimed at improving collaboration between the programmer and the company, which allows a function in the Web Service can be borrowed by another application without needing to know the details of the programming contained in it [11].

Some of the reasons why the use of the web service are as follows:[11]

a. Web services can be used for transforming one or more business logic or class and a separate object in one scope into one, so that the level of security can be handled properly [11].
b. Web service possesses the ease in the process of deployment, since it does not require special registration into an operating system. Web service simply uploaded to the web server and is ready to be accessed by parties who have been granted authorisation [11].

The Web service runs on port 80 which is the standard HTTP protocol, thus the web service does not require any special configuration on the firewall side of the [11]

2.1.5 *JavaScript Object Notation* (JSON)

JSON (JavaScript Object Notation) is a lightweight data interchange format, easy to read and written by humans, as well as easily translated and made (generate) by computer. This format is based on the JavaScript Programming language, Standard ECMA-262 3rd Edition-December 1999. JSON is a text format that is not dependent on any programming language because it uses the style language that is commonly used by programmers family C include C, C++, C #, Java, JavaScript, Perl, Python etc. Because of these properties, making it ideal as a JSON data exchange language [5].

The JSON structure is made of two [5]:

a. A collection of name/value pairs. In some languages, it is declared as an object (object), recording (record), structure (struct), dictionary (dictionary), hash table (hash table), list of berkunci (keyed list), or associative arra.
b. List the value of the terurutkan (an ordered list of values). In most languages, this is expressed as an array (arrays), vector (vector), lists (list), or the order (sequence).

These data structures are known as universal data structure. Basically, all modern programming languages support this data structure in the form of the same or different. It is called so because the

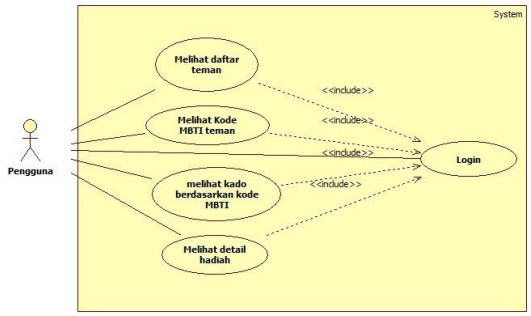
format of the data is easily interchangeable with programming languages that are also based on this data structure [5].

2.2. A Functional Needs Analysis

Analysis of functional requirements using use Case Diagrams to describe the functionality of the software that will be built in mobile flatform.

2.2.1. *Use Case Diagram*

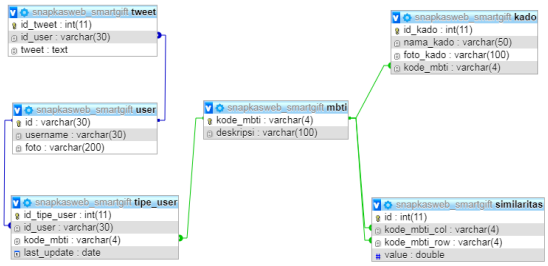
Use Case Diagram is a construction to describe relationships that occur between actors with the activities contained in the system.



Gambar 1 *Use Case Diagram*

2.3 The design of data

Here is the design of data from software that will be built by using a diagram of the relation. Diagram of relation is the set of relationships between two or more tables in a database system.



Gambar 2 Diagram Relasi

2.4 System Implementation

System implementation stage is the stage of translation of design based on the results of the analysis into a specific programming language as well as the application software that is built on real environments.

2.4.1. Hardware Requirement

Tabel 1 Minimum Hardware Requirement

Name Hardware	Specifications
RAM	512 MB
Prosesor	1 *core* dengan kecepatan 830 MHz
Memory Internal	1 GB
GPS	Tersedia
Prosesor	Quad-Core 1.2 GHz
Memori	1GB Ram, 8GB Rom

2.4.2. Software Requirement

Tabel 2 Software Requirement

Nama Perangkat Lunak	Spesifikasi
Operating System	Windows 10 64 bit
IDE	Android Studio 2.1
Browser	Google Chrome
Text Editor	Sublime Text 3
Operating System	Android 4.4 Kitkat

2.5 Testing The System

The next stage is the stage of testing the system on a gift recommendation application. This stage is the most important thing that aims to find an error or deficiency in the application that is being built. This test aims to find out whether the application meets the criteria which have been made in accordance with the purpose of designing the application or not. Testing of the system application will use strategy testing, alpha testing (black-box) and beta testing.

2.5.1. Plan Testing

Alpha testing is done using black-box method that focuses on the functional requirements of the software. This program testing method using black-box. Black-box testing is testing a program based on functional view of the program. The purpose of the black-box method is to find the error function on program. Testing with the black-box method is done by the input data provided a number of applications which are then processed in accordance with the needs of its current status to see if the application is then processed in accordance with the needs of its current status to see if applications produce output that is used and in accordance with the functions of the program. If the given input data from the process of producing outputs that correspond to the needs of its current status, then the applications that have been made are correct. But if the resulting output does not correspond to the needs of its current status, then there is still an error in the application.

2.5.2. The Results Of The Testing Functionality

Results Of Testing The Functionality Of Sub System Mobile.

Tabel 3 Results Of Testing The Functionality Of Sub System Mobile

Class Test	Test Points	Status
Login	Input data login	*Valid*

Class Test	Test Points	Status
List Perteman twitter	Input data	*Valid*
Detail profil teman	Input data pengguna	*Valid*
Kado	Input Data pengguna	*Valid*
Detail Kado	Input Data kado	*Valid*

2.5.3. Beta Test Results

Results Of Questionnaire Questionnaire Answer Scale Gifts Finders

SS : Sangat Setuju
S : Setuju
RG : Ragu-Ragu
TS : Tidak Setuju
STS : Sangat Tidak Setuju

Based on the results of questionnaires given to the general public as a sample, the percentage can be calculated using the formula:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

In each answer questionnaires will be given a score of below:

Tabel 4 Score Questionnaire Answers

Scale Of Answers	Description	Score
SS	Sangat Setuju	5
S	Setuju	4
RG	Ragu-ragu	3
TS	Tidak Setuju	2
STS	Sangat Tidak Setuju	1

a. Following are the results of a questionnaire that had been filled by 30 respondents as examples of sample-taking the first question.

Tabel 5 Results Of The Questionnaires The First Question

No	QUESTION
1	Apakah aplikasi smartgift dapat memberikan rekomendasi sesuai dengan kepribadian seseorang?

Here is the calculation of the percentage of the results of the questionnaire questions first:

Tabel 6 Results Of The Questionnaires The First Question Gifts Finders

No	Description	Answers Respondents	Score
1	Sangat Setuju	12	60
2	Setuju	13	52
3	Ragu-ragu	3	6
4	Tidak Setuju	2	4
5	Sangat Tidak Setuju	0	0
Jumlah		30	120

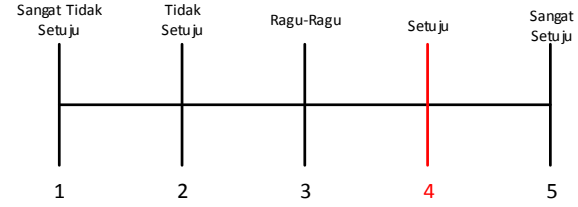
From the results above, the percentage value can be calculated as follows:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

$$Rata - rata = \frac{120}{30}$$

$$Rata - rata = 4$$

Results the percentage of getting results 4 of 5 with the data of 30 respondents. Here is a picture of the results of the assessment questionnaire first question Gift Finder.



Gambar 3 The Results Of The First Assessment Questionnaire Questions

It can be inferred from the first question that the user agrees that the application recommendations based on the MBTI personality gift can make in determining the appropriate gift type.

b. Following are the results of a questionnaire that had been filled by 30 respondents as examples of sample-taking the second question.

Tabel 7 The Second Question Questionnaire

No	QUESTION
2	Apakah anda sebagai penerima kado yang direkomendasikan sangat cocok dengan barang yang anda inginkan?

Here is the calculation of the percentage of the second question questionnaire results:

Tabel 8 The results of the questionnaires the second question gifts Finders

No	Description	Answers Respondents	Score
1	Sangat Setuju	17	85
2	Setuju	10	40
3	Ragu-ragu	1	3
4	Tidak Setuju	2	4
5	Sangat Tidak Setuju	0	0
Jumlah		30	132

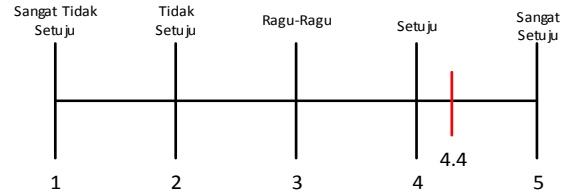
From the results above, the percentage value can be calculated as follows:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

$$Rata - rata = \frac{132}{30}$$

$$Rata - rata = 4.4$$

Results the percentage of getting results 4.4 from 5 data 30 respondents. Here is a picture of the results of the assessment questionnaire the second question;



Gambar 4 The Results Of The Assessment Questionnaires Of The Third Questio

It can be deduced from the second question that the user agrees that the application of recommendation smartgift give gifts in accordance with personality and items in wanted.

c. Following are the results of a questionnaire that had been filled by 30 respondents as examples of sample-taking the third question.

Tabel 9 The Third Question Questionnaire Results

No	QUESTION
3	Apakah aplikasi ini mempermudah anda dalam pencarian kado yang dijual?

Here is the calculation of the percentage of the third question questionnaire results:

Tabel 10 Hasil Kuesioner Pertanyaan Ketiga

No	Description	Answers Respondents	Score
1	Sangat Setuju	14	70
2	Setuju	12	48
3	Ragu-ragu	4	12
4	Tidak Setuju	0	0
5	Sangat Tidak Setuju	0	0
Jumlah		30	130

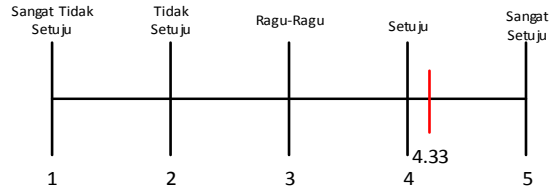
From the results above, the percentage value can be calculated as follows:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

$$Rata - rata = \frac{130}{30}$$

$$Rata - rata = 4.33$$

Results percentage of 4.33 of 5 get results with the data of 30 respondents. Here is a picture of the results of the assessment questionnaires of the third question;



Gambar 5 Results Of Assessment Questionnaires Third Question

It can be concluded from the third question that the user agrees that the application of recommendation smartgift give ease to find goods that are sold in accordance with the recommendations received the user.

d. Following are the results of a questionnaire that had been filled by 30 respondents for example retrieval sample question four.

Tabel 11 The Fourth Question Questionnaire

No	QUESTION
4	Apakah detail barang dan harga yang tampil pada aplikasi smartgift sesuai dengan barang yang ada di bukalapak?

Here is the calculation of a percentage of the fourth question questionnaire results:

Tabel 12 The Fourth Question Questionnaire Results

No	Description	Answers Respondents	Score
1	Sangat Setuju	18	90
2	Setuju	10	40
3	Ragu-ragu	2	6
4	Tidak Setuju	0	0
5	Sangat Tidak Setuju	0	0
Jumlah		30	136

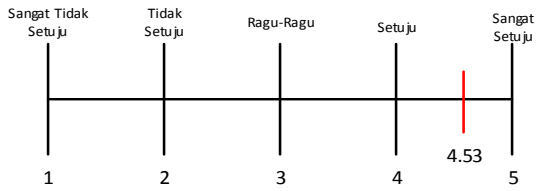
From the results above, the percentage value can be calculated as follows:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

$$Rata - rata = \frac{136}{30}$$

$$Rata - rata = 4.53$$

Results percentage of 4.33 of 5 get results with the data of 30 respondents. Here is a picture of the results of the assessment questionnaires of the fourth question;



Gambar 6 The Results Of The Assessment Questionnaires Of The Fourth Question

It can be inferred from the fourth question that users couldn't agree more smartgift recommendations provide detailed application information on the recommended goods.

e. Following are the results of a questionnaire that had been filled by 30 respondents for example taking the fifth question sample.

Tabel 13 Hasil Kuisioner Pertanyaan Kelima

No	QUESTION
5	Apakah anda cepat menguasai cara penggunaan aplikasi smartgift ini?

Here is the calculation of a percentage of the fifth question questionnaire results:

Tabel 14 Hasil Kuesioner Pertanyaan Kelima

No	Description	Answers Respondents	Score
1	Sangat Setuju	17	85
2	Setuju	10	40
3	Ragu-ragu	1	3
4	Tidak Setuju	2	4
5	Sangat Tidak Setuju	0	0
Jumlah		30	132

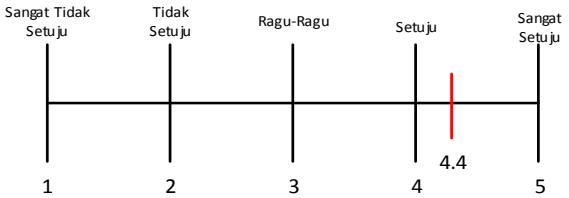
From the results above, the percentage value can be calculated as follows:

$$Rata - rata = \frac{jumlah\ skor}{jumlah\ responden}$$

$$Rata - rata = \frac{132}{30}$$

$$Rata - rata = 4.4$$

Results the percentage of getting results 4.4 from 5 data 30 respondents. Here is a picture of the results of the assessment questionnaires of the fifth question;



Gambar 7 The Results Of The Assessment Questionnaires Of The Fifth Question

It can be inferred from the fourth question that users agree to the application of recommendation smartgift it is easy to be understood and used in the activities on the application.

2.5.4. Conclusion The Results Of The Testing

a. Blackbox Testing Results Conclusio

Based on the results of the testing that has been done then the obtained conclusions that all existing processes on the application recommendations wrapping has been running as expected.

b. Conclusion The Results Of Beta Testing

Based on the test results obtained by the conclusion that the difference:

- The user agrees that the application recommendations based on the MBTI personality gift can make in determining the appropriate gift type.
- Application of smartgift recommendations give gifts in accordance with personality and items in wanted.
- The application of recommendation smartgift give ease to find goods that are sold in accordance with the recommendations received the user.
- The application of recommendation smartgift provide detailed information about the recommended goods.
- The application of recommendation smartgift it is easy to be understood and used in the activities on the application

3. CLOSURE

In this section, describes the conclusions contains the results obtained after the analysis, design, and implementation of the design of software built and have been developed as well as suggestions that will provide notes It is important and possible repairs need to be done for previous software development.

3.1 Conclusion

Based on the results of the analysis and implementation of obtained in making this final assignment. You can take the conclusion that, from the objective APPLICATION DEVELOPMENT RECOMMENDATIONS WRAPPING BASED ON TYPE OF MYERS BRIGGS ON ANDROID-BASED UCLASSIFY API is making the application of wrapping one's personality based on recommendations, so that makes it easy to give recommendations in the determination of gifts and gift sellers provide information via online sales bukalapak API, so that makes it easy to search the gift. Following is the result of application development goals of bandung, near you has been in analysis and in the test so obtained the following results:

a. Make gift recommendations application based on a person's personality, have been met. In the test results obtained by testing that the application recommendations based on the MBTI personality gift can make in determining the appropriate type of gift and give gifts in accordance with personality and items in wanted.
b. Give the seller a gift through FIRE bukalapak online sales, have been met. In pengugujian obtained test results give you the ease to find goods that are sold in accordance with the recommendations received the user, providing detail information on the recommended items and easy to understand and used in performing the activity on the application.

3.2 Advice

In building the application, there are still many shortcomings. Therefore need to be developed and further refinement. Us for the suggestion in order for the system to be built can work even better, should do the following things for future development suggestions :

a. The addition of Notification If there is a friend that birthday as well as provide recommendations.
b. The addition of the criterion of hobby and a fondness for a more complete data.
c. Using gender analyzer uClassify tool to find out the sex so that the recommended gifts of personality and gender, for accurate data.

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