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Abstract

In the era of digital, social media is highly used, and many businesses are using this opportunity to promote their product online massively using promotions from many different social media influencers or endorsement to famous people. Many promoters also need a great representation of their product in the shape of images and pictures to make them look great. However, finding a great quality photographer is quite hard right now, because everything is done manually from mouth to mouth, and there are no applications or websites in Indonesia that can provide a service of renting great photographers. There are also many bad photographers that's not capable of doing professional photography. Mobile Application has been a part of our everyday life since it first came out on smartphones. Many applications helps our daily life such as uber, Gojek, and grab. Those aforementioned applications helps with transport, logistics, and payment. Although there are platforms like Airbnb that listed entertainment / experiences from their user to be rented, It doesn't focuses on photographers and such. This paper proposes the idea of an application that connects photography related peoples such as a professional photographer, hobbyist, or someone who loves to be a model in one platform. The application can also become a platform of incomes to them and idea sharing for all groups.

1 INTRODUCTION

In the era of digital, social media is highly used, and many businesses are using this opportunity to promote their product online massively using promotions from many different social media influencers or endorsement to famous people. Many promoters also need a great representation of their product in the shape of images and pictures to make them look great. However, finding a great quality photographer is quite hard right now, because everything is done manually from mouth to mouth, and there are no applications or websites in Indonesia that can provide a service of renting great photographers. There are also many bad photographers that's not capable of doing professional photography.

After we finished our research about the problems and finding the solution, we were inspired to make an application called "Lensman". Lensman is an application that brings together customers that need photography services with professional licensed photographers. Every customer can choose which photographer they want based on their portfolio and ratings by past customers. We believe that this solution is going to solve what's going on right now in the photography industry.

The obstacles faced in the world of photography are as follows:

1. Quality of Human Resources
    To find quality human resources in the field of photography is not an easy job. It takes foresight to find professionals who are able to produce good photographic products.
2. Availability of Capital
    Opening a photography business certainly requires a lot of capital and this has become a problem that has arisen. Because a little and a lot of available capital will affect the development and progress of the business being occupied.
3. Location of Business or Business
    The place of business is a necessity in doing business. Even though everything is digital, many people still do consultations and come directly to the office. For this reason, it is necessary to consider and pay attention to its location so that it can be easily reached and found. Because the strategic position will be more profitable and can be seen by many people.
4. Business Concept
    After the core of the business is obtained, then the business concept is very decisive for the success of the photography business. This is because in the photography business there are many areas that must be considered and occupied.
5. Market Research
    The important thing to do is to do market research first to take into account and analyze competitors in the market. Research is a point that must be considered, and if it is missed it will have an impact on its development.

2 METHODOLOGY

The strategies or methodology approach to investigate and analyze data based on the distinguished issues, consist of:
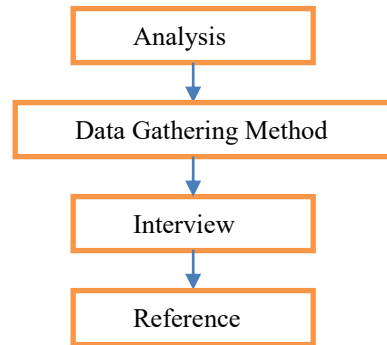
Figure 1. Methodology of this research

The explanation of the image above is as follows:
1. Analysis Process
    In this analysis cycle, there are two different ways which the authors use to dissect the information.
2. Data Gathering Method
    These are a few strategies to acquire information and the best approach to accumulate the necessities to be utilized in the proposal.
3. Interview
    Information gathered by doing meeting on the measurement of the measure of an article of clothing industry in Tanah Abang to identify the latest stock administration framework that has been existing previously. Stock and centerpiece of clothing industry current circumstance information assembled utilized as references which can be delivered into a legitimate arrangement.
4. References
    Authors will assemble hypotheses that help the investigation and planning measure from course books, diaries, reports, sites, and other media.

3. CONCEPTS AND THEORIES

This paper will not be able to be made without the foundation of concepts and theories about both photography (including the state of the art and current condition of the market) and the application as an ecommerce platform and service provider. This section is going to be divided into 2 parts:

Photography

Nowadays, especially in Indonesia, many photography studios are relying promotions and marketing on their social media and their own website. There are no exact photography service platform that focuses on promoting photography studios in Indonesia. This causes these studios to promote their service without any certainty that their service will be seen by people that actually need a photography service. However, based on research by prnewswire.com, world photography industry has accounted for $79.12 billion in 2017 and is expected to reach $149.98 billion in the next 10 years. This is distinctly different on what's happening here in Indonesia where even though the market is also rising, it's not rapidly rising with the same speed as the entire world. In order to do that, there's going to be a stimulation needed for all photographers in Indonesia. This can be done by opening an entirely digital marketplace specially for photography, which is going to be explained next.
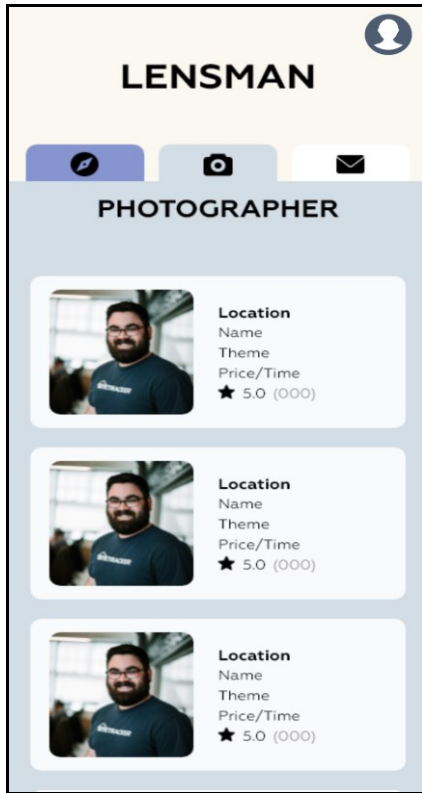
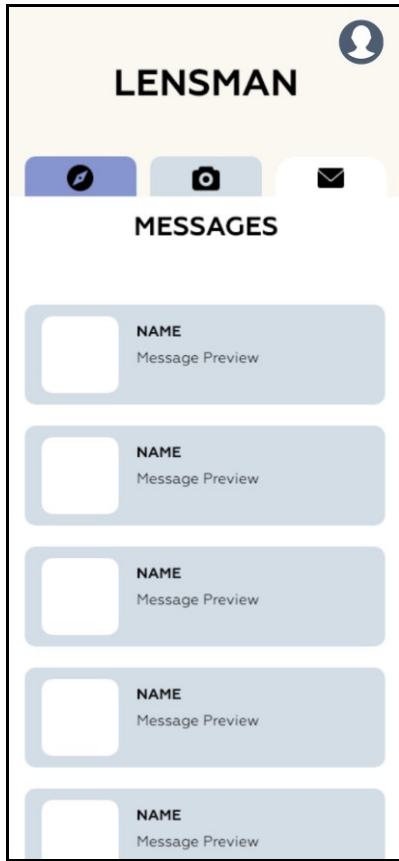Figure 1. Photographer using Lensman
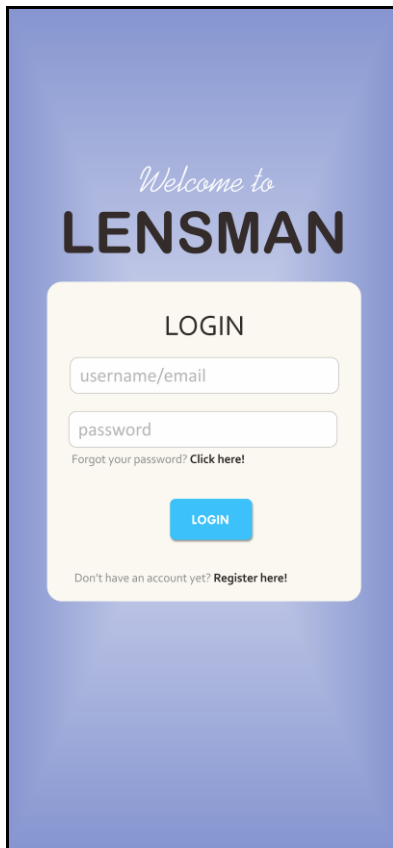
Figure 2. Message using Lensman

Figure 3. Login using Lensman
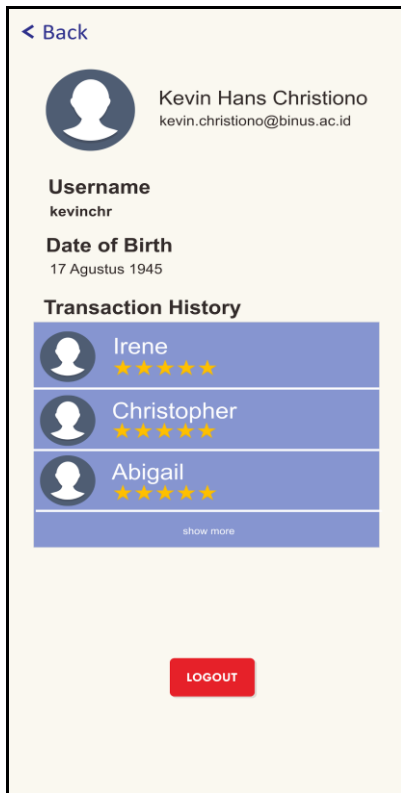
Figure 4. Explore using Lensman

Figure 5. Biodata using Lensman

Figure 6. What is Lensman

Figure 7. Explorer using Lensman

3.1 Application as an E-Commerce Platform and Service Provider

Based on yarddiant.com, an application as an e-commerce is an area which application is used in various fields of business such as wholesale, retail, as well as manufacturing unit. This type of application also connects businesses with their customers directly. Every customer can search for things or services based on what their needs and preferences. Lensman is implementing this type of application, so that it is widely opened for every customer and photographer (individual or studio) to explore what this application has to offer. An E-commerce application is able to give freedom for their customers to choose whether they want to buy or use items or services based on their budget, and the sellers or service providers are able to set their own bars, including their price based on their experience on their expertise.

4. SURVEY LITERATURE

People who work behind cameras are usually Called Photographers, these individuals take beautiful and stunning images such as sceneries, peoples, places, etc. But there's actually another term for them which is Lensman, the name for our proposed Application on this Paper. The idea came from seeing another application that helps "ojek" or motorcycle taxi find their customer easily through applications like Go-jek, Grab, and uber. Our "ojek" here are Photographers or People who want to use their photography skill to get an income or customers. Before we finalize our idea we need to survey people who could become our customer / target audience in mind, so that when we deploy our application it suits them and solved the problem or question we want to solve. We survey how another application handles a middleman-like job between a user and another user, so that our job is balanced and not biased to one of them. Surveying other media also helps us find statistics on what kind of functions or products the target audience needs on our application.

5. RESEARCH METHODS

The method we use in this research is Quantitative Method, where we will make an applications related to the data from the survey that we do such data as well as questions through questionnaire, one of which is gform request to other people and also photographer which is the

target in this application about the effectiveness of our application, then after that a calculation will be carried out in order to produce an important, efficient, and impact percentage of this Lensman application. The percentage of the data we collect will be made in chart for each question and then from the results of the graph in this gform, after that we will analyze this important application. However, to provide a questionnaire to photographers is not easy, this is due to the lack of photographers that we know, so it requires extra effort to find some photographers.

6. RESEARCH RESULT

6.1 Software Development

Research of information about application development is needed in order to create a healthy team and application development in the future. We have done research on Mobile Application Development and here are a few things that we might use or implement in our project in order to make Lensman the best photography marketplace on the internet.

The Process Model that we're going to use for the Lensman application project is Agile Model, which is a model that's more modern than some other models by adapting to changes that might occur in the future. Even though the time of development might be longer than other models, the quality that's going to be made from this process model is better. Moreover, Agile Model has several benefits, such as faster system development, reduction of risk for the non-technical software implementation, more flexibility based on needs of the future customer for a better application rating, and many more. This process model is also going to be linked with how our team will be accepting feedback and ideas of potential improvements from the customer in the future, so that the features are going to be updated periodically in order to compete with others in the market, and also to raise the functionality of this application.

Next, we've searched all over the internet and it's quite certain that Android Studio is going to be the IDE that we're going to use. We choose Android studio because it's the official IDE for Android Application Development and it's already been one of the most used IDE in the world right now. Based on our research, Android Studio has its own fast and feature-rich build system, android emulator for application testing, unified environment for all android phone types, and many more features.

We've also done research on what Database Software that we're going to use, and we've found that PostgreSQL is one of the best and most advanced open-source databases that offers many advantages and benefits for our application to work properly. It supports the ACID (Atomicity, Consistency, Isolation, and Durability) concept which is very crucial on a database software. Moreover, it also has diversified extension functions and a wide variety of communities which make problem solving easier.

6.2 Post-production Development

The maintenance that will be done is first, when the android version is updated, so we have to update the application that we made, it aims to keep our applications compatible. Then secondly, there will be bugs found in the application in the future that need to be fixed and a bug report is needed to make it easier to find and fix bugs in the future. And the last maintenance is to improve the quality of the system that we have built to deal with bugs before they occur.

Because the model that we used is the agile model, there are some features that will be added in the future so that it can further facilitate the user. For example, the feature that will be added   is camera rent feature where the user can use the camera when he rents through the Lensman application.

7. DISCUSSION

The problem in real life is when we need to find photographers, we often find some fake photographers so we have to find out if the photographer that we rent is a real professional photographer or not. And it's hard to find a good photographer that you can trust. And from the photographer's side, it is hard for a newcomer to make their name become known by the customer. With this application, we can solve so many problems that the customer and service provider have. And by doing it online, we can save customer's and photographer's time. By doing this online and protected by the admin, it can reduce the risk of photographers or the customer to be scammed. So as the admin, we can help to protect the customer and photographer. If one side of the deal is trying to scam the other party, we can protect the other party from being scammed. The problem in finding service to rent is that we cannot trust the service provider and we don't know about their past result. With this application the customer can see the review about the photographer so they can think again about renting the photographer.However, in the future, there might be new problems that can occur, such as fake photographers on the platform that are not identified by our Admin, or even scams that are not able to be detected. That's why improvements have to be made in the future so that our application can adapt based on later condition.

8. CONCLUSION

Our application is meant to be a place where we can find some photographers that can be trusted and we protect the customer and the photographer so they can do their own role without any disruption and protected by the application itself. It can help the customer to save their time by doing the rent online and it can help the photographer to find customers. And we hope that our application can help both the customer and the photographer.

9. ACKNOWLEDGEMENT

References

Awaludin R. 2016. 4 Jenis Maintenance dalam Software Development. https://medium.com/laravel-indonesia/4-jenis-maintenance-dalam-software-development-3f3f94e9d814. Accessed on June 1st, 2020

Franindo, A. 2016. Mengintip Proses pembuatan mobile apps. https://suitmedia.com/ideas/Proses-pembuatan-mobile-apps. Accessed on June 1st, 2020

Segue.2015.8 Benefits of Agile Software Development. https://www.seguetech.com/8-benefits-of-agile-software-development/ . Accessed on June 1st, 2020

Novoseltseya,   E.2017.The   Benefits   You   Get   by   Doing   Agile   Project Management.https://apiumhub.com/tech-blog-barcelona/benefits-of-agile-project-management/. Accessed on June 1st, 2020

Terry,   J   .   2020   .   Benefits   of   Agile   Development. https://www.planview.com/resources/articles/benefits-of-agile-development/. Accessed on June 1st, 2020

Nur, N . 2016 . Kelebihan dan Kekurangan Beberapa Model Proses dalam Rekayasa Perangkat Lunak . http://share.its.ac.id/blog/index.php?entryid=747 . Accessed on June 1st, 2020

Muntenescu,   F   .   2020   .   Restore   RecyclerView   Scroll   Position   . https://medium.com/androiddevelopers/restore-recyclerview-scroll-position-a8fbdc9a9334 . Accessed on May 28th, 2020

Kalicinski, W . 2020 . Navigating Your Way Around Customizable Delivery . https://medium.com/androiddevelopers/navigating-your-way-around-customizable-delivery-e7a882390aa . Accessed on May 28th, 2020

Ford, K . 2020 . Android at large: how to bring optimized experiences to the big screen . https://medium.com/androiddevelopers/android-at-large-how-to-bring-optimized-experiences-to-the-big-screen-a50a6784e59d . Accessed on May 28th, 2020

Author of BitNine.net . 2016 . Advantages of PostgreSQL . https://bitnine.net/blog-postgresql/advantages-of-postgresql/ . Accessed on May 28th, 2020

Author of Guru99.com . 2020 . What is PostgreSQL? Introduction, History, Features, Advantages . https://www.guru99.com/introduction-postgresql.html . Accessed on May 28th, 2020

Author of CYBERTEC . 2020 . ADVANTAGES OF POSTGRESQL . https://www.cybertec-postgresql.com/en/postgresql-overview/advantages-of-postgresql . Accessed on May 28th, 2020

Research and Markets . 2019 . Global Digital Photography Market Report 2019: Market Accounted for $79.12 Billion in 2017 and is Expected to Reach $149.98 Billion by 2026. https://www.prnewswire.com/news-releases/global-digital-photography-market-report-2019-market-accounted-for-79-12-billion-in-2017-and-is-expected-to-reach-149-98-billion-by-2026--300884766.html . Accessed on June 4th, 2020

admin@yardd   .   2019   .   eCommerce   and   its   Applications   . https://www.yarddiant.com/blog/ecommerce/ecommerce-and-its-applications/ . Accessed on June 4th, 2020

mrfdn . 2019 . Konten dan Pasar . https://www.mrfdn.com/2018/09/konten-dan-pasar.html . Accessed on June 4th, 2020

McCombes,   S.   2019.   How   to   write   a   research   methodology. https://www.scribbr.com/dissertation/methodology/. Accessed on June 4th, 2020