

Digital Innovation in the Gaming Industry: Gamefinite

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Abstract

This project aims to provide gamers could not get from other gaming platforms that are cheaper games and platforms for live streams among gamers, and also intend to work together with gaming companies to expand their market. The project adopted a qualitative research by conducting case studies and quantitative research by conducting a survey using google forms which are filled by 63 participants. The research findings shows that the evolution of the gaming industry have been impacted by the development in technology by innovating on technological and creative side to attract audiences. Most previous studies are focused on discussing the evolution of the gaming industry due to the development of internet technologies in general and rarely to find studies which discussed on the innovation of gaming platforms. This affected the research findings as previous studies on current gaming platforms are mainly needed for this project. This project contains implications on innovating a new gaming platform helps users with the problems they faced on current gaming platforms and aims to propose a solution to overcome with those problems.

Keywords: Games; Gaming industry; Digital platform; Streaming platform; Social media; Innovations

Introduction

In the last few years, the development of technology not only led to PC performance but also the popularization of PC. The number of digital devices also increased which enables growth in the gaming industry [1]. The gaming industry has grown extremely over the last 3 decades. Video games started as a hobby for groups of young people around the 80s and 90s. In the previous decade, games have created a career path for players and also software engineers and an investment option for shareholders. The development of the gaming industry as a social activity has affected the world of technology and changed the global market [2]. Interactive online games have become a popular object of investigation since social and cultural sciences studied the internet [3]. The annual revenue of video game industry in 2020 projected to reached US\$128.5 billion which increased from US\$108.9 in 2017 [4]. Recently there has been a huge expansion of casual games that has led to a major shift in the game industry [5].

Gamefinite is a gaming platform where it works together with gaming companies and users can play games, go live and watch streams, and also do discussion and sharing about the games by joining Gamefinite subscription. Gamefinite is simply similar to a movie streaming platform such as Netflix and a music platform such as Spotify, but it sells games. The main purpose of Gamefinite is for game companies to expand their market and introduces their products to more people and allow users to experience many games without costing them a lot of money. Gamefinite will allow gamers or even professional players to stream while they are playing games. This will give an advantage for them as they will be better known by people worldwide and raised their names. In this social platform also, users might get tips and tricks for them to complete the games they played. The innovation introduced in the gaming industry have successfully overcome the transition to digitalization of the advancement of the new platform [6].

Problem Statement & Objective

The average cost of the most popular games played by online game users around the world is US\$60. According to data 21% of online game users in the United States in 2020 is under 18 years old and 38% of them is 18-34 years old, 26% of them is 34-54 years old, 9% 55-64 years old, and 6% of them is above 65 years old. It may be concluded that more than half of them or almost 60% of online game users is young aged which maybe they still go to school or university and some of them are in the early-working age who needs to save money for their future. Most of them play these games when they are waiting for something or when they are bored [7]. Another problem is that many game accounts got lost. It may be caused by hackers who hacked someone's account or the users simply forgot the username and password of their account. Many people hacked other people's accounts because they got many rare items, the account reaches high levels, and much more reasonable.

The cause of users forgot their username and password is too many game accounts where each game has different requirements when making the username and password. To solve this problem, Gamefinite users only need to make 1 account for all games they played and all the data that have been stored will be saved and not get lost even if their subscription runs out. Gamefinite aims to provide what gamers could not get from other gaming platforms that are spending less money to play more games, providing a platform for gamers who want to streams while they playing games, and for users to socialize with other users and expand their connection. Also, Gamefinite aims to work together with gaming companies to expand their market which before most of the expensive game users are from middle to high-class people, and to increase earnings for them.

The objectives of innovating Gamefinite was:

A. To investigate the current problem with the existed gaming platform

Investigating the current problem in the existed gaming platform may be done by try to use the platform and search for what it lacks of.

B. To design and develop a new gaming platform

To design and develop a new gaming platform which different from other gaming platform. The main thing that differs Gamefinite with other gaming platform is that Gamefinite using subscription method for the users to enjoy playing games.

C. To evaluate the gaming platform

Evaluating the gaming platform by conducting system test, unit test and user acceptance test after done with the implementation phase.

Value creations

User are allow to enjoy services provided by Gamefinite which are play and download for games they like by purchasing Gamefinite subscription plans

Research Methodology

The research methodology used on this project is mixed mode methods which are qualitative and quantitative research. Qualitative research for this project are conducted by studying and analyzing previous studies on the related topics. On the other hand, the quantitative research is done by distributing a survey and interview using google form which filled out by 63 participants. This chapter will discuss the research findings based on the survey and interview.

Literature Review

Gaming industry evolution

Since 1950, computer games have existed even though have not available for an amount of time until 1971. In estimation, 33% of world's population or around 2.5 billion people are playing video games. At the late of the 90s, game companies are competing for consumers. Different genre of games are made to draw attention among players. Nowadays, it can also be called as the game launcher era. Gaming platforms such as Steam and Epic Games Store have built their own digital distribution networks. With the development of these platforms, physical copies of the games are getting rare. In 2010, introduced a digital codes which can be physically bought and users need to enter the game code to download the games from Steam or Epic Games Store [2].

Social media impact on video games

Social media nowadays plays an important role on the gaming industry's success. The more discussions had on a certain games on social media, the more it is to reach wider users. Games becoming more popular and also getting more difficult and challenging which needs better communication among the players. Several VoIP software programs are developed in early 2000s such as Ventrilo and Mumble. One of the most popular software is Discord which is released in 2017 and had 250 million of users on 2019. Discord is free for users and allows to send text messages, creating multiple communities and also voice and video chat [2].

Video games streaming platform

One of the biggest video games streaming platform are twitch. tv which are released in 2011 and due to the fact that they have reached a big number of users after being acquired by Amazon in the 2014. Twitch.tv are primarily used for gamers to stream while they are playing video games.

Innovations in the gaming industry

In the last 40 years, the gaming industry have grown rapidly and continuously increasing its users over the world, expanding its demographics with an addition of accessible platforms such as video game consoles, computers, mobile phones, and tablets. Certainly, the supply and demand on this industry have changed due to various factors for instance, the developments in technology such as interfaces, devices and networks [6]. The key element that influence for the growth of this gaming industry are the ability of digital native to face changes in technology, by innovating in

synergy on both technological side and creative side to attract new users [6].

Changes in the global video game market

Regions like United States, Europe, and Japan have been the main place for video game markets in 2009. They have accounted for more than one half of the video games market worldwide. EMEA, which ever becomes the largest video games market compared to 4 major world regions, was overtaken by the Asia Pacific in 2010. Main factor of this incident is online and mobile segment [6]. If the United States leading the market, then the next three are located in China, Japan, and South Korea. In 2012, Asia Pacific has been calculated for 33% of the global market with a 13% growing rate, next is North

America with 32% growing at a mere 1%, followed by the Europe 28% with a 3% growing rate. Newzoo predicted 38% of the gaming industry revenues will be generated by Asia Pacific in 2016 [6]. Online games in China becomes one of the biggest growing internet business sectors over the world. The Chinese gaming industry have reached around \$9.7 billion, online games calculated for 90% from this total. Chinese gaming industry have 2 surprising facts. First, number of consumers and their spending habits grows extremely fast which shown by more people are online to shop, play games, watch movies, and using social media compared to other country. Second is that consumers spends most of their time and money on Chinese internet platforms [6] (Table 1).

Table 1: Top 20 Companies by game revenues in 2012.

| Company | Country | Revenues (USD) Million | Growth Rate |
|----------------------|---------------|------------------------|-------------|
| Activision Blizzard | United States | 4.856 | 2% |
| Sony | United States | 4.589 | -20% |
| Microsoft | United States | 4.557 | -1% |
| Electronic Arts (EA) | United States | 3.956 | 2% |
| Tencent | China | 3.627 | 40% |
| Nintendo | Japan | 2.775 | -27% |
| DeNa | Japan | 1.841 | 7% |
| GREE | Japan | 1.735 | 36% |
| Ubisoft | France | 1.639 | 18% |
| Konami | Japan | 1.404 | -20% |
| Zynga | United States | 1.281 | 12% |
| Apple | United States | 1.262 | 65% |
| Nexon | South Korea | 1.254 | 10% |
| Net Ease | China | 1.248 | 22% |
| Take Two Interactive | United States | 1.063 | 24% |
| Namco Bandai | Japan | 1.021 | -5% |
| Square Enix | Japan | 878 | 0% |
| Disney | United States | 857 | -6% |
| Facebook | United States | 810 | 45% |
| Capcom | Japan | 780 | 12% |

Results and Findings

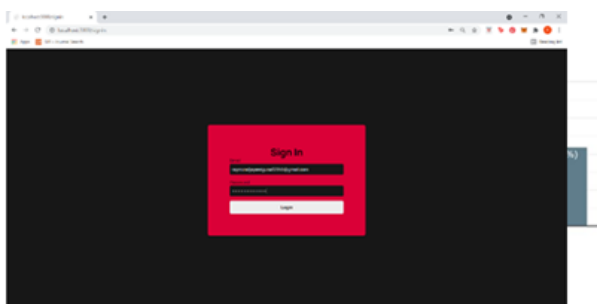


Figure 1: Gamefinite login page.

Out of 63 respondents, 17.5% of the respondents spent very much time on playing games, 30.2% of the respondents spent much time on playing games, 25.4% of the respondents spent regular

time on playing games, 15.9% of the respondents spent less time on playing games, and 11.1% of the respondents spent very less time on playing games (Figure 1). Out of 63 respondents, 14.3% of the respondents like to play action games, 19% of the respondents like to play adventure games, 25.4% of the respondents like to play first-person shooter games, 9.5% of the respondents like to play fighting games, and 31.7% of the respondents like to play other genre of games including MOBA, RPG, simulation, and puzzle games. From the findings above, it gives information about genre of games people likes to play. It can be concluded that various genre of games have to available on Gamefinite. Out of 63 respondents, 58.7% of the respondents are willing to spent less than \$10 to buy a game, 20.6% of the respondents are willing to spent \$10-\$20 to buy a game, 6.3% of the respondents are willing to spent \$20-\$30 to buy a game, 1.6% of the respondents are willing too spent \$30-\$40 to buy a game, 4.8% of the respondents are willing to spent \$40-\$50

to buy a game, and 7.9% of the respondents are willing to spent more than \$50 to buy a game. The majority of the respondent's answer are willing to spent not more than \$20 to buy a game. On this findings, it can come to the conclusion to decide the price of monthly subscription for Gamefinite subscribers which are \$12.99.

Implementation

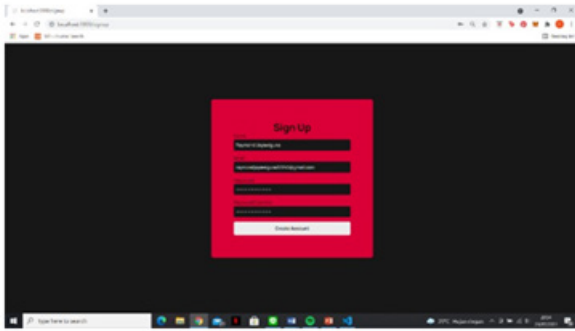


Figure 2: Gamefinite sign up page.

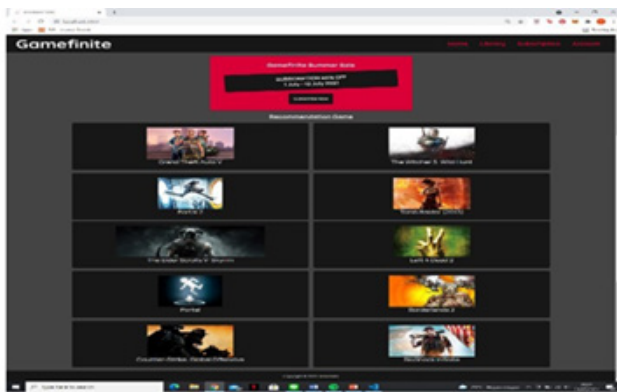


Figure 3: Gamefinite home page.

First page that will showed up for users is the sign in page. If the users have not registered a Gamefinite account yet, they have to sign up for their Gamefinite account. To sign up, they have to go to the sign up page which is localhost:3000/signup. After signing up their account by entering their name, email, and password, now users can use the registered email and password to sign in. The registered data will be recorded in the mongodb database (Figure 2). Once users done registering their Gamefinite account and sign up to Gamefinite, users will redirected to home page. In the homepage, promotions such as limited-time sale and recommendation games are displayed. Users who interested on purchasing the promotions can click the subscribe now button and it will linked them to the subscription page (Figure 3). On the library page, for users who have subscribed or their subscription still running they can browse and choose games of their selection to be played. Games in the library page are divided by genre in order for users to browse easily (Figure 4).

Users who want to subscribe have to go to the subscription page. Users needs to enter payment details (card number, card expired date, and CVV) and also choose which subscription plan

they wanted to purchase. After done entering payment details and choosing subscription plans and complete payment, the subscription will starts and users are allowed to enjoy Gamefinite services (Figure 5). For users who still have their subscription, they are unable to extend their subscription plans until their subscription expired (Figure 6). On the account page, the users account information details (user id, name, email, status, and subscription duration) are stated. Users can also sign out from their Gamefinite account by clicking the sign out button (Figure 7). User's account information such as email, password, and subscription plans data will be recorded in the mongodb database (Figure 8).

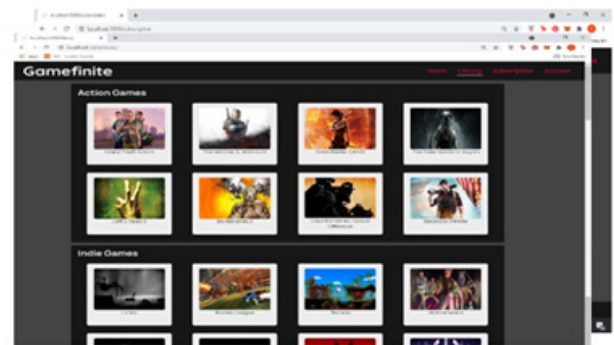


Figure 4: Gamefinite library page.

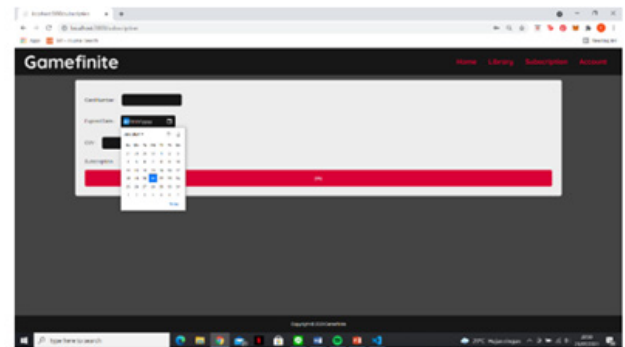


Figure 5: Gamefinite subscription page.

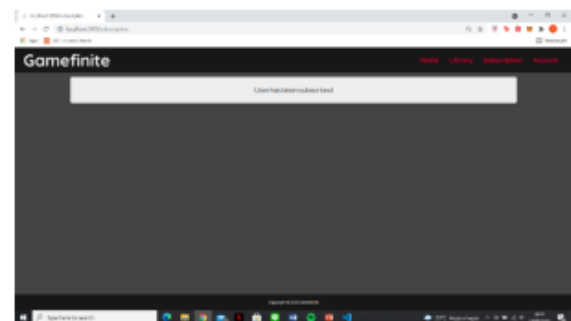


Figure 6: Gamefinite subscription page.

Conclusion, Limitation and Future Works

It can be concluded that the innovation of Gamefinite are to potentially useful for game users around the world due to the

rapid growth on the gaming industry. This project objectives are to investigate current problem in the existed gaming platforms, to design, develop, and evaluate a new gaming platform [8-10]. As the problem stated that many games cost too expensive for young gamers, the development of Gamefinite itself aims to overcome those problems that are suffered by gamers in using current gaming platforms by applying a new method for users to enjoy playing games which is a subscription method. Major limitation that are faced in this project are on the qualitative research due to the unsuitable research resources. Many previous studies are focused on discussing the development and growth of the gaming industry in general. Resources needed are those which mainly discussed the gaming platforms itself such as Steam, EpicGames, etc. Other limitation suffered is on the making of Gamefinite web app. With limited skills and resources that handled the system's front-end, back-end, and databases, some features such as search other users and instant messaging with friends, VoIP services similar to discord and skype, and providing various payment methods cannot be done (Figure 9).

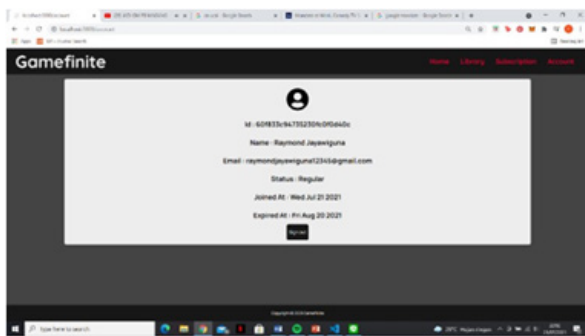


Figure 7: Gamefinite account page.

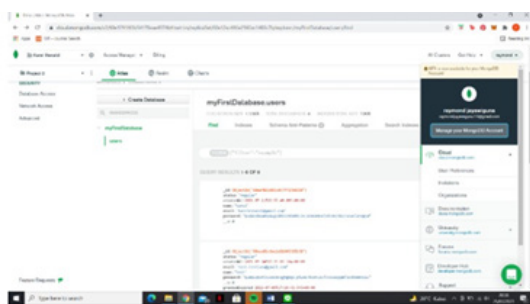


Figure 8: Mongodb database for Gamefinite.

With some features than cannot be done due to the limitation suffered, future works that is planned to develop the Gamefinite web app is by adding more features. Functional features needs to be added in developing the web to provide users with more useful services (Figure 10). Several features that are planned to be added on the Gamefinite web app are:

A. Search and add other Users by username

First feature that will be added to develop Gamefinite is by providing a social platform for users to search and add other users by username. By adding other users to their friend list, users are allowed to see for their friends who is online.

B. Instant messaging with other users

Not only seeing other users online, this social platform also have a feature that allow users sent instant messages to their friends.

C. VoIP services

Other feature that will be available on Gamefinite are the VoIP services. This VoIP services are intended for users to allow them to create a channel and do voice call with users they have added to the channel. This feature will be useful for users to do verbal communication with their friends while they are playing games.

D. Contact us page

Contact us page will be provided on the Gamefinite web to overcome problems suffered by users. For users who have some inquiries or faced some problems, users can fill up their name, email, subject, and messages. Once the message sent, it will get into the Gamefinite email account, and their messages will be reviewed by the Gamefinite customer service.

E. Various payment options

Various payment options such as bank transfers, paypal, google pay, e-wallets, etc will be added in order to ease users by providing more payment options to complete their payment

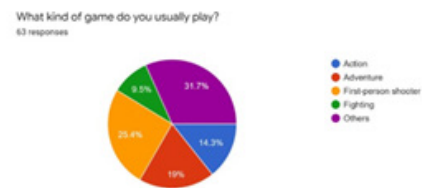


Figure 9:

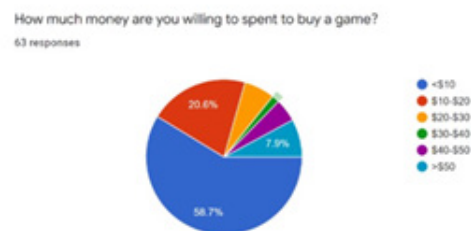


Figure 10:

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