

**AN ONLINE BASED PLATFORM FOR HIRING OF FILM EQUIPMENT  
AND SERVICES**

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**GROUP A**

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**Declaration and Approval**

I Menya Idi Susan Amondi declare that this work has not been previously submitted and approved for the award of a bachelor’s degree by this or any other University. To the best of my knowledge and belief, the work contains no material previously published or written by another person except where due reference is made in the work itself.

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## **Abstract**

The film industry in Kenya has been increasingly identified as a key growth industry with great potential to stimulate economic growth through infrastructural development, tourist attraction, investment and employment creation. Currently the film industry is generating approximately Kshs.6billion in revenue annually against a potential of over KES 40billion. The Kenyan film industry is however plagued by challenges such as less or no capital resources, equipment, production and training facilities and effective distribution and exhibition channels. The developed system will be of great significance to the film enthusiasts as it will help raise awareness and will further translate into a flourishing labour market. Apart from the challenges the Kenyan film industry faces, this documentation also covers the history of the film industry in Kenya, the environment in which it operates and how to make it better. Furthermore, it mentions other related works and the gaps which exist in them. A conceptual framework was drawn to show how the developed system functions. The developed system used iterative waterfall methodology and took the object-oriented approach. This method was suitable because the model provided feedback from every phase to its preceding phases.

### **Acknowledgements**

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## **Chapter 1: Introduction**

### **1.1 Background**

Film has become a powerful tool for culture, leisure, education, and the governments wishing to drive development agenda. The Film industry in Kenya is critical on three levels; economic, political and social. The industry plays a vital role in communicating ideology, information and ideas (National Film Policy, 2015). The economic level, the industry turns over billions of dollars and creating jobs for millions throughout the world. The film industry generates jobs to companies dealing with preproduction, production and post-production, crew and cast agencies, set-design, prop suppliers, equipment-hiring and manufacturing, inclusive of marketing and distribution. Jobs created indirectly in supporting industries such as banking, transport, hospitality and insurance. (Githinji, 2020). The question on whether Kenya would embrace film production as a viable industry is as old as the nation itself. The debate was in independent Kenya's first government and a feasibility study was carried out to find out how a film industry could be set up. Nyoike F. Njoroge did a report on the industry which became the basis of establishing KFC (Kenya Film Corporation) which was set up under the Industrial Development Corporation (ICDC). There is however no doubt about the viability of the film industry as an investment option in Kenya more than sixty years after independence. (Nyutho, 2015). A major goal of the film industry is to become a significant player by developing a major motion picture production industry with sufficient employment, and capitalizing on the economic, social, and cultural rewards associated with such industries worldwide. The online based platform for film equipment and services hiring provided a platform for any film enthusiast and any person in need of film related to work with. It especially enabled solo artists to be able to afford to produce content by providing an affordable means to hire equipment needed. It also brought together individuals like actors, producers, directors and the rest who combined efforts and worked together as professionals and in that way also marketed themselves and sold themselves.

## **1.2 Problem Statement**

Nguma (2015) found out that film environment has not been conducive for filmmakers in Kenya. This was attributed to expensive equipment, heavy investments in film production, lack of training and proper film commissioning, lack of exhibition and distribution opportunities and poor communication network that inhibited film success in the country. This hence called for proactive action for the film industry to be made better, producers should be more creative, high quality film crew, more entertaining and less political films The creation of a medium that hires out film equipment and film service providers helped raise awareness and reached out to every other film guru that needed support in their day to day business in the competitive film industry especially the solo professionals and start-ups, which required regional collaboration for effective distribution and marketing into a wider market.

## **1.3 Aim**

This project aims to develop an online-based platform for hiring of film equipment and services by clients.

## **1.4 Specific Objectives**

The online platform is intended to meet the following objectives:

- I. To review the various film equipment and service providers in the film industry.
- II. To analyse the factors affecting film industries in the county.
- III. To design and develop an online platform for hiring film services and equipment.
- IV. To test the developed system.

## **1.5 Justification**

Cham (2006) outlines that the Kenyan film industry is plagued by challenges such as less or no capital resources, equipment, production and training facilities and effective distribution and exhibition channels. The developed system will be of great significance to the film enthusiasts as it will help raise awareness and will further translate into a flourishing labour market. This will provide new opportunities for young talent and thus helping to combat the global contemporary phenomenon of youth unemployment.

## **1.6 Scope and Limitations**

The project is expected to cover the film industry in Kenya, that is, it will focus on providing film equipment for hire to clients and will provide a platform for producers and other film professionals all over the country to market themselves and the services they offer from the convenience of wherever they are. The developed system will be an online platform that will be able to hire out film equipment and services. The user would be able to register first in order to log in. A registered user would hence be able to view the products for hire and hire them. They would also be able to add their profile and make reviews. A non-registered user would be able to only view the products without being able to hire or review. The limitation of the project is that since it will be online based, a user would require access to internet connection. This would limit use for people without internet.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter reviews the various literature in relation to the film industry. It expounds on the background and the challenges faced in Kenyan Film Industry and various studies that have been done to show how the industry can positively impact this huge potential market. It also mentions the already existing sites for film equipment hiring and illustrates how the concepts of the developed solution will operate.

### **2.2 Challenges facing the film industry**

#### ***2.2.1 Inadequacy of skills***

Obonyo (2007) explains that Kenya lacks a school that focuses on film. There have been few colleges and institutes that offer training in media and other related areas of interest. Most people especially the youth rush into the film industry with the thought that its an easy sector to make easy money or achieve their dreams. It is a necessity to have the required skills even if one has the passion for the art. Most of the young Kenyans have the passion but not the skill and it should be quickly realised that in the film industry for instance photography, it is not just about pointing the camera at an object and taking snaps but understanding the skill. A few programs in Nairobi offer film production workshops: Wilnag and Magenta are two such programs. They offer one or two training sessions, but nothing thorough (Dalby, 2010). These programs are akin to the “Learn Filmmaking in two weeks” crash courses that advertise in magazines in the United States.

#### ***2.2.2 Shortage of enough filming equipment***

Not many Kenyans own renowned filming equipment that produce content worth competing in the international film industry arena. The number could be countable. This could be blamed on ignorance or even funds. Kenyans are risk averse in that should one buy the expensive and well-deserved filming equipment, the prices are likely to be high. What are the chances that the Kenyans will pick you for their job when the chance arises when there is an opportunity to save a few pennies. It costs a lot of money to produce a film. Producers in Kenya have to raise their own funding through any means necessary, since there is no studio system in place (Edwards, 2008)

#### ***2.2.3 Finding funding and financial backers***

Films around the world feel the sting of a basic fact of filmmaking: it costs money. More often than not, it costs a lot of money, whatever the level of production value.

Kenya's film industry is no different (Nyutho, 2015). Producers in Kenya have to raise their own funding through any means necessary, since there is no studio system in place. (Padron, 2019) agrees that it is difficult for most independent film enthusiasts to raise funds for production and equipment. Kenyan film producers face the same financial challenges as independent filmmakers around the world.

#### ***2.2.4 Limited support***

Support mostly comes from the Government and any other organisations that have stakes in the affairs of the film industry. Support also comes from international bigwigs well versed in the area and other global connections made by the government. It remains a mystery whether the government should be blamed for not being loud enough or whether to blame ourselves for not being persistent and aggressive enough in the acquisition of those means of support. This hence stunts the film industry.

#### ***2.2.5 Limited exposure***

So many international forums are held every now and then to support films but Kenya has yet to achieve that dream. Maintaining consistency in our breakthroughs becomes a problem. No matter what level of success is attained exposure is still ideal and is required to gauge the milestones made, that is, how far one has come from and how many more steps they need to make. Exposure brings about social connection in the film industry. This leads to the creation of a more comprehensive social network. (Nguma, 2015).

### **2.3 The environment in which the film industry operates**

This was aimed at obtaining a good understanding of the environment under which the local film producers operate with the intention of better understanding the circumstances they find themselves in as well as the possible challenges they normally face as they go about executing their roles.

#### ***2.3.1 Legal environment of the film industry***

Filming that is done in Kenya for purposes of public exhibition or sale either within or outside Kenya are produced under and in accordance with the terms and conditions of filming license issued by the film licensing officer (Mohammed, 2007). All applications for licenses to film in Kenya are made to the Permanent Secretary in the Ministry of Information and Communication. The Ministry requires that private companies or individuals submit their applications through local agents who are accredited with the Ministry (Nyanja, 2008). Crews that wish to film in Kenya have

to meet the filming requirements which are laid down by the Ministry. The requirements are such as providing details of crew members, equipment to be imported itinerary etc. Applications are processed and approval is granted by a film licensing committee consisting of a multi-sectoral team. The committee approves requests for 8 feature films commercial films, documentary films and skills for commercial purposes (Simiyu, 2009).

### ***2.3.2 The business environment of the film industry***

According to the Kenya Draft Film Policy (July 2011), the government of Kenya sees film not only as a tool for information and entertainment but also as a powerful communication instrument for national integration, for social and economic development and for the exploitation, preservation and further enrichment of the country's cultural heritage. In this policy document, the film industry has been identified as a key growth industry with potential to spur economic growth through tourist attraction, investment and employment creation. KFC agrees that this is so because of the country's great scenic physical and environmental features, which makes it an ideal location for film making. According to Meredith Beal (2015), two of the leading African film bodies; African Media Initiative (AMI) and the Pan African Federation of Filmmakers (FEPACI) recently joined together to support the development of high quality audio visual and film content in the continent's film industry. The two organizations have united to create the conditions for the production of compelling African stories which meet international film standards. The two bodies have joined forces with regional organizations and national governments in developing legislative and policy environments which will drive the industry's success and promote cross-border collaborations on production and distribution of films. The creation of such a medium will help to raise awareness on the need to watch African films and market the same, which requires regional collaboration for effective distribution and marketing into a wider market. According to (Beal, 2015), the media and entertainment industries are a high growth area and are registering an above average growth in many African countries and are expected to grow at 5% GDP per capita up until 2015. Nigeria, Kenya and South Africa offer great opportunities for content producers and distribution platforms for film, television, digital media, mobile and other forms of entertainment (Entertainment and Media Outlook report ,2015-2019).

## **2.4 How to make the Kenya film industry better**

The audience of the Kenyan film industry will grow according to the way the industry will grow. A film that is produced locally is relied upon to provide quality, unique, challenging and important films as time goes by. (Edward, 2008) agrees that this should be the vision for a self sustaining and indigenous film industry in Kenya.

### ***2.4.1 Finding funding and financial backers***

Films around the world feel the sting of a basic fact of filmmaking: it costs money. More often than not, it costs a lot of money, whatever the level of production value. Kenya's film industry is no different. Producers in Kenya have to raise their own funding through any means necessary, since there is no studio system in place. Producers should go to corporations, such as Kenya's cellular giant, Safaricom, the national grocer, Nakumatt or Coca-Cola. They encourage pitching films and seeing if they go for the idea (Sitati, 2008). Film producers ought to look for various options that include barter whereby they offer product placement to corporate brands as a source of finance (Dalby, 2009). Feature films bring in co-production partners to share the financial burden and recoup some of the investment through theatrical and video releases and international sales, can enable the producers to develop quality projects with high production values to be programmed as highlights of their schedules (Pramagiore and Wallis, 2006). Good feature film production would give sponsors the opportunity to invest relatively large sums in properly authored projects involving internationally renowned talent and bring them to the screen at an affordable price to their Corporations (Thompson and Wright, 2007).

### ***2.4.2 Organization of talent***

For a film industry to run smoothly, each aspect of it needs to be catered and cared for. This includes writers, actors, and directors all the way down to miscellaneous crew members, extras, costume designers, lighting technicians, caterers and so on. The Kenyan film industry would be well advised to form for themselves at the very least a guide for writers, actors, and directors (Edwards 2008). There are many talented youth who need to develop and practice their craft, yet because of financial limitations are unable to do so. Workshops are helpful but more intensive ongoing training is required for youth to truly develop their skills (Ochieng, 2002). That is why organizations like The Hot Sun Foundation opened a Film school known as 'The Kibera Film School', the first-ever film school of its kind in Kenya, based in East Africa's largest slum. The

school is a six-month intensive educational experience. It trains youth in scriptwriting, camera work, editing, directing and producing (GebreEgziabher, 2005). The facets in film industry in America have formed various unions for workers in the industry for reasons such as worker representation, equity in pay, working conditions and security of jobs (Barson, 2007). The Kenyan film industry would be well advised to form for themselves at the very least a guild for writers, actors, and directors

### ***2.4.3 Understanding the potential audience***

During the shooting of a film, the audience could simply be immediate family and friends who might belong to a given age group or same sex. In fact, the audience could be clearly defined or made up of people from several different ages, cultures and backgrounds (Thompson and Wright. 2007). The key is to know the audience as best possible before they make the film and to tailor it to suit the audience as much as possible (De Beer, Kasoma Megwa & Steyn. 2005).

## **2.5 Related works**

An example of an almost similar platform is Emerge Film Solutions. It is a global network of specialised locally based content producers, fixers and camera crews. They deal with clients who are looking to have footage shot around the world or require local production support. Another platform is the Kenya Film Commission which boasts some of the most sophisticated post-production facilities and offer a pool of skilled technicians and crew. Kenya's Film and Television Production industry has invested considerably in keeping the facilities up-to-date with the latest film and television technology resulting in more foreign as well as domestic producers choosing to complete productions in Kenya. In addition to these, there is also Insignia productions. Insignia does not always use their equipment and hence decide to hire them out when they are not in use. They own high end film and documentary video production equipment and aim to help out filmmakers who might not have the budget to buy or rent the equipment they need. They however mostly just deal with TV commercials production, documentary production and film and video production.

### ***2.5.1 Gaps in the systems***

The systems mentioned above mostly just rent out film equipment. The ones that provide both equipment and services come with their own personnel. The developed system however will provide a platform for everyone to be able to interact with each other. This will enable professionals to be able to combine their knowledge and help

each other to grow. It will also open a platform for start ups and film enthusiasts who are have not yet made it to be able to find a middle ground.

## 2.6 Conceptual Framework

This is a conceptual diagram that shows how the developed system functions. The user registers and logs into the system and is directed to the user page. The user can then add their profile, hire products, review, view products and add their schedule. When a user registers the details are stored in the database so that when they log in now their credentials are checked in the database and when correct they are able to log in. Incorrect details will give a message to check their input. When a user wants to view products or services the request is sent to the server which in turn will give a response by displaying the products and services available. If a user hires one product that information is recorded in the database and it reflects onto the user interface such that if another user wants the same product it will be shown as not available for that period. The reviews made by the user are also stored in the database.

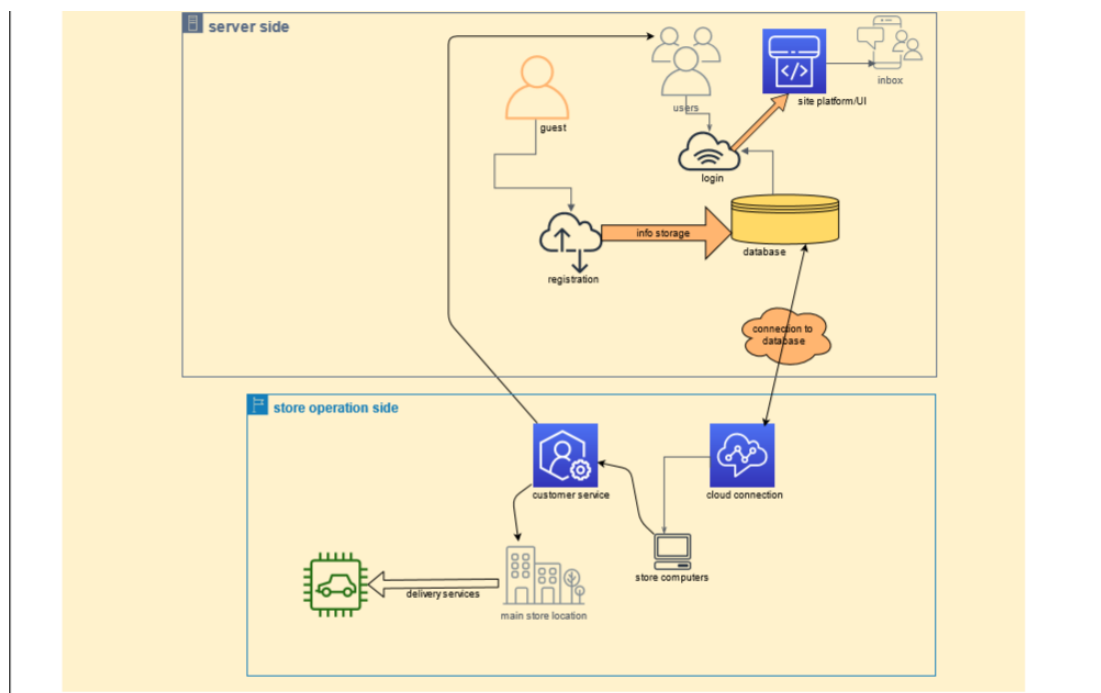


Figure 2. 1. Conceptual Framework

## **Chapter 3: Research Methodology**

### **3.1 Introduction**

An information systems development methodology can be defined as a collection of procedures, techniques, tools and documentation aids which will help the system developers in their effort to implement a new information system. (D. E. Avison and Fitzgerald, 1995, P. 10). This project applied an Object-oriented Analysis and Design (OOAD). This was because the problem was approached from an Object-oriented perspective. The System Development Methodology (SDM) that was applied is iterative waterfall methodology. This was because it allowed revisitation of other modules. It also provided feedback from every phase to its preceding phases

### **3.2 Iterative waterfall**

The classical waterfall model is hard to use for a practical software development project. That is why an iterative waterfall model can be brought in and thought of as a way of incorporating the necessary changes to the classical waterfall model to make it usable in practical software development projects. It is almost the same as the classical waterfall model but it is more efficient in software development. Their main difference is that the iterative model provides feedback paths from every phase to its preceding phases. Iterative waterfall software process model was developed by Winston W. Royce in 1970. This model became popular and provided practical guidelines for developing software product. Its name is derived from structural specification. Every phase comes after a phase is completed and tasks can be divided according to phases. The output of one phase becomes input of next phase but we have the option to revisit phases in the next cycle. When errors occur or are detected at some later phase, the feedback paths allow the correcting of those errors. They allow a phase to be reworked. The figure below shows the feedback paths introduced by the iterative model.

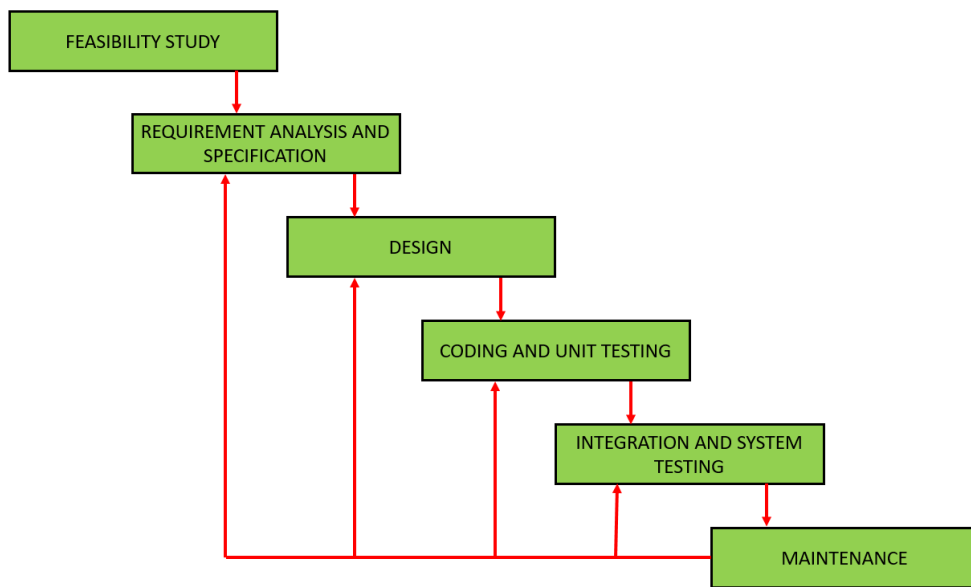


Figure 3. 1 Iterative Waterfall Method

The phases of the iterative waterfall cycle include;

### ***3.2.1 Feasibility Study***

This is the first step where the clients name their desired product to be developed. It comes up with a rough idea about what all the functions the developed system must perform and which features are expected of it. Hence a detailed study is done about whether the desired system and its functionality is feasible to develop. This study analyses whether the developed system can be practically materialized in terms of implementation, its contribution and the constraints. It also explores the technical aspects of the developed project and product such as usability, maintainability, productivity and integration ability.

### ***3.2.2 Requirement analysis and specification***

The software requirements are description of features and functionalities of the target system. These requirements convey the expectations of users from the developed solution and must be quantifiable, relevant and detailed. They can be obvious or hidden, known or unknown, expected or unexpected from client's point of view. In this stage the requirements are analysed and documented. Specification of requirements in this second process is done because it defines how the intended solution will interact with

hardware, software, external interfaces, speed of operation, response time of system, its portability with platforms, recovery, security and maintainability.

### ***3.2.3 Design***

The design process is a process to transform the user requirements into suitable form which will be used in the coding and implementation of the developed solution. It conceptualizes the requirements into implementation. This step moves the concentration from the problem domain to the solution domain. It is the process of planning and problem solving for a software solution and deals with choosing the appropriate algorithm design, use-case diagram, class diagram, sequence diagram and database schema.

### ***3.2.4 Coding and Unit Testing***

During coding, the whole requirements will be converted to the production environment. Programming starts here with source code writing while keeping in mind the previously defined requirements. The user interface is developed together with the logic for its interaction with the server. Unit testing is done during coding. It is a testing technique which independent modules are tested to determine if there are any issues. It is correlated with functional correctness of the independent modules.

### ***3.2.5 Integration and System Testing***

Integration involves combining individual units to be one. Integration testing in this phase is defined as the type of testing whereby modules are integrated logically and tested as a group. The purpose of this level of testing is so as to expose defects in the interaction between the modules when they are integrated. It focuses on checking data communication amongst these modules.

### ***3.2.6 Maintenance***

After the system is already released, it may need some modifications, improvements, errors correction, and refinement accordingly. Thus, this phase is the process responsible for taking care of such concerns.

## **3.3 Method to be used to Gather the Functional and Non-Functional Requirements**

Since the Functional and Non-functional requirements are based on what the Stakeholders want and desire, their participation was required. This was done by

reviewing other existing computer-based information systems documentations. In addition to this their requirements was found out by giving them questionnaires to fill and also conducting interviews with them.

### **3.4 List of Design Diagrams that will be drawn in chapter 4**

The developed system applies Object-oriented Analysis and Design. The Design Diagrams which suit OOAD include Use-case Diagram, Class Diagram, Sequence Diagram and Database Schema.

#### ***3.4.1 Use case diagram***

This is a diagram that represents a user's interaction with the system. It would show the functionality of the developed system using actors and use cases. This helped in the organisation and identification of the system requirements.

#### ***3.4.2 Class diagram***

Since the developed system is object-oriented, a class diagram was appropriate in depicting the structure of the system by showing its attributes together with the relationships and other aspects of object oriented approaches. It also showed the relationships between classes, objects, attributes, and operations.

#### ***3.4.3 Sequence diagram***

A sequence diagram depicts interactions between objects in a sequential order. They describe how and in what order events occur. The developed system had a sequence diagram because it helped in the modelling of the flow of logic in a visual manner. This was both for analysis and design purposes.

#### ***3.4.4 Database schema***

A database schema is described as an abstraction used to represent the storage of data in a database. This defines data organization and shows how the relations are related. This was useful in the developed system because it not only revealed the relations but also formulated the constraints to be applied on the data.

### **3.5 List of Development Tools that will be used**

The Integrated Development Environment (IDE) that the project applied is Sublime Text together with PHP programming and notepad. Sublime Text and notepad IDE supports PHP, PHP being the programming language which was chosen to undertake the project. The programming language was used because it is platform-independent language as well as object-oriented. It also laid an emphasis on features like scalability, performance and security. MySQL is the standard tool which was used to come up

with the databases for the project and in which stored information was updated and retrieved when required. MySQL is ideal because it is designed for web applications. Furthermore, it is open source and quite easy to use. Hence xxamp and php my admin was used.

### **3.6 Method to be used to test the developed system**

Method that was used for testing was unit testing whereby when the code was written for project modules, it was tested at the unit level. Black box testing approach was conducted to test the functionality of the system. Tests to ensure ease of use of the system by the client were also performed, that is, the usability test.

### **3.7 Domain of Execution**

The developed project is web-based so that it works right in the web browser. This means no installation or updates was required, neither is an IT person needed. It can therefore be accessed over a network connection using HTTP rather than existing within a device's memory.

### **3.8 Developed Modules**

The developed system has registration and login of the user. This accepts data of the user during registration. It also have a guest module where by anyone who is not registered can access the platform. The guest view is however be limited in terms of the actions they can perform for instance a guest would only be able to view the products and services without being able to hire anything or make any reviews. A registered user on the other hand can be a client or the personell. For the clients they are able to hire equipment or the personell they would require for a job while for the personell available they are able to upload their profiles, their previous works and be able to sell themselves. Only the registered users are able to make reviews. The administrator side has an inventory of products and their details as they are in their stores.

## Chapter 4: System Analysis and Design

### 4.1 Introduction

This chapter outlines the various system analysis and designs applied. The functional and non-functional requirements based on the stakeholders were listed and finally the design diagrams were drawn based on the approach that was used that is Object-oriented analysis and design (OOAD).

### 4.2 System Analysis

#### 4.2.1 *Functional Requirements*

i. Interface Requirements

The login page enables user to log onto the system using their right credentials.

A successful login takes the user to the homepage where users can navigate through the menu.

ii. Usability Requirements

A registered user update profile, view products, hire products, review, view most selected products.

The user is even be able to pay for the item hired.

iii. Security Requirements

The The users to the system are required to have an account first before login to the system. The accounts require authorization hence the users each have a unique username and password. This ensures only authorised people have access to the system.

iv. Reliability Requirements

The system would allow entry, update and deletion of records to process desired output without failure.

The system shall be flexible and adequately reliable, in that it would be accessible to every person online.

v. Performance Requirements

The The response time would be minimal to enable retrieval and saving of records into the database fast as well as the general operation of the system.

The system shall be adequately scalable to handle workloads.

vi. Supportability Requirements

The system is able to adapt easily to any future changes and will be easy to maintain.

#### ***4.2.2 Non-functional Requirements***

These are the constraints on the services that the system should provide. The non-functional requirements of this system include;

- The system is user friendly and easy to use. It can be used by everyone and not essentially an IT expert.
- The system accurately updates transactions and generates accurate reports.
- The system runs without glitches
- The system can be maintained.

### 4.3 Design

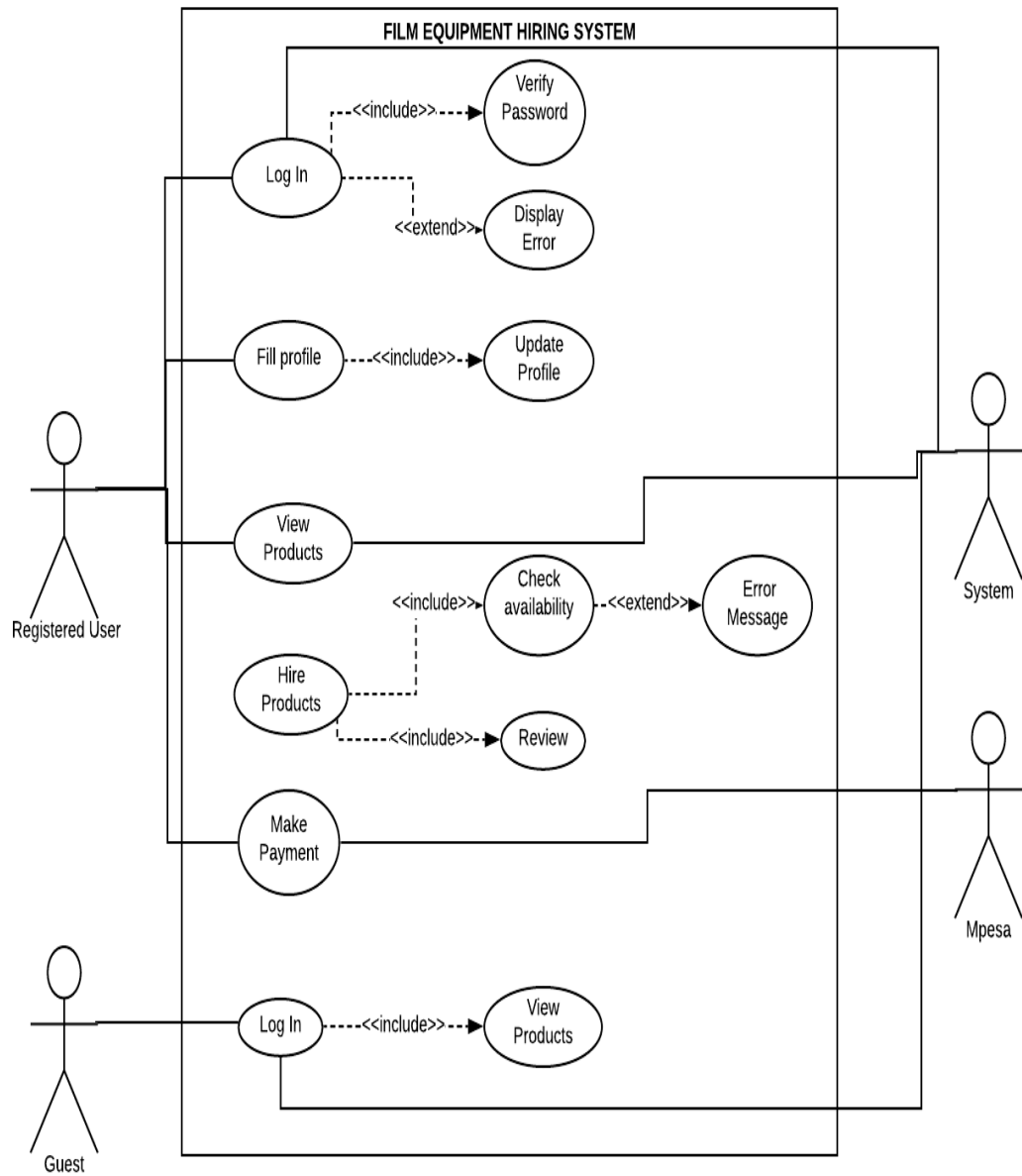


Figure 4. 1 Use case diagram

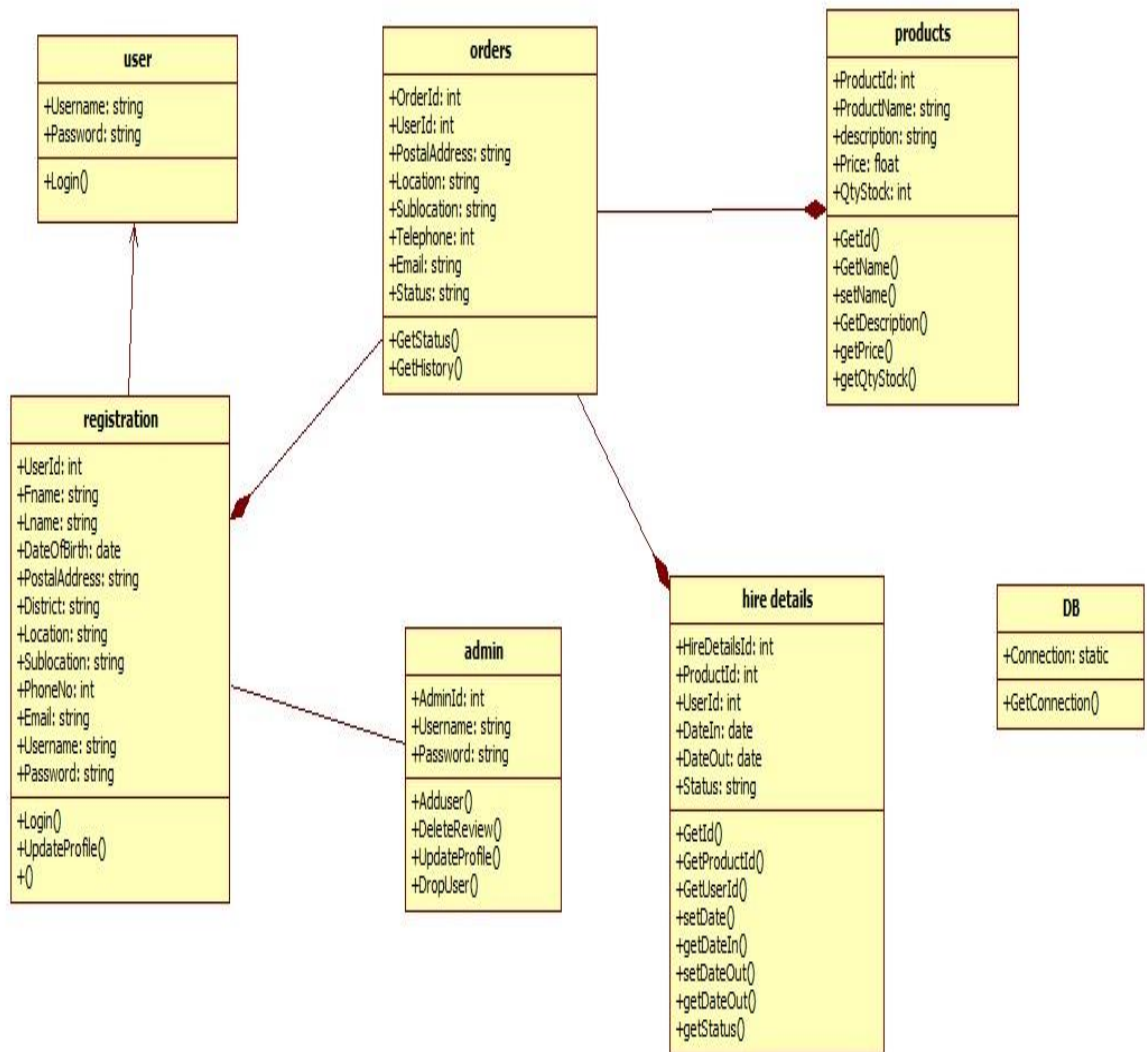


Figure 4. 2 Class diagram

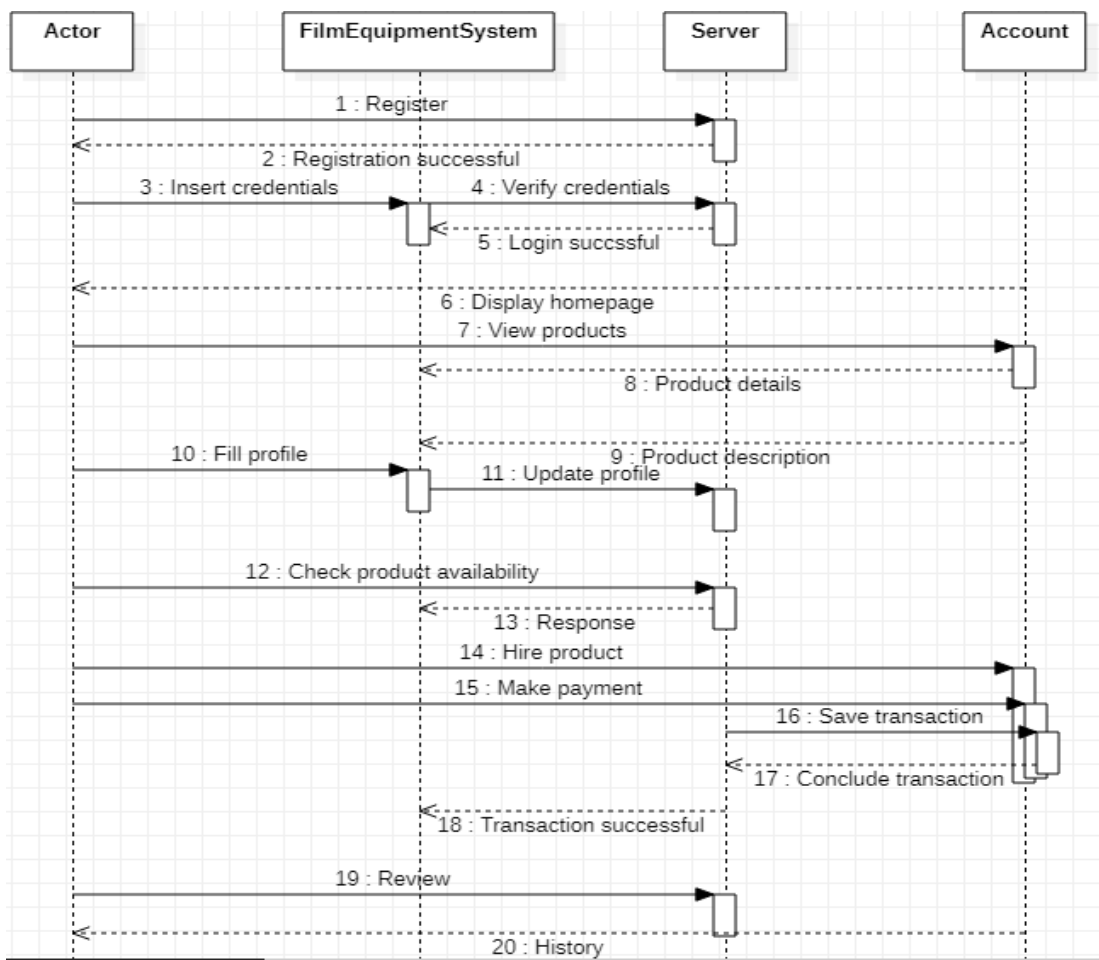


Figure 4. 3 Sequence diagram

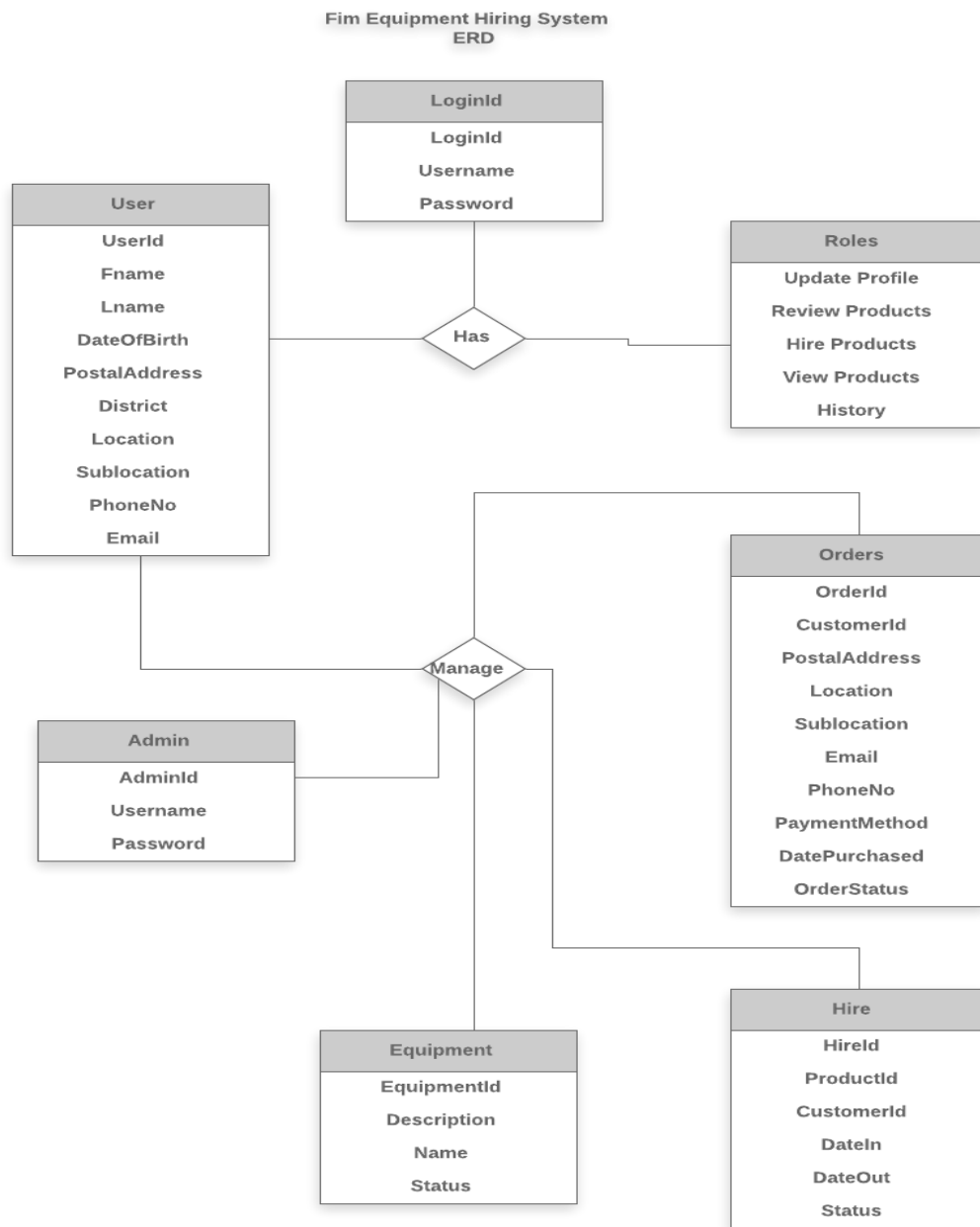


Figure 4. 4 ERD diagram

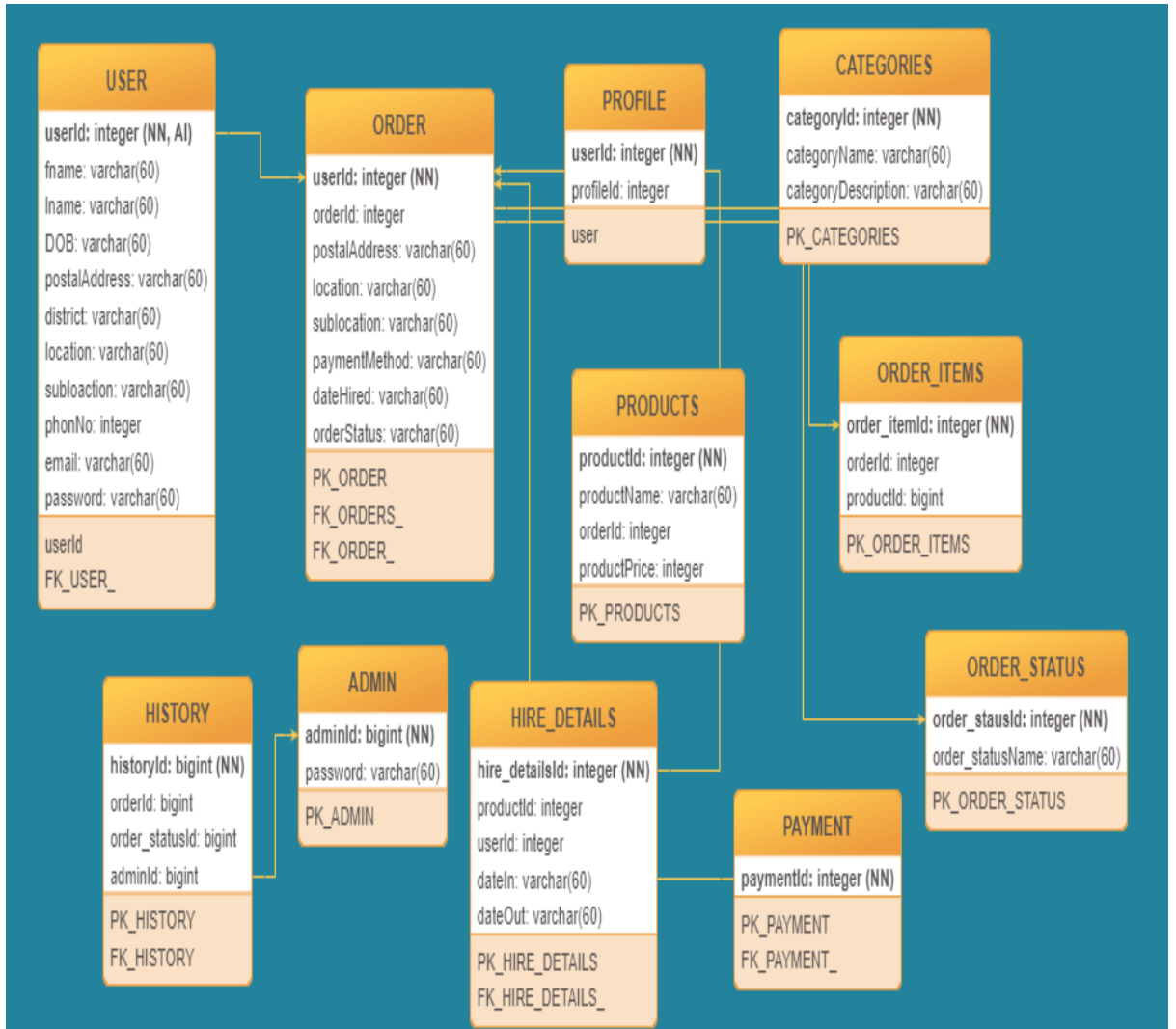


Figure 4. 5 Database schema

## Chapter 5: System Testing

### 5.1 Introduction

This chapter contains test cases performed during the development of the system and the outcome of the specific tests.

### 5.2 Test Environment

The system uses internal memory and requires internet connection to access. It uses data from the root server to run. Its functionalities can also be checked for whether it is effective or not and errors be checked for.

### 5.3 Test Cases

This section focused a lot on the system and what it does. It majorly focused on the system testing, detecting system failures, and whether the system functionalities succeeded or not.

Table 5. 1 Test Cases

Test ID	Related Requirement	Inspect Check	Pre-Condition	Test data	Priority test
T1	System login details verification	Does the system verify the details	All details should be specified	Data from the database used by the system	High
T2	Viewing film equipment available	Can one be able to view the equipment available	User should be registered	Data stored in the database	High
T3	Hiring an equipment	Does the system add a new item to the cart	The user should be logged in	Session data stored for the current user	High
T4	Saving transactions made	Can transactions be saved	Transactions been entered	Data currently available for the currently logged in user	High
T5	Viewing details of equipment	Can an entity view details about an equipment	An entity should be logged in	Data available from the database	High
T6	Concluding transactions during payment	Does the system show total of what is to be paid	All transactions should have been compiled	Data currently available for the currently logged in user	High

<b>T7</b>	Viewing history	Can the system show history of equipment that are in cart and those that have been frequently selected.	User should be logged in and the transactions been saved	Data from the database	High
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#### 5.4 Test Results

The tests performed mirrored the following results:

Table 5. 2 Test Results

<b>Test ID</b>	<b>Expected result</b>	<b>Actual result</b>	<b>Status</b>	<b>Remarks</b>
<b>T1</b>	System login details verification	The system allowed logging into the system	Pass	When a wrong password was input the system denied access
<b>T2</b>	Viewing film equipment available	Fim equipment available were viewed on the home page	Pass	Successful viewing of equipment that is available
<b>T3</b>	Hiring an equipment	The system allows hiring of an equipment	Pass	Successful hiring of an equipment
<b>T4</b>	Saving transactions made	The system saved transactions performed successfully	Pass	Successful saving of transactions
<b>T5</b>	Viewing details of equipment	Film equipment specifics can be viewed	Pass	Successful viewing of film equipment details
<b>T6</b>	Concluding transactions during payment	The system compiles all transactions plus totals	Pass	Successful compilation of totals

<b>T7</b>	Viewing history	The system allowed user to view equipment that were in cart and also those that had been frequently selected	Pass	History viewing was successful
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## **Chapter 6: Conclusion and Recommendations for future work**

### **6.1 Introduction**

This chapter is going to cover on the system and what the system has been able to achieve at the end of its completion. There will also be the coverage on what the system was not able to achieve and make recommendations on future works that can be achieved by similar systems that aim at solving the same problem. We will be analyzing the system developed and summarise on the data collected. On the recommendation, this will entail suggestions on other tasks that can be achieved by the system in future or that can also be achieved by similar systems that aim to solve the same problem as the current system. This will help the current and future developers to know of what areas to cover. Conclusion will be on conversing and stating what the system has been able to accomplish as per its completion and will also cover on the termination of the system development. This will also mark the final stage of the system completion by confirming and clarifying that the system development has come to the end of its construction as per the developer's knowledge.

### **6.2 Conclusion**

This system was developed majorly to help provide film equipment to film enthusiasts who cannot buy their own. The online based application is developed to solve challenges such as inadequate funds and help film enthusiasts to market themselves and produce good work. The user would be able to register first in order to log in. A registered user would hence be able to view the products for hire and hire them. They would also be able to add their profile and make reviews. An admin is able to upload available items on the dashboard. The limitation of the project is that since it will be online based, a user would require access to internet connection. This would limit use for people without internet.

### **6.3 Recommendations for future work**

Despite this research aiming to solve problems such as shortage of enough filming equipment, funding, limited support and limited exposure in the film industry, not all areas were addressed due to the scope of the project and some limitations. Therefore,

for the future work, I would recommend that the system to be able to work offline. Additionally, the arrival date and return date should be implemented into the system. There should also be a limitation to the period of time in which one can have a particular equipment for. Then there should also be a filter added to the system such that one could search for an item in a particular price range or a particular brand name. Also, the system should implement a module whereby a user is notified when a particular item is coming soon or if it is out of stock and if stocks have been restocked as well as have an expert chat bar where users can interact with experts in the field and be well advised. Finally, it should be expanded and be able to link different suppliers of equipment both locally and internationally.

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## Appendix A: Timeline of Activities

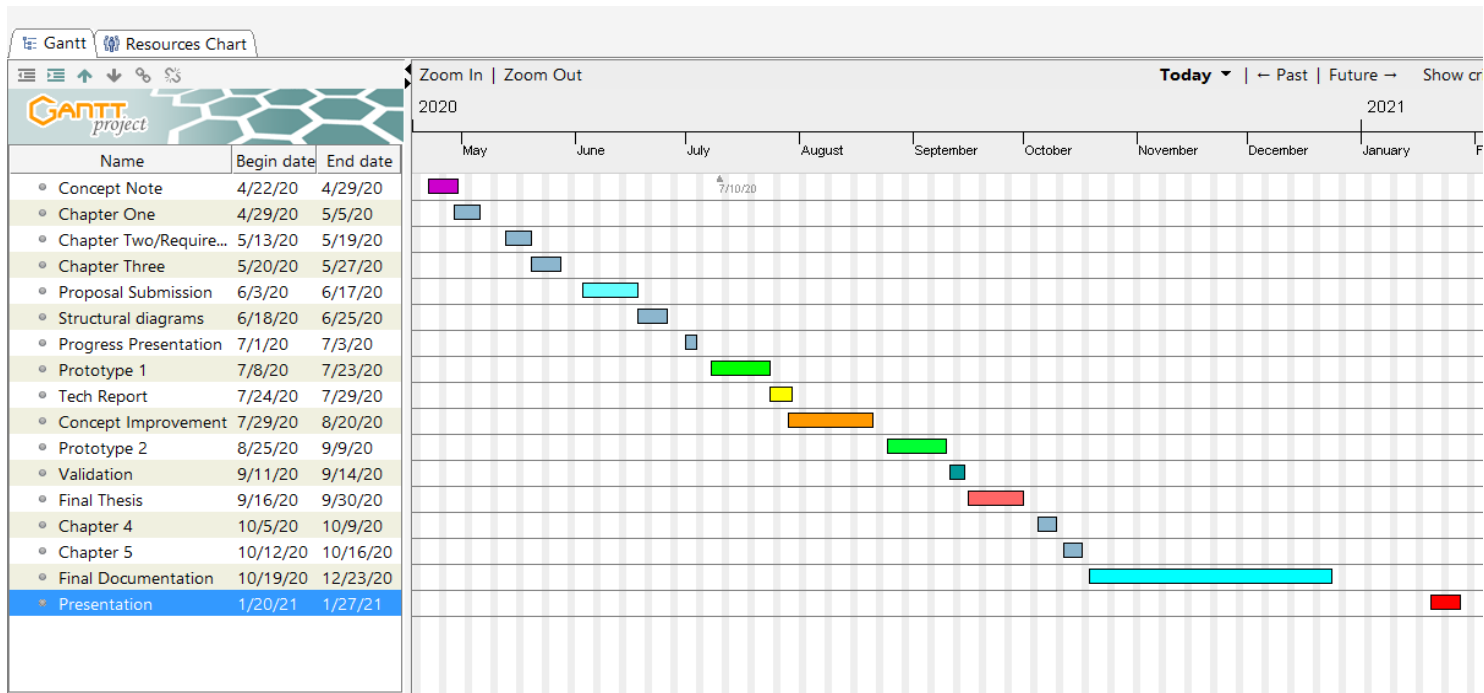


Table 5. 3 Gantt Chart

## Appendix B: User Manual

The developed system uses XAMPP which is an open source software that is incredibly easy to install and use. Since the system uses MySQL database the first step is to download XAMPP.

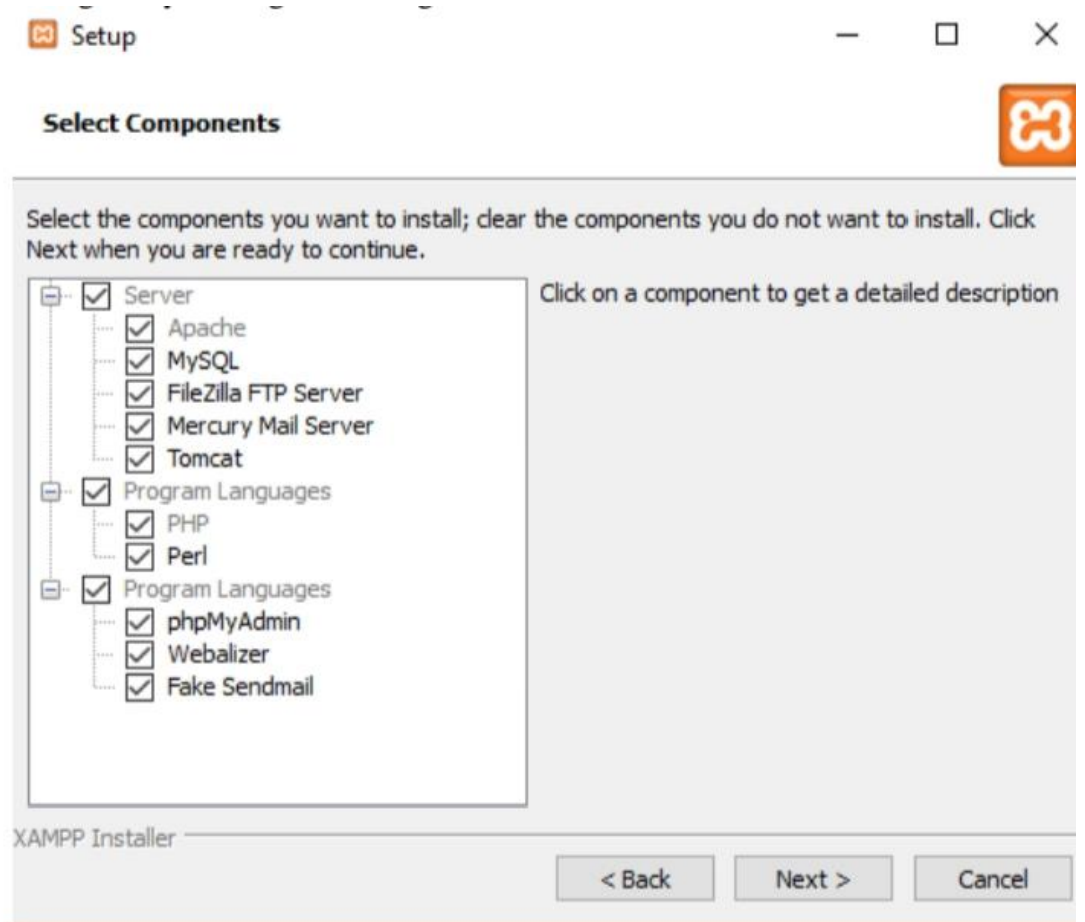
- I. First start by downloading XAMPP from [www.apachefriends.org](http://www.apachefriends.org) select the download file according to the PHP version that is needed.



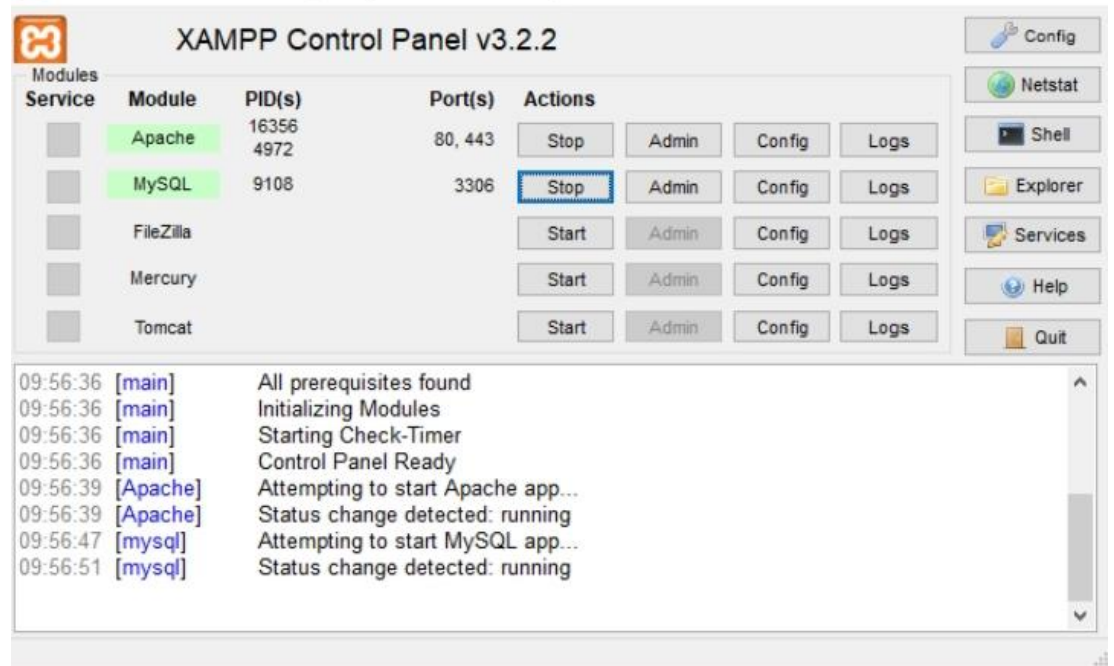
- II. Open windows(c) through my computer and install the program and click next.



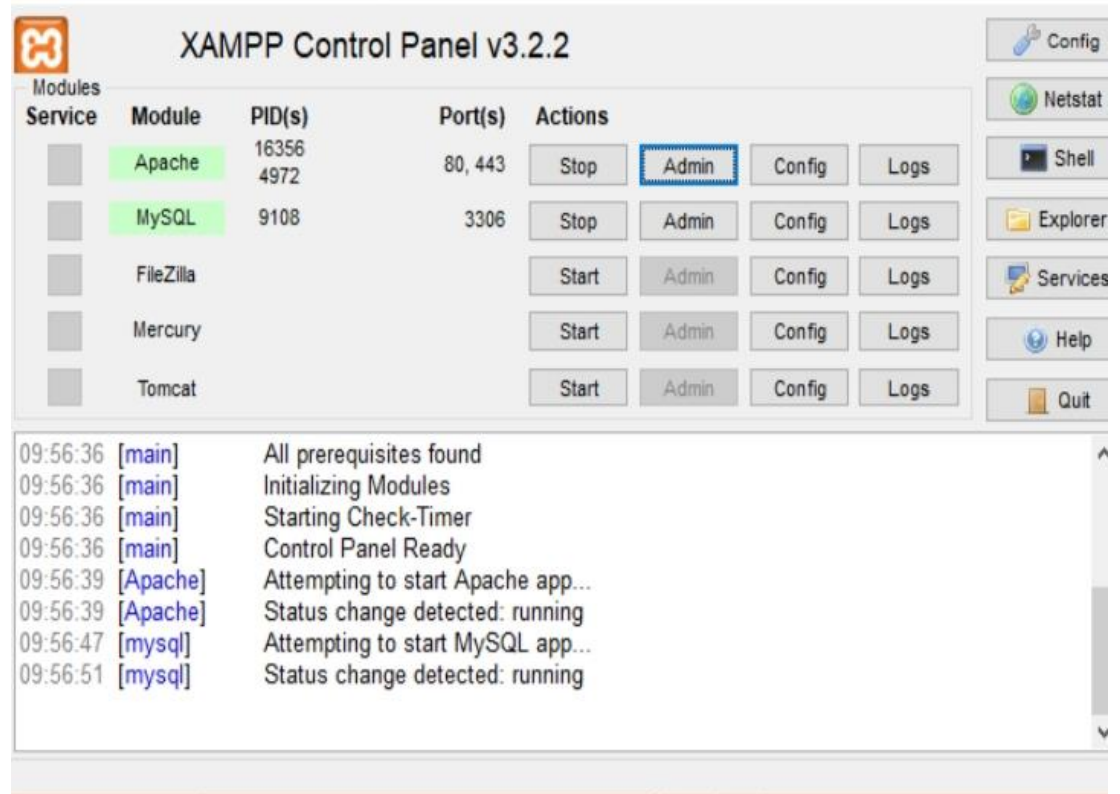
- III. **Accept the default settings.** A command will open and offer an initial installation prompt. Click Enter key, and accept the default settings. To make the installation simple, just hit ENTER when prompted on the command line. Settings can always be changed, by editing the configuration files later.



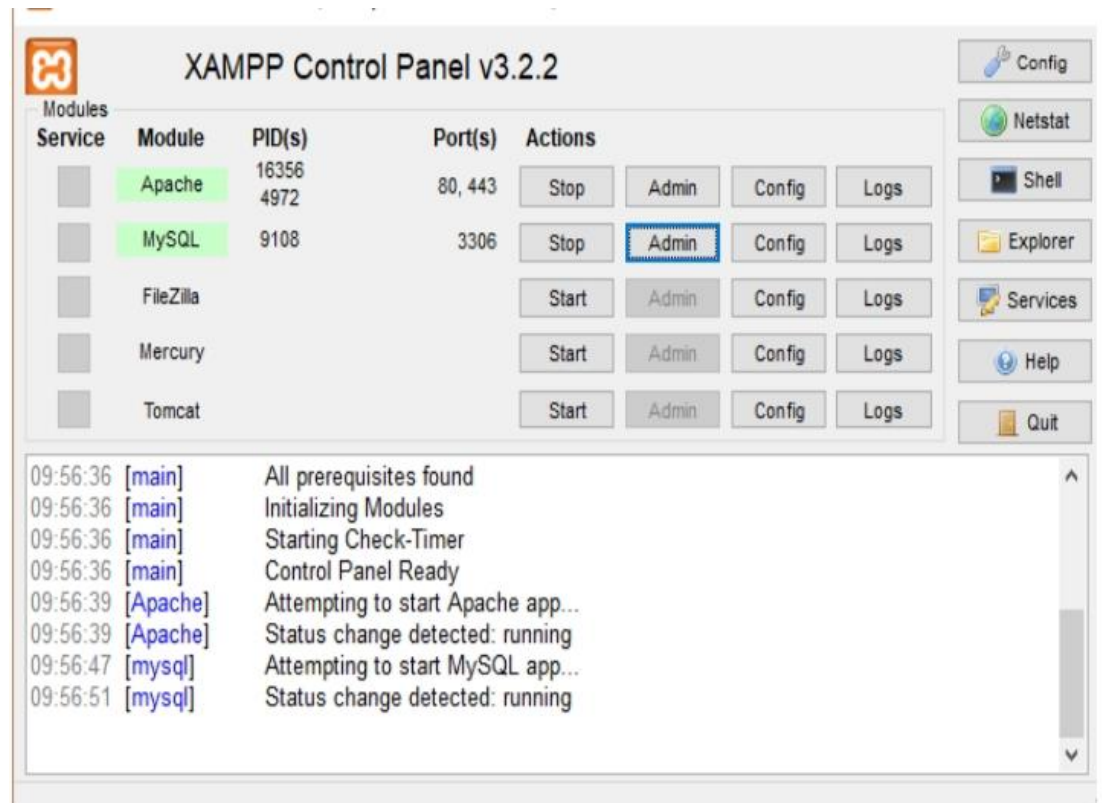
- IV. When your installation is done, you should exit the command window by typing x on the command line.
- V. Start the XAMPP control panel.
- VI. **Start the Apache and MySQL components.** In case you plan on using the other components You can also start them.



VII. Verify the Apache install, by clicking on the Apache administrative link in the Control Panel.



VIII. Verify the MySQL installation, by clicking on the MySQL administrative link in the XAMPP Control Panel.



## Frequently asked questions and answers (FAQs)

**Q:** Must one sign up into the system for them to apply for a loan?

**Q:** What happens when one needs to adjust some data or realizes that they input the wrong data?

**Q:** What happens when one is unable to view the equipment details?

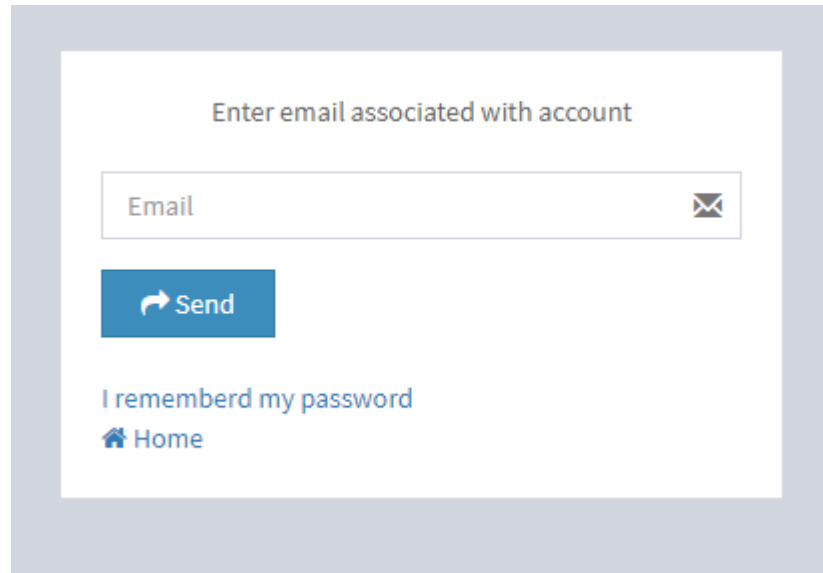
**Q:** What platforms need to set up to access the modules properly?

## Troubleshooting Sections and Possible Errors

### Log in errors

There are some difficulties that may occur during the operation of the system. While signing up on the user's side, it may fail due to the user using a wrong format while filling the different fields. Make sure that password match as well. For the login a user that has never signed up will not be able to log into the system. Make sure you signup before logging into the system. To access the other services that are offered by the system. When a user enters a username that does not match his/her password, a login error occurs in the form of a text displays as follows: Invalid login. A user should hence input the correct credentials. In case the system fails to work as a

whole or some 45 particular modules fail to work, please confirm on how you have saved your pages. XAMPP control panel also needs to be open in order to run the different modules of the system. If you have forgotten the password then you can go to forgot password and type the email used during sign up.


A screenshot of a web form for forgot password. The form is centered on a white background with a light gray border. At the top, the text "Enter email associated with account" is displayed in a blue font. Below this is a text input field with the placeholder text "Email" and a small envelope icon on the right. Underneath the input field is a blue button with a white right-pointing arrow and the text "Send". At the bottom of the form, there are two links: "I rememberd my password" and "Home" with a small house icon.


### **Usage of system modules**


This system has two main users who interact with it, the admin who does all the administration work like uploading items and the user interested in hiring equipment. But both have to be signed up or sign themselves up into the system. The sign-up form for the user has different fields that need be filled by the user when signing up into the system. The sign up will act as a user registration into the system.


## Registration form


Register a new membership

Firstname 

Lastname 

Email 

Password 

Retype password 

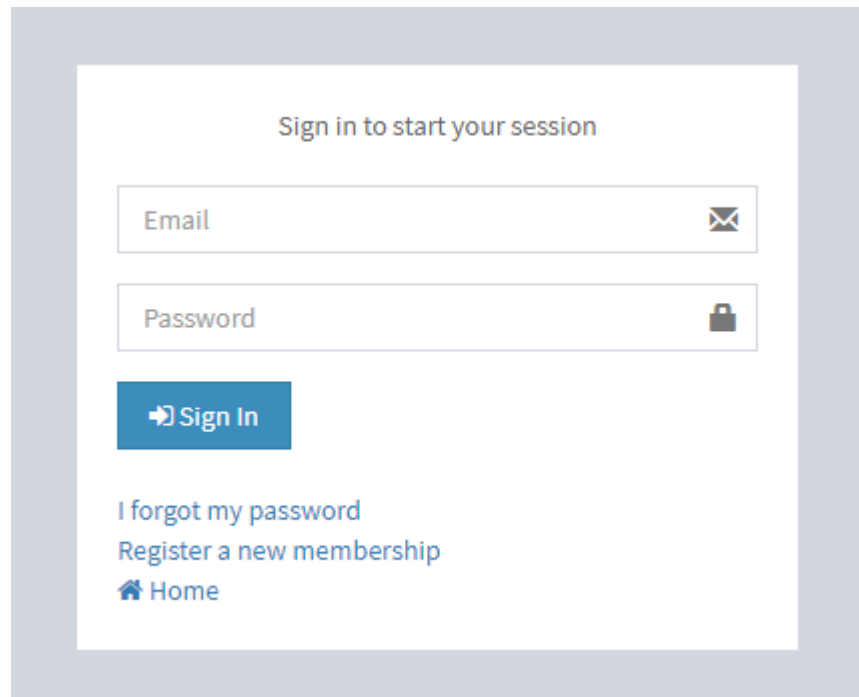
[Sign Up](#)

[I already have a membership](#)


[Home](#)


After the user is signed up by filling the sign-up/registration form and clicks the sign-up/register button the user will now be able to login to the system. The only way that a user will be able to access the systems services is when the user has logged into the system. Non-existing users need to first sign up/register.


## Login form



Sign in to start your session

Email 

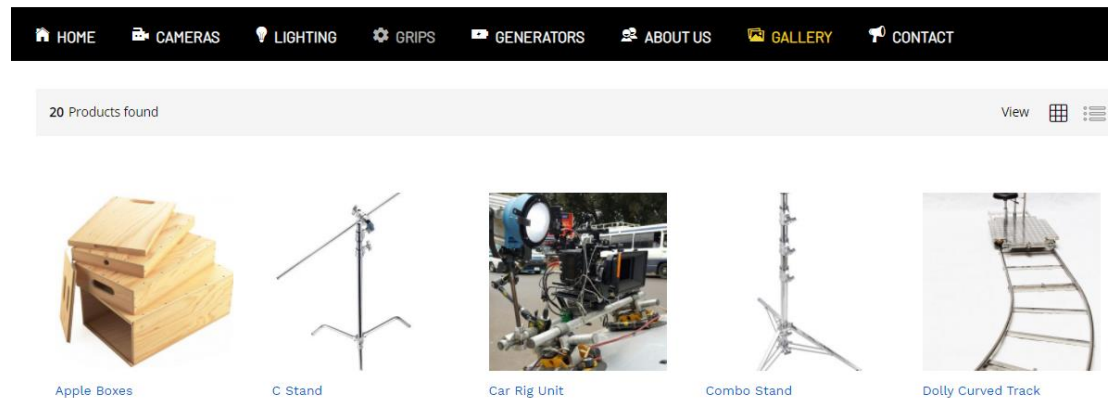
Password 

 Sign In



[I forgot my password](#)  
[Register a new membership](#)  
[Home](#)

After the user has logged in they should be able to view more links and the services that are provided by the system. That is viewing equipment and being able to hire them.

## Homepage



HOME CAMERAS LIGHTING GRIPS GENERATORS ABOUT US GALLERY CONTACT

20 Products found View  

Apple Boxes C Stand Car Rig Unit Combo Stand Dolly Curved Track