

A Project Report on



I-Stream

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

In

COMPUTER ENGINEERING

Submitted By

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Moti-Bhoyan, Gandhinagar

2019-2020

Acknowledgement

We have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. We would like to extend our sincere thanks to all of them.

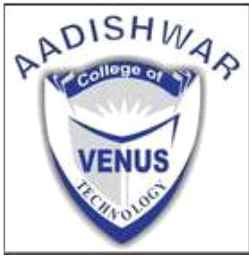
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Abstract

Live streaming is the broadcasting of live video to an audience over the internet. It can also be a one-on-one live video chat. Unlike pre-recorded videos that can be cut and edited, live streaming is just that – live and uncensored. All you need to be able to live stream is an internet enabled device, like a smart phone or tablet, and a platform (such as website or app) to broadcast on.



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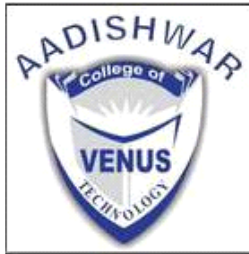
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CERTIFICATE

This is to certify that the work of User Defined Project entitled “**I Stream**” has been carried out by Urdip Jadeja(***160810107012***) under my guidance in partial fulfilment for the degree of Bachelor of Engineering in ***Computer Engineering*** 7thSemester at the Computer Engineering Department , ***Aadishwar College of Technology*** ,Moti-Bhoyan, Gandhinagar, Gujarat, during the academic year 2019-2020 and her work is satisfactory. This student has successfully completed all the activity under my guidance related to User Defined Project for 7thsemester.

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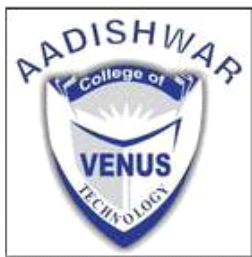
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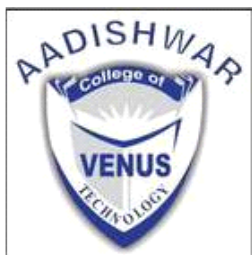
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Chapter 1

Introduction

Description of the Project:

1.Introduction:

The Project entitled “Video Streaming” is an application that allows the users to add videos. The users those who wish to add videos, can register for the website and get the UserID and password. Video Streaming is a web based application allow the users to browse the videos, and at same time. It provides the user up to date information at any appropriate location.

1.1 EXISTING SYSTEM

The earlier system is not computerized. The process of adding the videos is very difficult when done manually. Users face so many problems in uploading videos. Here now such type of preplanned applications are not there for users.

Drawbacks of Existing System:

- Difficulty in adding videos manually.
- Doesn't provide effective mechanism
- Difficulty in browse the all the information.

1.2PROPOSED SYSTEM:

The proposed system is fully computerized, which removes all the drawbacks of existing system. In the proposed system, the users can add the videos very easily.

Advantages of the proposed system:

- Managing the levels is very easy
- Storing the Videos is so easy.
- Giving input is as simple as just a single mouse click
- Easy to maintain up to date information.

- Cheaper to maintain.
- No manual tracking is required.

1.3 Hardware and Software Requirements

Hardware and software specifications

SOFTWARE REQUIREMENTS

OPERATING SYSTEM	:	WINDOWS XP
DATA BASE	:	MONGODB
PROGRAMMING LANGUAGE	:	REACT JS
SERVER	:	HEROKU

HARDWARE REQUIREMENTS

PROCESSOR	:	P-III or Above
RAM	:	512MB
HARD DISK	:	40 GB

1.4 FEASIBILITY STUDY:

Feasibility study is an important phase in the software development process. It enables the developer to have an assessment of the product being developed. It refers to the feasibility study of the product in terms of outcomes of the product, operational use and technical support required for implementing it.

Feasibility study should be performed on the basis of various criteria and parameters. The various feasibility studies are:

- Economic Feasibility
- Operational Feasibility
- Technical Feasibility

Economic Feasibility: It refers to the benefits or outcomes we are deriving from the product compared to the total cost we are spending for developing the product. If the benefits are more or less the same as the older system, then it is not feasible to develop the product.

In the present system, the development of the new product greatly enhances the accuracy of the system and cuts short the delay in the processing of application.

The errors can be greatly reduced and at the same time providing a great level of security. Here we don't need any additional equipment except memory of required capacity. No need for spending money on client for maintenance because the database used is web enabled database.

Operational Feasibility: It refers to the feasibility of the product to be operational. Some products may work very well at design and implementation but may fail in the real time environment. It includes the study of additional human resource required and their technical expertise.

In the present system, all the operations can be performed easily compared to existing system and supports for the backlog data. Hence there is need for additional analysis. It was found that the additional modules added are isolated modules as far as the operational is concerned, so the Developed system is operationally feasible.

Technical Feasibility: It refers to whether the software that is available in the market fully supports the present application. It studies the pros and cons of using particular software for the development and its feasibility. It also studies the additional training needed to be given to the people to make the application work.

In the present system, the user interface is user friendly and does not require much expertise and training. It just needs a mouse click to do any sort of application. The software that is used for developing is server pages fully is highly suitable for the present application since the users require fast access to the web pages and with a high degree of security. This is achieved through integration of web server and database server in the same environment.

Implementation plan:

The main plan for the system developed is to upgrading existing system to the proposed system. There are mainly 4 methods of upgrading the existing system to proposed

- Parallel Run System
- Direct Cut-Over System

- Pilot System
- Phase-in Method

Parallel Run System: It is the most secure method of converting from an existing to new system. In this approach both the systems run in parallel for a specific period of time. During that period if any serious problems were identified while using the new system, the new system is dropped and the older system is taken at the start point again.

Direct Cut -Over Method: In this approach a working version of the system is implemented in one part of the organization such as single work area or department. When the system is deemed complete it is installed through out the organization either all at once (direct cut-over) or gradually (phase-in)

Phase-in Method: In this method a part of the system is first implemented and over time other remaining parts are implemented.

Implementation planed used: The workflow Management system is developed on the basis of “Parallel Run Method” because we upgraded the system, which is already in use to fulfill the requirements of the client. The system already in use is treated as the old system and the new system is developed on the basis of the old system and maintained the standards processed by the older system. The upgraded system is working well and is implemented on the client successfully.

of the candidate recruitments.

Project Plan

It was decided to use good Software engineering principals in the development of the system since the company had quite a big client network & was aiming to provide staffing for the clients or to develop the internal projects of the companys & expand their operations in the near future. So the following Project Plan was drawn up:

1. The Analysts will interact with the current manual system users to get the Requirements. As a part of this the Requirements Specification Document will be created.
2. The requirements Specifications document will contain the Analysis & Design of the system & UML will be used as the modeling language to express the Analysis & Design of the System.

According to Grady Booch et al, in The Unified Modeling Language User Guide **[UML-1998]**, “The Unified Modeling Language (UML) is a graphical language for visualizing, specifying, constructing, and documenting the artifacts of a software-intensive system. The UML gives you a standard way to write a system's blueprints, covering conceptual things, such as business processes and system functions, as well as concrete things, such as classes written in a specific programming language, database schemas, and reusable software components”.

3. The Analysis, Design, Implementation & testing of the System itself will be broadly based on the Rational Unified Software Development process. According to Ivar Jacobson et al, in The Unified Software Development Process (The Addison-Wesley Object Technology Series) **[USDP-2000]**, the Unified Software Development Process contains Inception, Elaboration, Construction & Transition as the main Phases, which contain further cycles & iterations. This process will be followed to produce an incremental cycle, which will deliver milestones like the Requirements Specification Document etc., at the end of each of the iterations, Phases or cycles.

4. The Architecture & Technologies will be decided as a part of the Analysis of the requirements.

5. Once the Design is ready the Implementation & Testing strategy of the system will commence. Each will be independent of the other. The implementation of the system itself will be broken down into sub-systems following the Software Engineering principles for the development of robust software.

6. Once the implementation is ready, the System testing will take place. If the system is judged to be stable then Acceptance testing by the Users will take place & once the Users are satisfied the System will be rolled out to the Users & they will be trained on how to use it for an initial period.

The following chapters contain an account of how the Technology & architecture for the system were chosen.

2.3.4 Validation Criteria

The Validation Criteria are dealt separately in the Chapter dealing with the Test Strategy & Test cases.

3. 2 MONGODB

According to the MONGODB Corporation website, in the Products category where MONGODB is listed “Whether users are creating a database for personal use, departmental use or for an entire organization, oracle offers an easy-to-use database for managing and sharing data. Oracle brings not only the traditional broad range of easy data management tools but also adds increased integration with the Web for easier sharing of data across a variety of platforms and user levels and additional ease-of-use enhancements to assist with personal productivity”. MONGODB is a no-sql Database, which forms part of the Office Suite of products from mysql Corporation. Though it can be used only for small applications, this

RDBMS was chosen for the implementation because it has a very user friendly Graphical User Interface. The tables can be created in the design view or through a Wizard. It is easy to create integrity constraints & foreign keys through the GUI.

If the Database is to be changed, then all that is required is to change the Thin Driver jar file. For example, in Tomcat 5.0 server, a new connection can be created by changing the name in Bean class. So it is very easy to connect to a Database.

Access provides all the features of an RDBMS. So it can be used for development of any application, which requires the relational Database features. It is also easy to import into or export data from Oracle. It supports SQL & can be connected from Java through thin driver.

3.7 Modules:

3.7.1 Administrator Module: This module allows administrator to manage different videos that upload by the users. It allows him to add, modify and delete the videos

3.7.2 User Module: It allows the candidate to register for the website and generate the ID and password. It allows the user login into this application and see the videos. He can view all the videos upload by the admin. He can add videos as Favorites.

3.7.3 Registration: This module allows the users to register for the website. It allows the Users select an option for add favourites with in the stipulated time and continues generating the videos.

User Activities:

Administrator :

- He can manage different videos
- He can upload the videos

Normal User :

- Register for the website
- He can add videos.
- He can add favorites.
- He can view his profile and edit his profile

- He can view his favorite video details

General Methodology in Developing Software Project

The general methodology in developing a system is involved in different phases, which describe the system's life cycle model for developing software project. The concept includes not only forward motion but also have the possibility to return that is cycle back to an activity previously completed. This cycle back or feedback may occur as a result of the failure with the system to meet a performance objective or as a result of changes in redefinition of system activities. Like most systems that life cycle of the computer-based system also exhibits distinct phases.

Those are,

Requirement Analysis Phase

Design Phase

Development Phase

Coding Phase

Testing Phase

1. Requirement Analysis Phase:

This phase includes the identification of the problem, in order to identify the problem; we have to know information about the problem, the purpose of the evaluation for problem to be known. We have to clearly know about the client's requirements and the objectives of the project.

2. Design Phase:

Software design is a process through which the requirements are translated into a representation of software. One of the software requirements have been analyzed and specified, the software design involves three technical activities: design, coding generation and testing. The design of the system is in modular form i.e. the software is logically

partitioned into components that perform specific functions and sub functions. The design phase leads to modules that exhibit independent functional characteristics.

It even leads to interfaces that reduce the complexity of the connections between modules and with the external environment. The design phase is of main importance because in this activity, decisions ultimately affect the success of software implementation and maintenance.

3. Development Phase:

The development phase includes choosing of suitable software to solve the particular problem given. The various facilities and the sophistication in the selected software give a better development of the problem.

4. Coding Phase:

The coding phase is for translating the design of the system-produced during the design phase into code in a given programming language, which can be executed by a computer and which performs the computation specified by the design.

5. Testing Phase:

Testing is done in various ways such as testing the algorithm, programming code; sample data debugging is also one of following the above testing

Requirement Specification:

Here, the focus is on specifying what has been found giving analysis such as representation, specification languages and tools, and checking the specification are addressed during this activity.

The Requirement phase terminates with the production of the validate SRS document. Producing the SRS document is the basic goal of this phase.

The purpose of the Software Requirement Specification is to reduce the communication gap between the clients and the developers. Software Requirement

Specification is the medium through which the client and user needs are accurately specified. It forms the basis of software development. A good SRS should satisfy all the parties involved in the system.

Purpose:

The purpose of this document is to describe all external requirements or client provisioning. It also describes the interfaces for the system.

Scope:

This document is the only one that describes the requirements of the system. It is meant for the use by the developers, and will also use by the basis for validating the final delivered system. Any changes made to the requirements in the future will have to go through a formal change approval process. The developer is responsible for asking for clarifications, where necessary, and will not make any alternations without the permission of the client.

System Design:

Design:

Design of software involves conceiving, planning out and specifying the externally observable characteristics of the software product. We have data design, architectural design and user interface design in the design process. These are explained in the following section. The goal of design process is to provide a blue print for implementation, testing and maintenance activities.

The primary activity during data design is to select logical representations of data objects identified during requirement analysis and software analysis. A data dictionary explicitly represents the relationships among data objects and constraints on the elements of the data structure. A data dictionary should be established and used to define both data and program design.

Design process is in between the analysis and implementation process. The following design diagrams (Data Flow Diagrams and E-R Diagrams) make it easy to understand and implement

The design process for software system has two levels.

1. System Design or Top Level Design.
2. Detailed Design or Logical Design.

System Design or Top Level Design:

In the system design the focus is on deciding which modules are needed for the system, the specification of these modules and how these modules should be interconnected.

Detailed Design or Logical Design:

In detailed design the interconnection of the modules or how the specifications of the modules can be satisfied is decided. Some properties for a software system design are

- Verifiability.
- Completeness.
- Consistency.
- Trace ability.
- Simplicity/Understandability.

Chapter 2

Design: Analysis, Design Methodology and Implementation Strategy

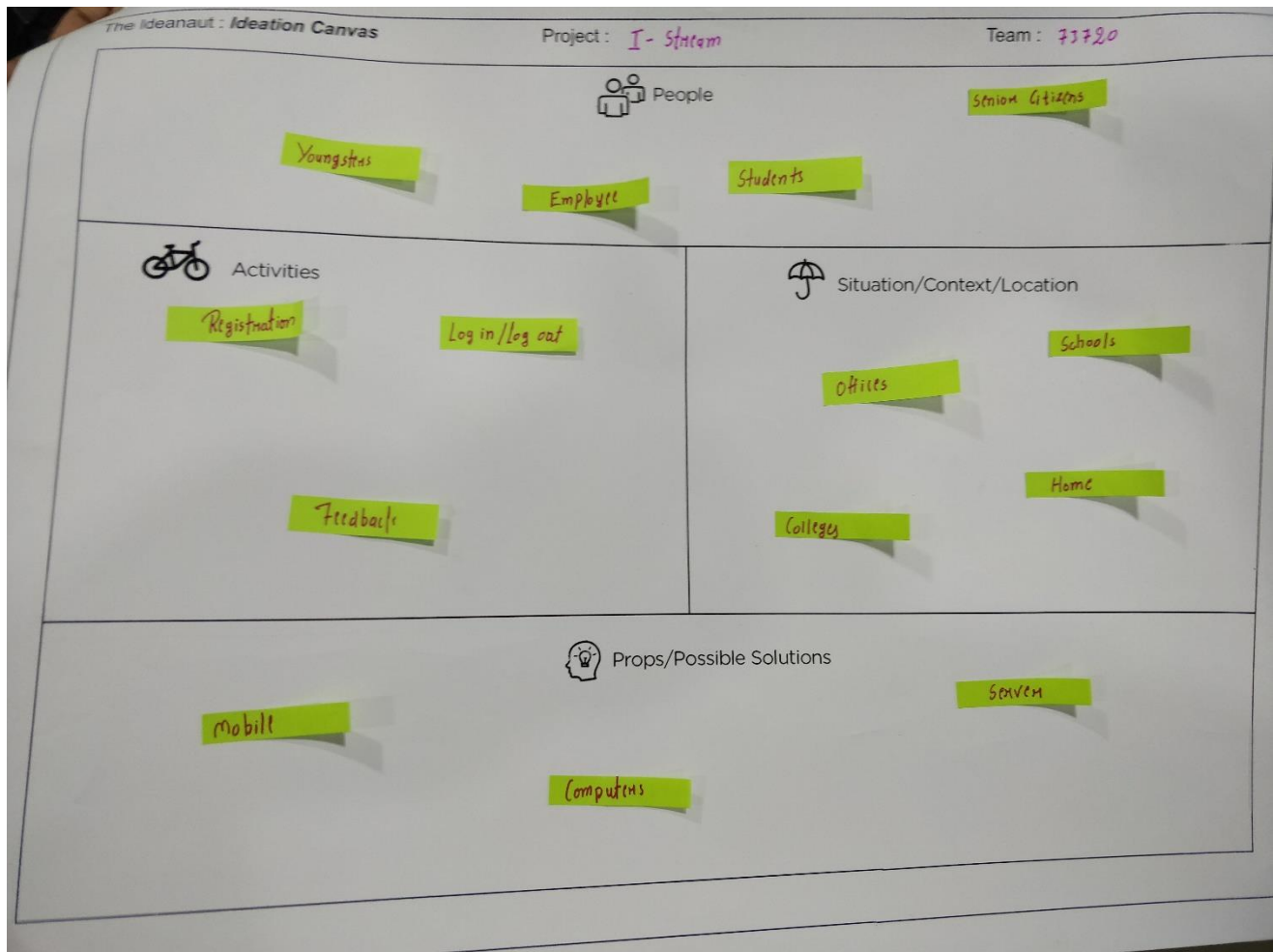
2.1 AEIOU Summary framework

AEIOU Summary :		Group ID : 73720	Date :	Version :
Domain Name :				
Environment : <ul style="list-style-type: none">CollegesSchoolsShopsHome	Interactions : <ul style="list-style-type: none">Student notesBusiness meetingsSoftware operations	Objects : <ul style="list-style-type: none">ComputersInternet connectionMobile		
Activities : <ul style="list-style-type: none">RegistrationFeedbackLog-InCreate streamLibrary		Users : <ul style="list-style-type: none">StudentsEducatorsGamesMusicians		

Empathy Mapping Canvas

Design For Date		Design By 73720 Version	
USER Students		STAKEHOLDERS Personal Coaching	
ACTIVITIES Registration Log In/Log Out Create stream View streaming Searching			
STORY BOARDING			
HAPPY There are probably a million of people who are going to get educated by live stream.			
HAPPY Ability to cache streaming video and watch it after the completion of the online broadcast.			
SAD People on viewers try to spam in the chat box or in the comment box and it leads to demotivate the content creator on this platform.			
SAD Some people post the negative content which is irrelevant to the topic like the kind of environment is toxic to creating new ideas.			

Ideation Canvas



Product Development Canvas

Product Development Canvas

Team/Date/Version : 73720

<p>Purpose</p> <p>What is the purpose of this concept you're developing? Does it solve a problem, or it enhance a certain experience?</p> <p>Is it serving a need or it is trying to create a new need or tap an untapped need?</p> <p>Online streaming</p> <p>Share it freely</p>	<p>Product Experience</p> <p>Define what your customer should feel like when he uses your product/service? What emotions, feelings would define his experience? (feeling of comfort, convenience, or feeling of being more with (confidence, productivity, or feeling of greater security, safety, etc.)</p> <p>Secure transaction</p> <p>Happy to help</p>	<p>Customer Revalidation</p> <p>Once you're finished with your feature, you need to ask yourself if the feature truly solves the problem that your customer is facing.</p> <p>Easy to use</p> <p>Easy to contribute</p>
<p>People</p> <p>Who is the key customer segment who will use this product/service or the end product of the concept you're pursuing?</p> <p>Write here about them, describe them a little.</p> <p>Students</p> <p>Gen Z</p> <p>Youngsters</p>	<p>Product Functions</p> <p>Functions are a product's answer to user problems/need. They do something that user wants. They are often verbs in nature. Every function is powered by many features. Multitasking is a function. Browser tabs is a feature that powers the multitasking function. A function can have one or more features powering it. Functions are very generic in nature. Features are often more specific. Functions can be similar to product experience. Safety (product function) provides a feeling of safety (product experience).</p> <p>Live sessions</p>	<p>Reject, Redesign, Retain</p> <p>Each customer validation, reject, redesign, or retain a feature that the customer didn't want, didn't like, didn't know that, was not useful, and really made the user, to date with this and not functions/features are accepted.</p> <p>Saves time</p>
	<p>Product Features</p> <p>Product features are specific. One or more features will power a function. Antilock Brakes, Airbags are features that power the safety function. Browser tabs, Apple's home button to multitask between apps are features powering the multitasking function. Each feature is powered by many components (sub-components) powering it. Sometimes a very popular component becomes a feature in itself. Like car stereo is a major component and a feature at the same time powering the in-car entertainment function powering entertainment as a product experience.</p> <p>Security</p>	
	<p>Components</p> <p>Components build up the features. For a airbag it will comprise a list of component, like bags, trigger etc. that go into making it. For a tabbed browser it will comprise of various chunks of code that will make the tabs work. In cases where the feature is a major component, you can define the sub-components that are required to make the major component work. You can also list new adjustments and innovations you're planning here at the component level.</p> <p>Laptop</p> <p>Intelligent</p> <p>Mobiles</p>	<p>Seven Emotions</p> <p>Need of devices</p> <p>Secure transactions</p>

Chapter 4 Analysis

4.1 E-R Diagram:

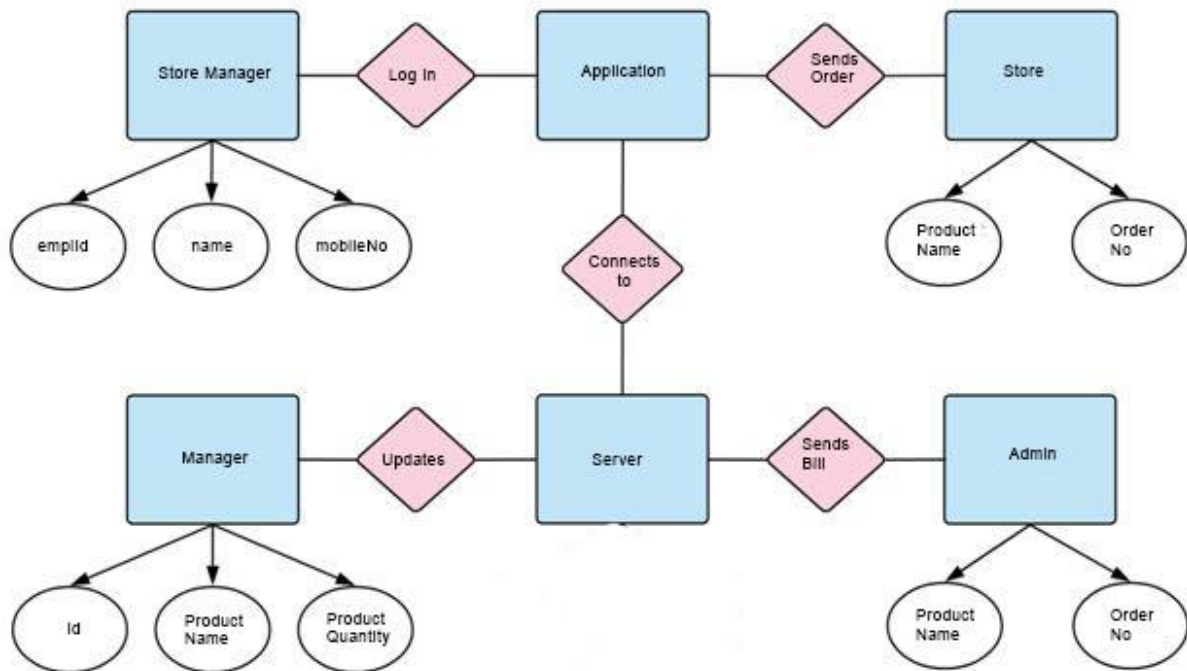


Fig 4. 1: E-R Diagram

4.2 Data Flow Diagram

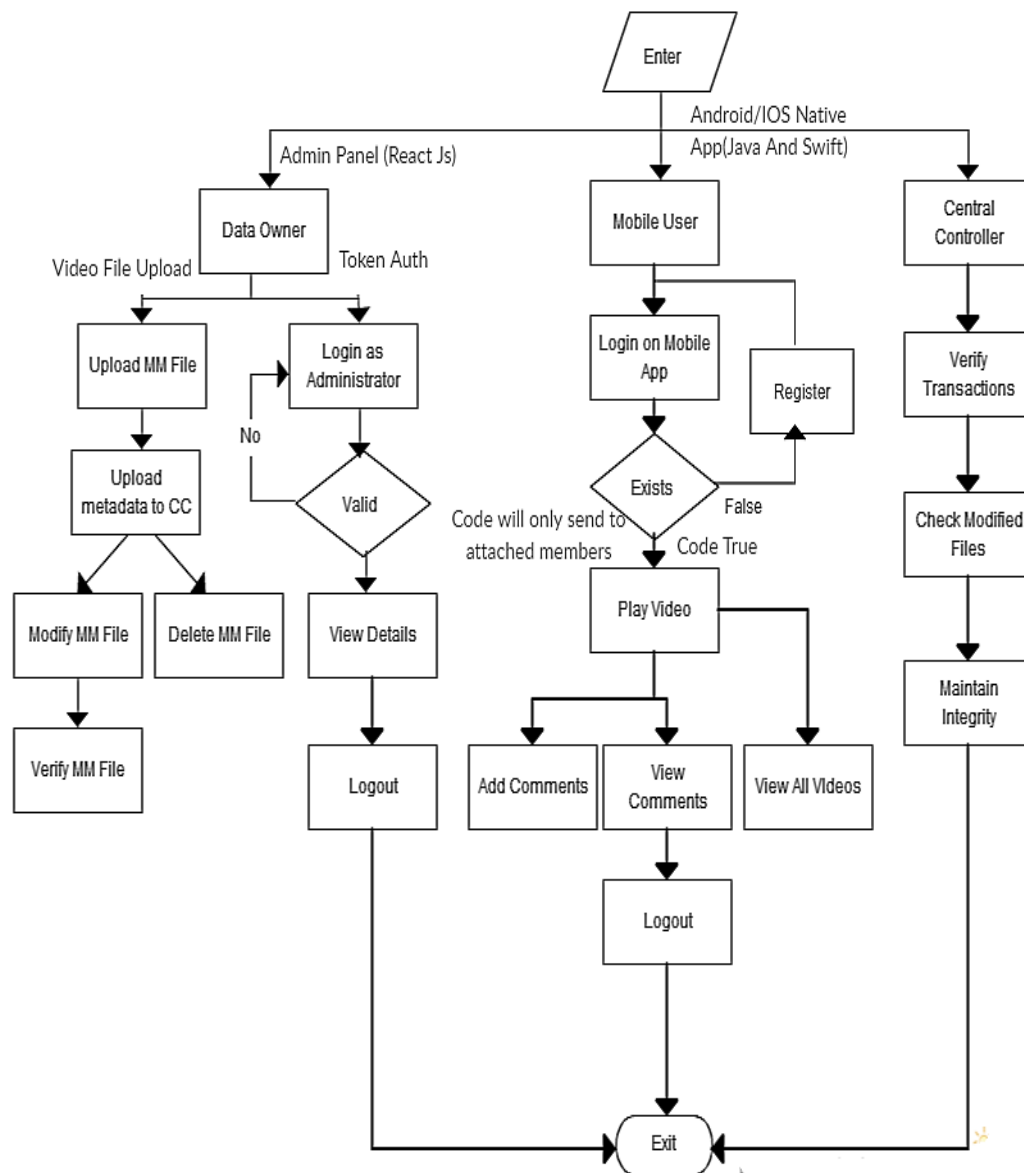


Fig 4. 2: Data flow diagram

4.3 Use Case Diagram

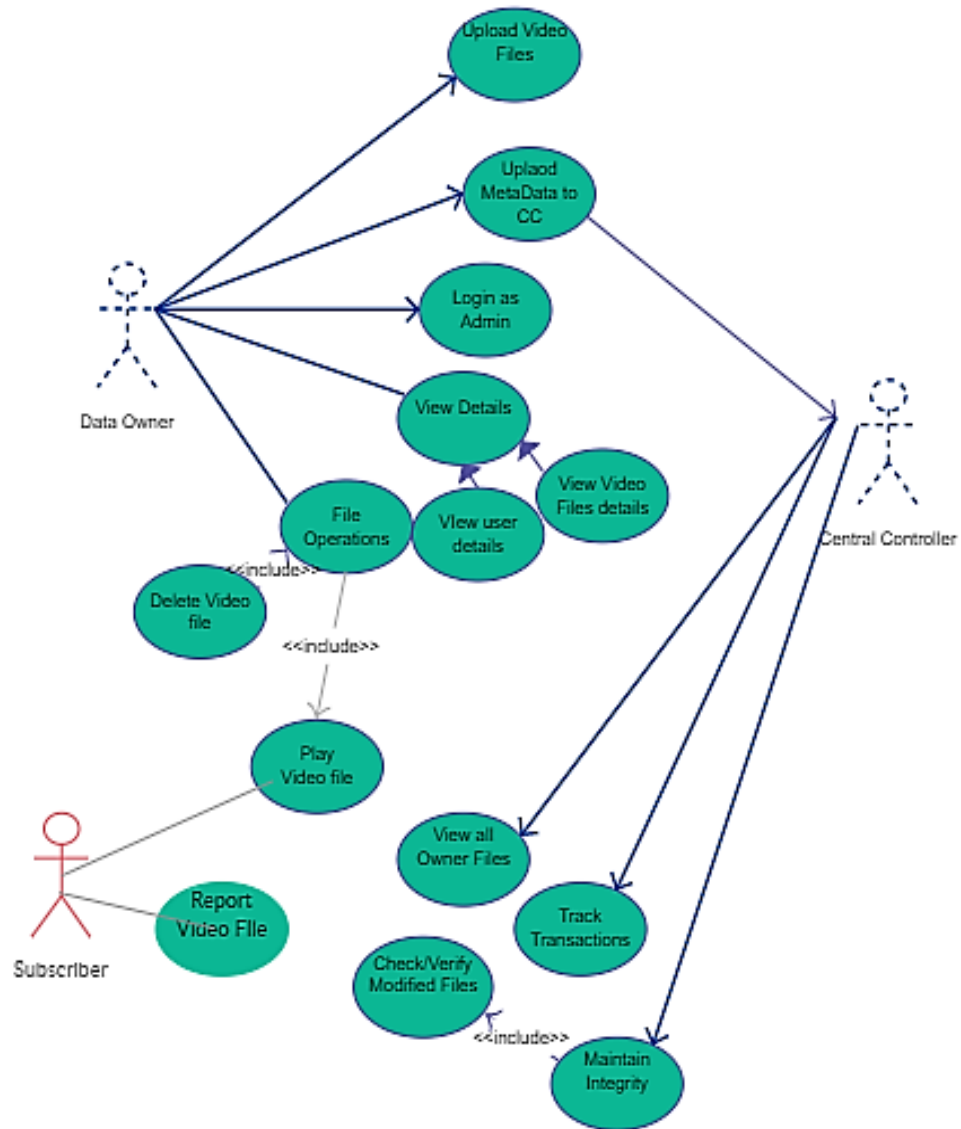


Fig 4. 3: Use Case Diagram

4.4 Sequence Diagram

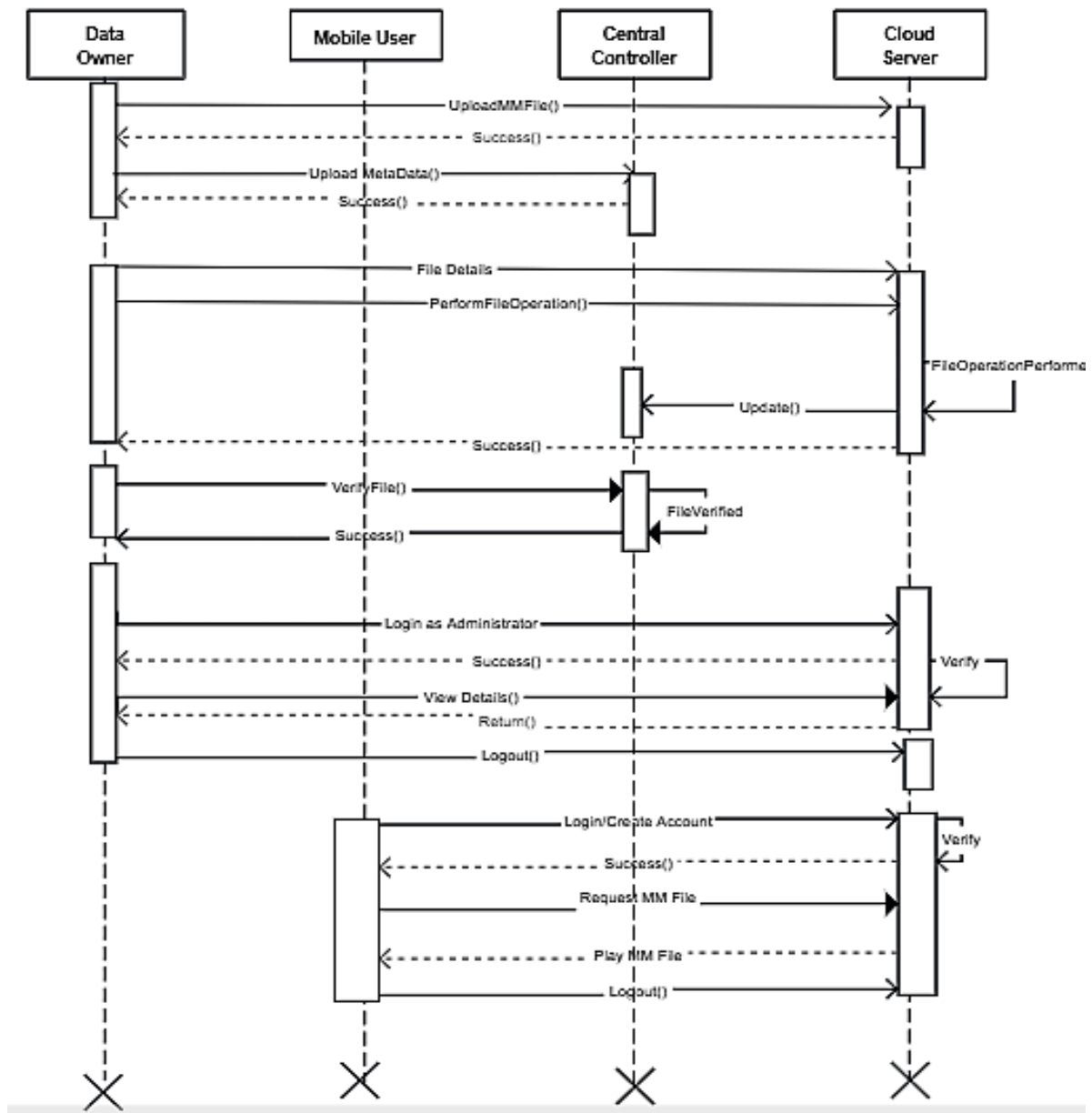


Fig 4. 4: Sequence diagram

4.5 Activity Diagram

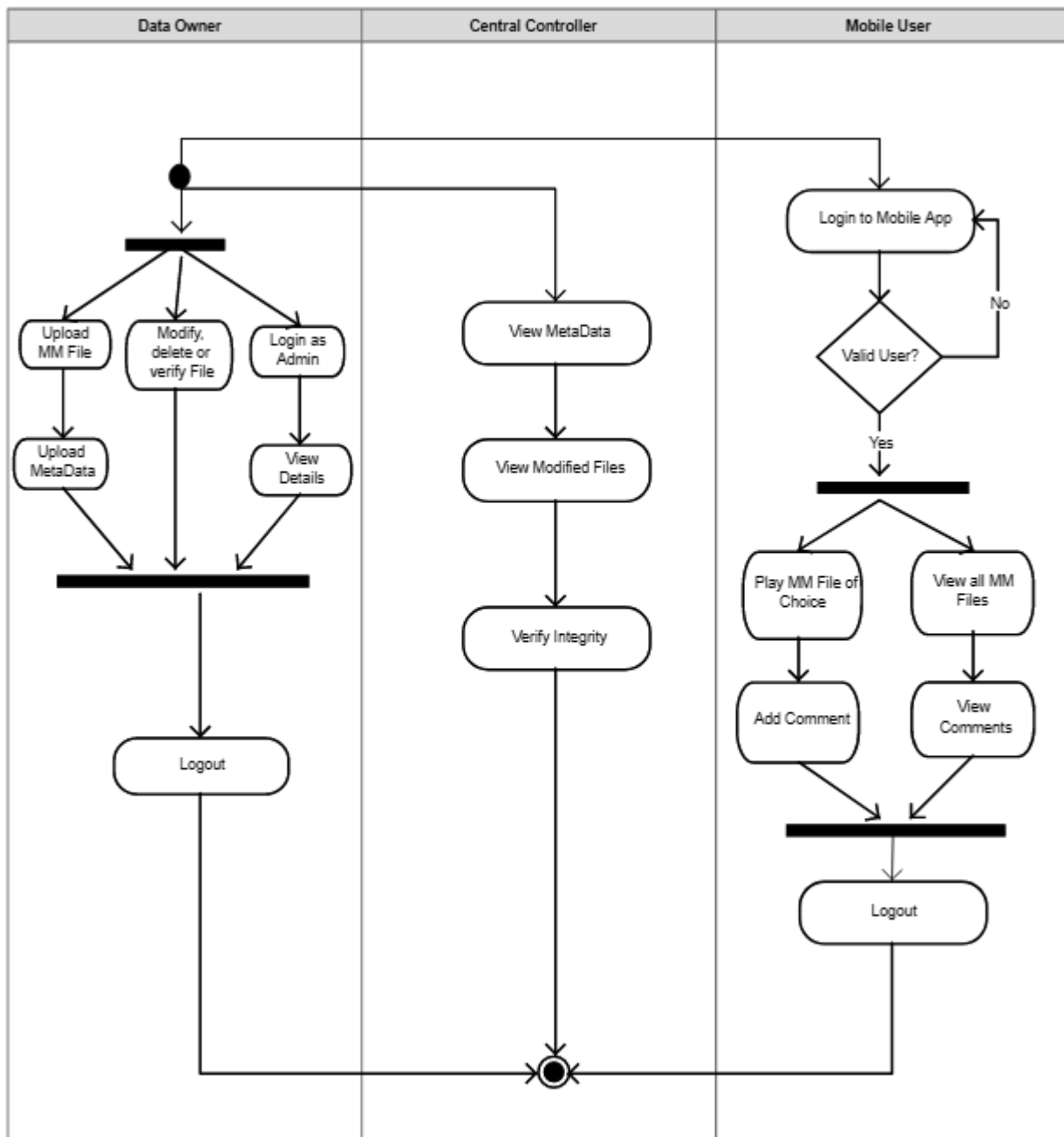


fig 4. 5: Activity Diagram

4.6 Class Diagram

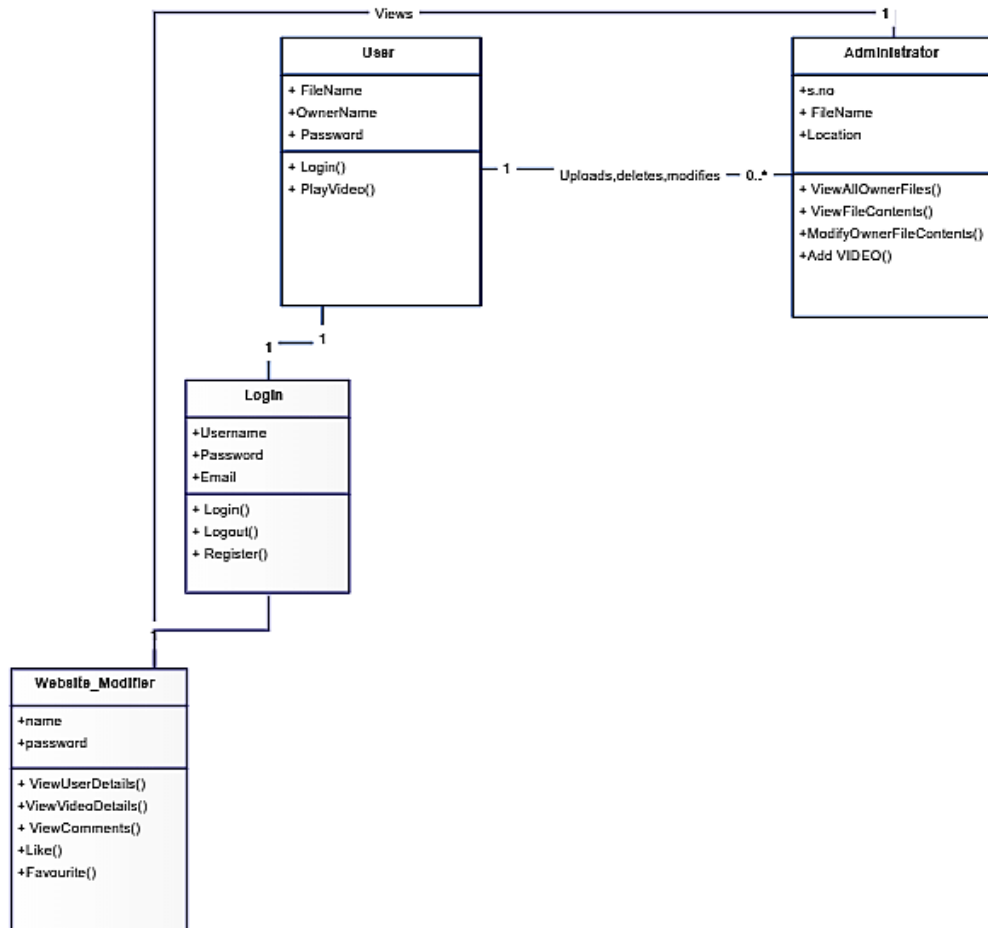


Fig 4. 6: Class Diagram

4.7 Class Diagram

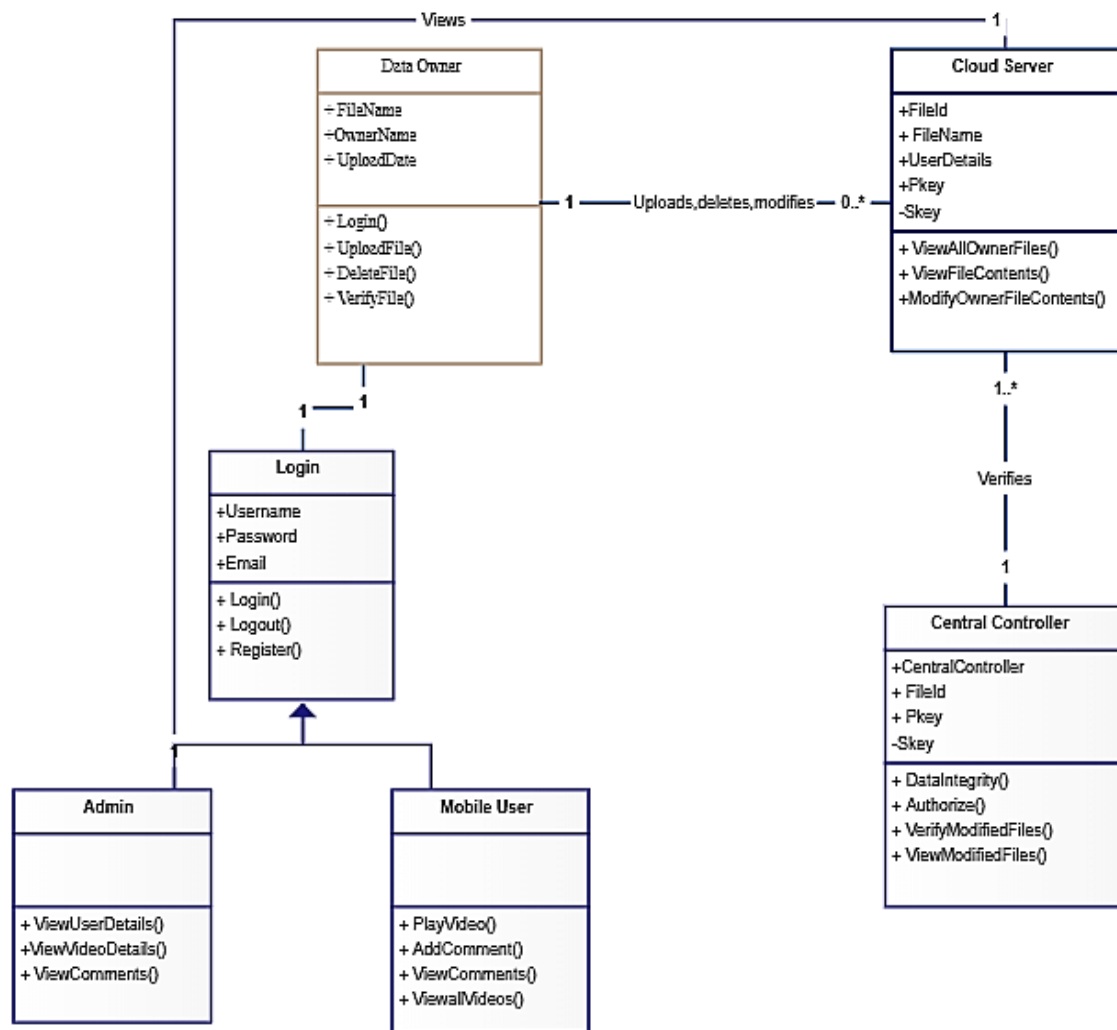
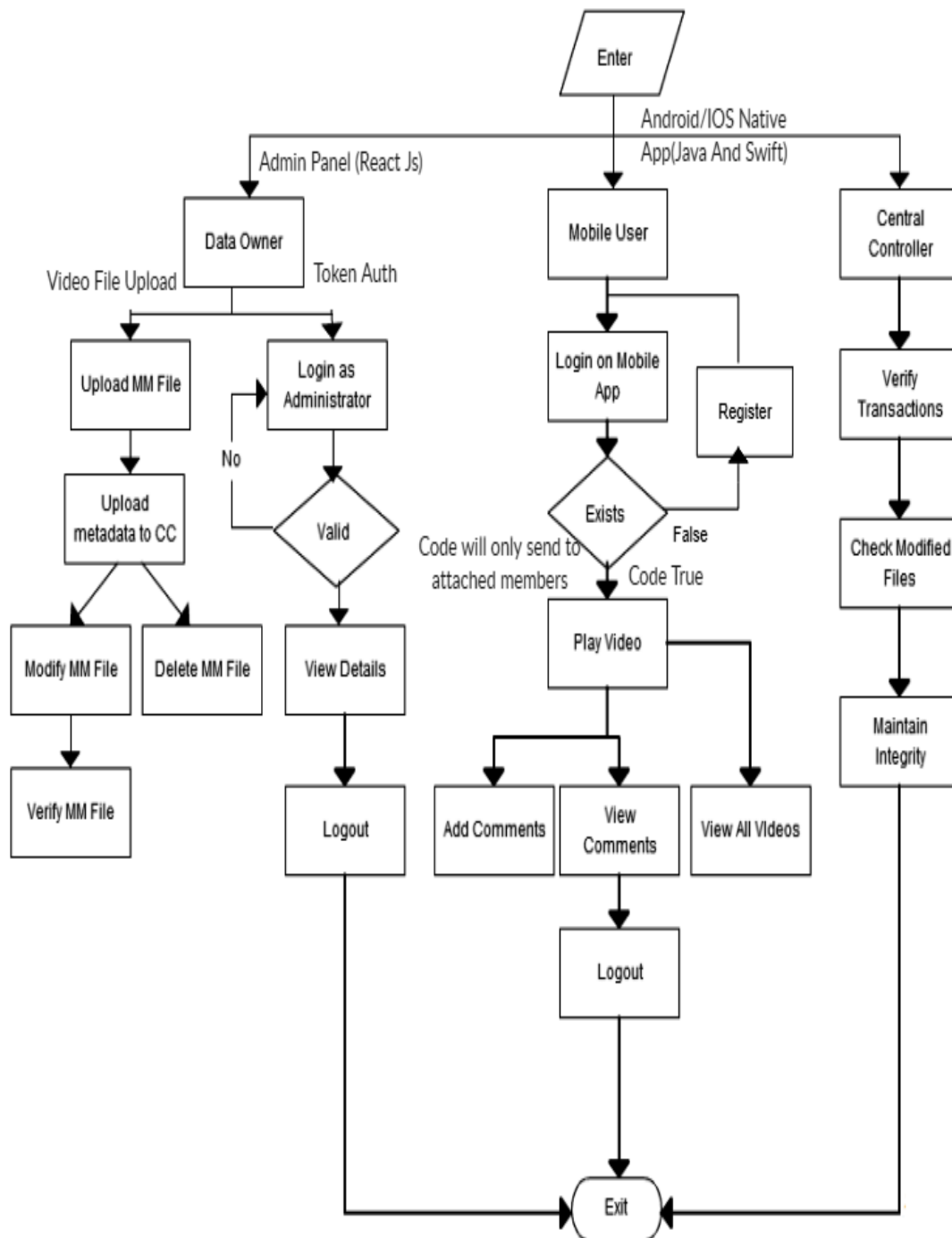


Fig 4. 6: Class Diagram

Chapter 5 Design

5.1 System Flow Diagram



Chapter 6

Conclusion & Future Work

6.1 Conclusion

In any business, make it big or small, we must understand that taking good care of our Security is very important. If we as managers do not understand the concept of good inventory management, we must learn to be familiar with it and its applications. One of the reasons for the failure of a business is its inventory management. There are many ways to fight failure, and we can start from here. There are new technology that can help us maintain and supervise our inventory. What we can do is learn, implement and evaluate our business. And you can start with your inventory...

6.2 Future Work

The following section describes the work that will be implemented with future releases of the software.

- Customize orders: Allow user to customize inventory order.
- Payment Options: Add different payment options such as PayPal, Cash, Gift Cards etc.
Allow to save payment details for future use.
- Allow to process an order as a Guest
- Delivery Options: Add delivery option
- Order Process Estimate: Provide customer a visual graphical order status bar
- Order Status: Show only Active orders to manufacturer's Employees.
- Order Ready notification: Send an Order Ready notification to the customer
- Restaurant Locator: Allow to find and choose a nearby manufacturer office.

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