

MINOR PROJECT REPORT ON

Document Management App

“M-Files”

UNDERTAKEN AT

SANT SINGAJI INSTITUTE OF SCIENCE AND MANAGEMENT

BY

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SUBMITTED TO



VIKRAM UNIVERSITY UJJAIN (M.P.)

Partial fulfilment of the Requirements for the Award of the

Degree Of Bachelor of Computer Application (B.C.A.)

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Guide name

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Sant Singaji Institute of Science and Management Sandalpur [Dewas]

# Certificate

Reference No: .....

Date: .....

## Project Completion Certificate

This is to certify that **Mr. Nitesh Vishwakarma** student of BCA (2<sup>nd</sup> Year) of **Sant Singaji Institute of Science and Management**, has successfully completed the project work entitled “**M-Files**” under the guidance of **Mr. Devendra Purohit** is a bona fide piece of work carried out at **Sant Singaji Institute of Science and Management Sandalpur**.

The project entitled “**M-Files**” developed by **Nitesh Vishwakarma** in the **SSISM** and he has put at least 200 hours of laboratory work during the tenure of the project with the guide to complete this project. All the prescribed certificates are attached after the completion of all the formalities of the projectwork as pre-schedule, including internal examination.

Place

Signature of Principal

Date

Signature of HOD

## Certificate of Attendance

Reference No: .....

Date: .....

This is to certify that **Mr. Nitesh Vishwakarma**, Student of BCA (**2<sup>nd</sup> Year**) of **Sant Singaji Institute of Science and Management**, has successfully completed the project work entitled “**M-Files**” and he has put at least 200 hours of laboratory work during the stipulated period of the project at **Sant Singaji Institute of Science and Management, Sandalpur.**

**Place**

**Signature of Guide**

**Date**

**Signature of Principal**

## **Declaration**

I'm **Nitesh Vishwakarma** of **Sant Singaji Institute of Science & Management** declare that the project report submitted by me under the guidance of **Mr. Devendra Purohit** is a bona fide work for the partial fulfilment of the requirement of the **BCA 2<sup>nd</sup> Year project work**. I have incorporated all the suggestions provided by my guide time to time.

I further declare that to the best of my knowledge this project contains my original work & does not contain any part of any work which has been submitted for the award of any degree either in this university or in any other university/Deemed university/Institute etc. Without proper citation and I shall be fully responsible for any plagiarism found at any stage.

**Name & Signature of the Guide**

**Name & Signature of the Student**

## Project Approval Certificate

Reference No: .....

Date: .....

This to certify that **Mr. Nitesh Vishwakarma**, a student of **BCA (2<sup>nd</sup> Year)** of **Sant Singaji Institute of Science & Management**, has successfully completed the project entitled “**M-Files**” under my guidance. I have regularly assessed the progress of the work and suggested the correction whenever required. The student has incorporated all the suggestions provided by me in this project. This project is bona fide piece of work of the standard of BCA project work carried out by the student under my supervision. Internal examination has been completed in my presence and student’s performance was satisfactory and hence this project is approved for the submission and valuation thereof.

**Signature of Guide**

**Place:**

**Signature of Principal**

**Date:**

**Seal of the Institute**

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# Introduction

## 1.1 Project Overview

**Document Management System App** is about organizing, managing the files. It also creates a service to store the file. In that Service we store messages and data. It also maintaining the database of creating that file and records of files that have been retrieved and issued, with their respective date and particular user. The main objective of the Document Management System App is organizing and managing Service. A Service is a place where all kinds of files (uploaded by us) are available. this is a web-based application and only a registered user can access the application. A document Management system app is developed to automate the task of entering the records of new files and retrieving the details of files available in the service.

**“M-Files”** is an online Web Application which are low a user to arrange their document at a systematic way in this app.

In **“M-Files”** the document is examined by 3 user which is called as Maker, Reviewer, Approver. In which Maker is create a Service and do updating and modifying on that service, Reviewer is review that service and approve that service, and Approver is approve that service and complete that service. 3 of them can also communicate through the messages weekend search the services and services we can also search the documents.



## **1.1 Problems and solutions of the project**

### **1.2.1 Existing System**

In the present scenario, in many organizations there are so many documentations going on currently so there are so many difficulties to well organise them so we are trying to collect same kind of documents in a service and displaying service on dashboard so that the company worker and their boss can review see from their place.

### **1.2.2 Proposed System**

In our proposal proposed system we are trying to solve all these problems too well arrange the docs in virtual machines. Our aim is to create a platform where any company can store their data or documentation in well-arranged manner which is very easy to access and any employee of the company can access easy.

# Feasibility Report

Preliminary investigation examines project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for “**M-Files**” adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

- ✓ Technical Feasibility
- ✓ Operation Feasibility
- ✓ Economic Feasibility

## 2.1. Technical Feasibility

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of ‘Secure Information Implementation System’. The current system developed is technically feasible. It is a web-based user interface for Document Management System App audit workflow at NIC- CSD. Thus, it provides an easy access to the users. The database’s purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified.

## 2.2. Operational Feasibility

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization’s operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following: -

- Is there sufficient support for “**M-Files**” from the users?
- Will the system be used and work properly if it is being developed and implemented?



### **2.3. Economic Feasibility**

A system can be developed technically and that will be used if installed must still be a good investment for Document Management System App - “M-Files” for the organization. As you know everything is changing in the changing time, we will make this project very easy to use so that every user can use it easily, and we will also keep in mind that it should be useful for the company as well, less time should be invested and more productive time should come out of this project.



# **System Analysis**

## **Software Requirement Specification Overview**

Aim is to create a platform any organization can store their documents in a very arrange manner. Our software “M-Files” fulfils their requirements. With the help of “M-Files”, anyone can easily documents from anywhere anytime. Through this “M-Files”, every type of documents can be stored.

All of these elements will drive us towards success and show us as one company that can perform and give value for Digitalization. This Service will solve the problems of a lot of people. That is because we have facilitated our users with a lot of facilities so that our users don't have to go here and there and find some random website to do the same. All these things waste the valuable time of people in this high-tech busy world so with the help of our “M-Files” people will not only save their valuable time but also their money.

### **3.1 Home module**

Through the home module the user can access to our various functionalities.

#### **3.1.1 Admin Home Module**

Project user firstly interact with the login. User have to login then in home page, user can see the dashboard of our services it can also go to the admin part the user can also able to see the list of users. List of organizations and user can go to “Create a service” screen as well.

#### **Functionalities:**

- Admin can create user, delete a user or update a user.

- Admin can disable or enable service.
- Admin can see all the services and review them as well.

### **3.2 Home Screen Module**

In the home screen user can able to see the service related to him/her on the dashboard. The User can go to that service and update according to him/her needs.

#### **Functionalities:**

- User can visit the create service screen.
- User can go to corresponding service.
- User can logout.
- If a user is admin so user can go to user list screen or client list screen.

### **3.3 Update Screen Module**

Whenever the user clicks on the any service, it will go to the view service screen and in the screen will be able to see the service details like year of creation, who is maker, reviewer, approver, client, name of service, priority.

#### **Functionalities:**

- User can add documents delete any documents and also give any feedback.

- Reviewer can also add documents, update documents, delete documents and submit to approve from the approver.
- User can also see the history of the service.
- User can go to message part and can any message to others.

### **3.4 Message Screen Module**

User can see the message posted by other members of the service.

#### **Functionalities:**

- User have to fill the title user can add any type of documents and body text.
- User can Update Message of himself/herself.
- User can delete him/her message.

### **3.5 Login Screen Module**

Users can see the login Screen, User has to enter the valid email and password.

#### **Functionalities:**

- User has to enter Email-ID and Password and press Submit button to Login.

# System Requirement Analysis

## 4.1 Hardware Requirements:

- Pentium Processor and above.
- 1 GB RAM and above.
- HDD 80 GB Hard Disk and above.

## 4.2 Software Requirements:

- Computer/Laptop System or Mobile Device.
- Browser
- Internet Connection





# **System Design**

## **5.1 Module design**

Software design sits at the technical kernel of the software engineering process and is applied regardless of the department paradigm and area of application. Design is the first step in the development phase for “M-Files” Document Management System App or any engineered product or System. The Designer’s goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement has been specified and analyzed, System design is the first of the three technical activities – design, code and test that is required to build and verify software.

The Importance can be started with a single word “Quality”. Design is the place where quality is fostered in software development. Design provides us with representations of software that can assess for Document Management System App – “M-Files” quality. Design is the only way that we can accurately translate a user’s view into a finished software product or system. Software design serves as a foundation for all the software engineering steps that follow. Without a strong design we risk building an unstable system – one that will be difficult to test, one whose quality cannot be assessed until the last stage.

During Design, Progressive refinement of data structure, program structure and procedural details are developed reviewed and documented. System design can be viewed from either technical or project management perspective. From the technical point of view, design is comprised of four activities – architectural design, data structure design, interface design and procedural design.

## **5.2 Data Flow Diagrams**

A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for “M-Files” Document Management System App identification purpose. The development of DFD’S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The top-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD.

## **DFD Symbols**

In the DFD, there are four symbols

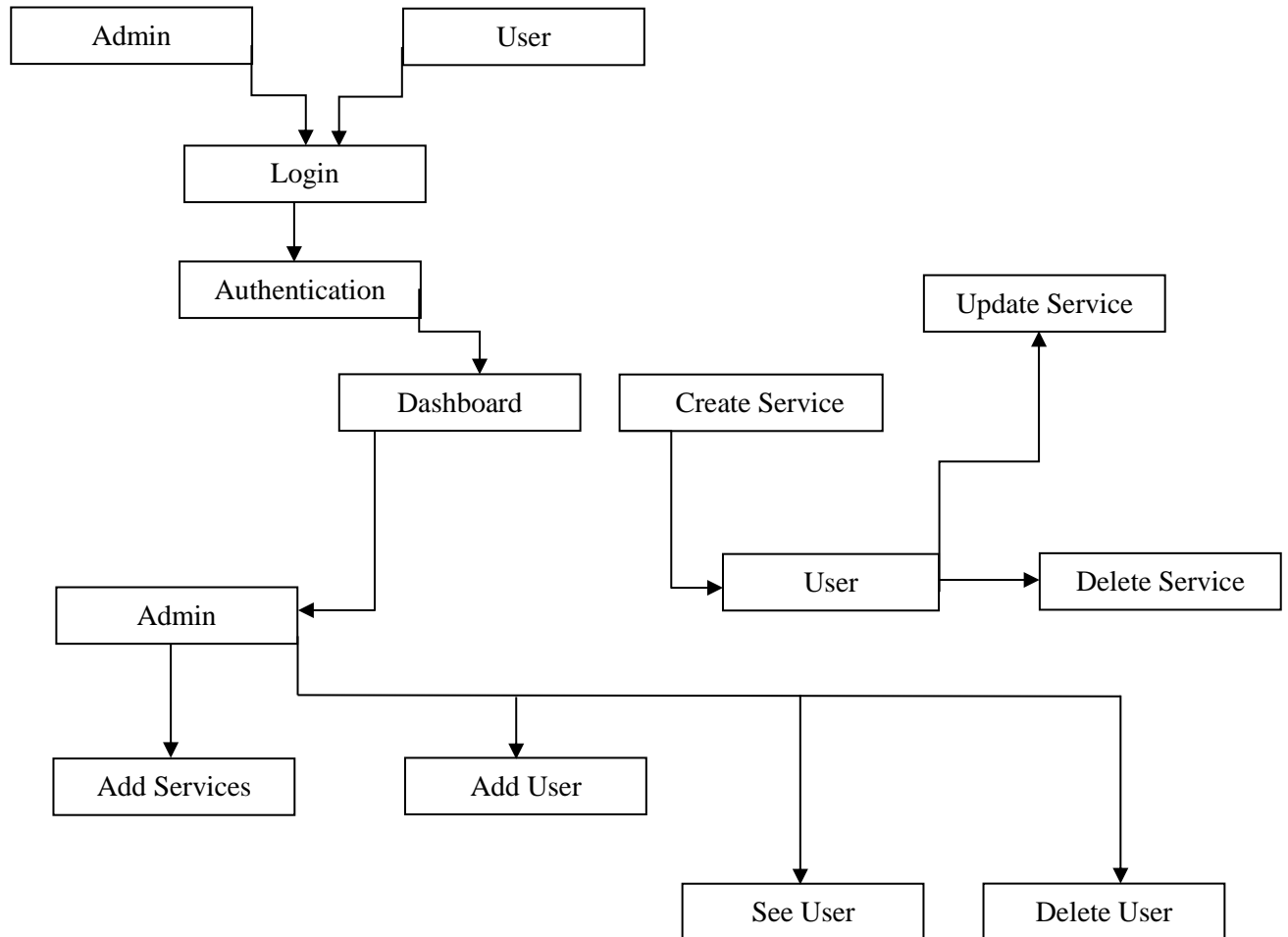
1. A square defines a source (originator) or destination of system data.
2. An arrow identifies data flow. It is the pipeline through which the information flows.
3. A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
4. An open rectangle is a data store, data at rest or a temporary repository of data.

## **Data Flow**

1. A Data Flow has only one direction of flow between symbols. It may flow in both directions between a process and a data store to show a read before an update. The latter is usually indicated however by two separate arrows since these happen at different type.
2. A join in DFD means that exactly the same data comes from any of two or more different processes data store or sink to a common location.
3. A data flow cannot go directly back to the same process it leads. There must be at least one other process that handles the data flow produce some other data flow returns the original data into the beginning process.
4. A data flow to a data store means update (delete or change).
5. A data flow from a data store means retrieve or use.

A data flow has a noun phrase label more than one data flow noun phrase can appear on a single arrow as long as all of the flows on the same arrow move together as one package.

## Level 1 Diagram for User Panel:

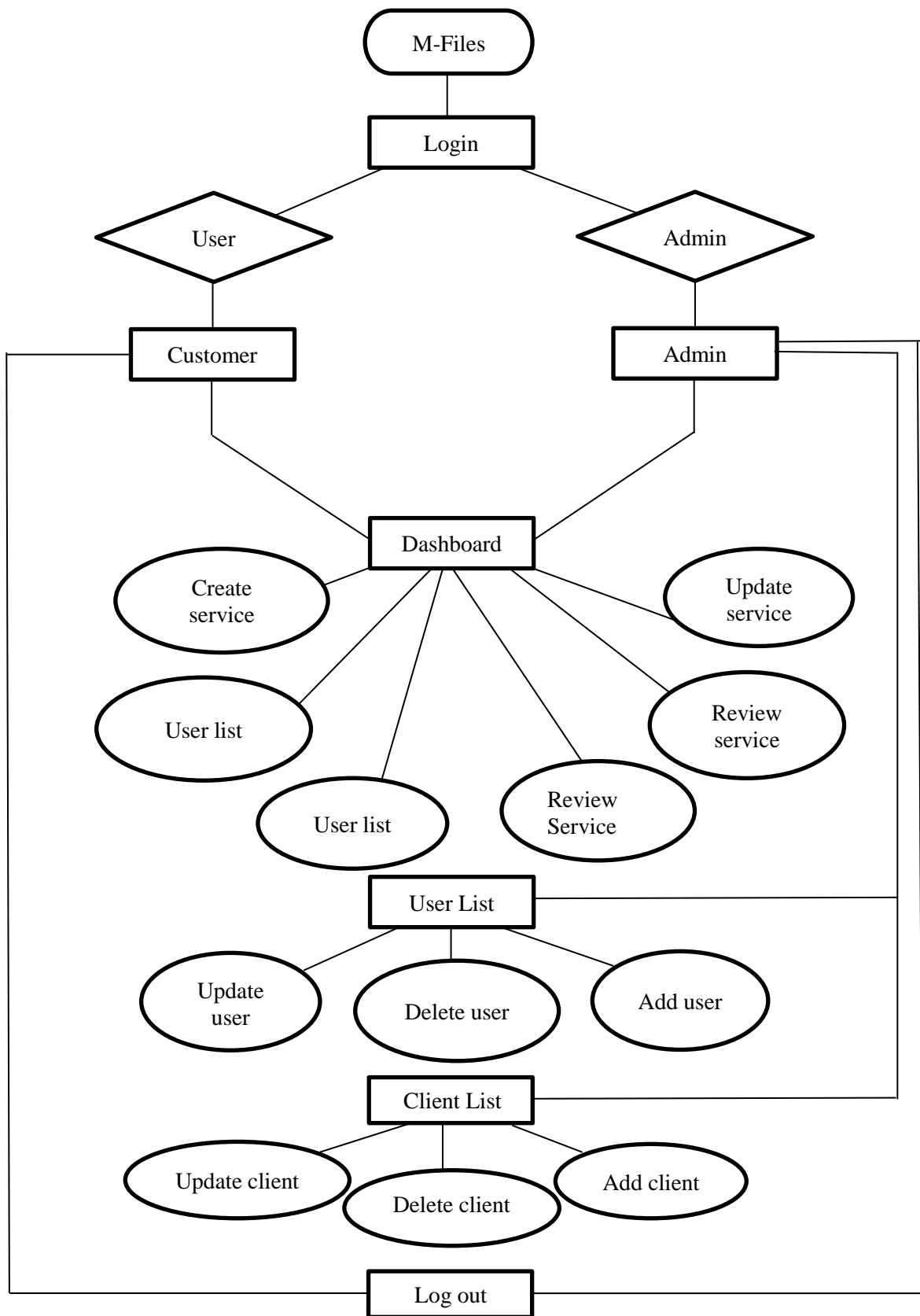


Server controls automatically maintain any client-entered values between round trips to the server. This control state is not stored on the server (it is instead stored within an `<input type="hidden">` form field that is round-tripped between requests). Note also that no client-side script is required.

In addition to supporting standard HTML input controls, PHP enables developers to utilize richer custom controls on their pages. PHP + BOOTSTRAP Web Forms provide an easy and powerful way to build dynamic Web UI.

1. PHP Web Forms pages can target any browser client (there are no script library or cookie requirements).
2. PHP Web Forms pages provide client level form validation.
3. PHP controls provide an easy way to encapsulate common functionality and send and receive data from form.

### 5.3 Entity Relationship Diagram



# **MySQL Server**

The MySQL™ software delivers a very fast, multithreaded, multi-user, and robust SQL (Structured Query Language) database server. MySQL Server is intended for mission-critical, heavy-load production systems as well as for embedding into mass-deployed software. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. MySQL is a trademark of Oracle Corporation and/or its affiliates, and shall not be used by Customer without Oracle's express written authorization. Other names may be trademarks of their respective owners.

## **MySQL Server Tables**

MySQL Server stores records relating to each other in a table. Different tables are created for Document Management System App – “M-Files” for the various groups of information. Related tables are grouped together to form a database.

### **Primary Key**

Every table in MySQL Server has a field or a combination of fields that uniquely identifies each record in the table. The Unique identifier is called the Primary Key, or simply the Key. The primary key provides the means to distinguish one record from all other in a table. It allows the user and the database system to identify, locate and refer to one particular record in the database.

## **Relational Database**

Sometimes all the information of interest to a business operation can be stored in one table. MySQL Server makes it very easy to link the data in multiple tables. Matching an employee to the department in which they work is one example. This is what makes MySQL Server a relational database management system or RDBMS. It stores data in two or more tables and enables you to define relationships between the tables and enables you to define relationships between the tables.

## **Foreign Key**

When a field in one table matches the primary key of another field is referred to as a foreign key. A foreign key is a field or a group of fields in one table whose values match those of the primary key of another table.

## **Referential Integrity**

Not only does MySQL Server allow you to link multiple tables, it also maintains consistency between them. Ensuring that the data among related tables is correctly matched is referred to as maintaining referential integrity.

## **Data Abstraction**

A major purpose of a database system is to provide users with an abstract view of the data. This system hides certain details of how the data is stored and maintained. Data abstraction is divided into three levels.



## **Physical level**

This is the lowest level of abstraction at which one describes how the data are actually stored.

## **Conceptual Level**

At this level of database abstraction all the attributed and what data are actually stored is described and entries and relationship among them.

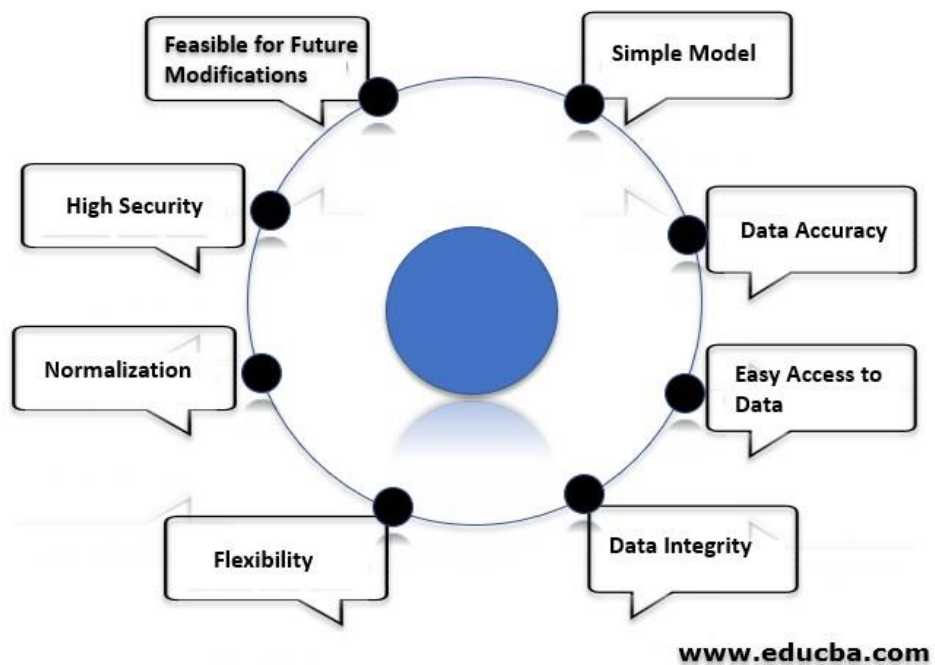
## **View level**

This is the highest level of abstraction at which one describes only part of the database.



## Advantages of RDBMS

- ✓ Redundancy can be avoided
- ✓ Inconsistency can be eliminated
- ✓ Data can be Shared
- ✓ Standards can be enforced
- ✓ Security restrictions can be applied
- ✓ Integrity can be maintained



## Disadvantages of DBMS

A significant disadvantage of the DBMS system is cost. In addition to the cost of purchasing of developing the software, the hardware has to be upgraded to allow for Document Management System App – “M-Files” the extensive programs and the workspace required for M-Files execution and storage.



# **System Testing and Implementation**

## **6.1. Introduction**

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. In fact, testing is the one step in the software engineering process that could be viewed as destructive rather than constructive.

A strategy for Document Management System App - “M-Files” software testing integrates software test case design methods into a well-planned series of steps that result in the successful construction of software. Testing is the set of activities that can be planned in advance and conducted systematically. The underlying motivation of program testing is to affirm software quality with methods that can economically and effectively apply to both strategic to both large and small-scale systems.

## **6.2. Software Testing**

The software engineering process can be viewed as a spiral. Initially system engineering defines the role of software and leads to software requirement analysis where the information domain, functions, behavior, performance, constraints and validation criteria for Document Management System App - “M-Files” software are established. Moving inward along the spiral, we come to design and finally to coding. To develop computer software, we spiral in along streamlines that decrease the level of abstraction on each turn.

A strategy for Document Management System App - “M-Files” software testing may also be viewed in the context of the spiral. Unit testing begins at the vertex of the spiral and concentrates on each unit of the software as implemented in source code.

Testing progress by moving outward along the spiral to integration testing, where the focus is on the design and the construction of the software architecture. Talking another turn on outward on the spiral we encounter validation testing where requirements established as part of software requirements analysis are validated against the software that has been constructed. Finally, we arrive at system testing, where the software and other system elements are tested as a whole.

### **6.3. Unit Testing**

Unit testing focuses verification effort on the smallest unit of software design, the module. The unit testing, we have is white box oriented and some modules the steps are conducted in parallel.

#### **6.3.1 White Box Testing**

This type of testing ensures that

- All independent paths have been exercised at least once.
- All logical decisions have been exercised on their true and false side.
- All loops are executed at their boundaries and within their operational bounds.

### **6.3.2 Basic Path Testing**

Established technique of flow graph with Cyclometric complexity was used to derive test cases for Document Management System App – “M-Files” all the functions. The main steps in deriving test cases were:

Use the design of the code and draw correspondent flow graph.

Determine the Cyclometric complexity of resultant flow graph, using formula:

$$V(G)=E-N+2 \text{ or}$$

$$V(G)=P+1 \text{ or}$$

$$V(G)=\text{Number of Regions}$$

Where  $V(G)$  is Cyclomatic complexity,

$E$  is the number of edges,

$N$  is the number of flow graph nodes,

$P$  is the number of predicate nodes.

Determine the basis of set of linearly independent paths.

### **6.4 Conditional Testing**

In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generate on particular condition is traced to uncover any possible errors.

### **6.5 Data Flow Testing**

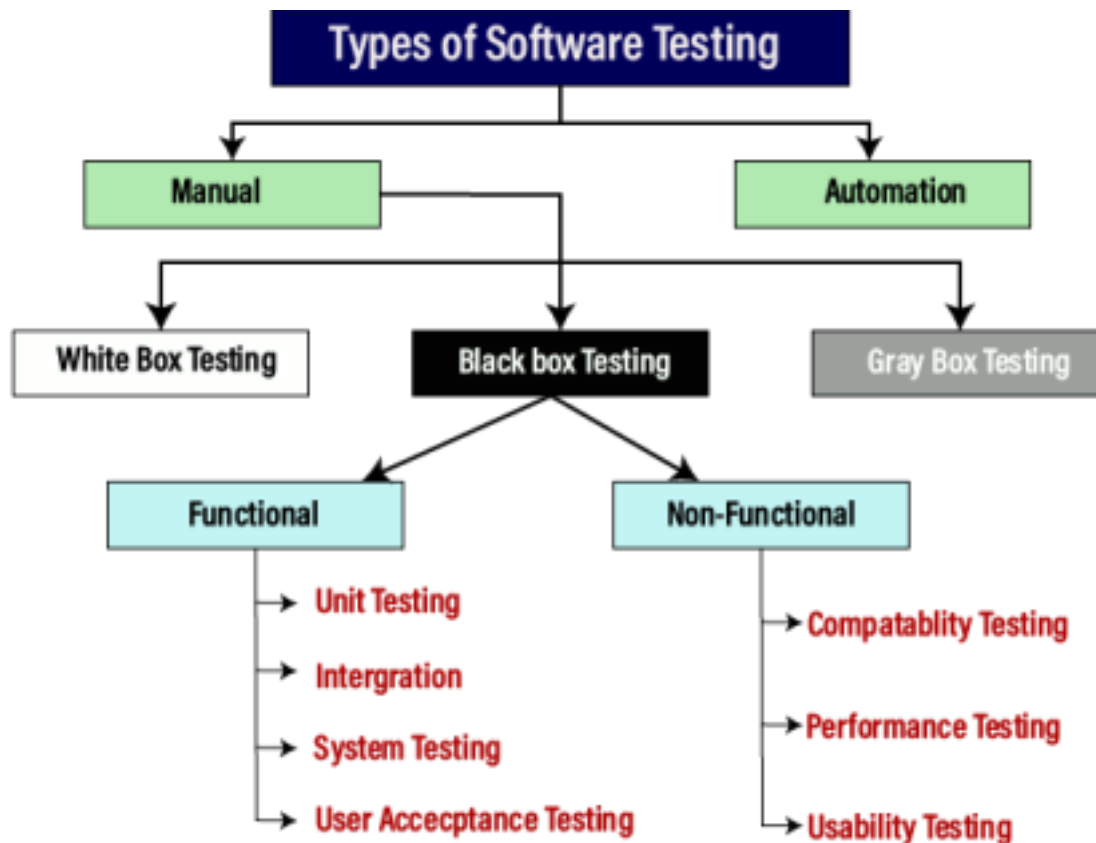
This type of testing selects the path of the program according to the location of definition and use of variables. This kind of testing was used only when some

local variable was declared. The definition - use chain method was used in this type of testing. These were particularly useful in nested statements.

## 6.6 Loop Testing

In this type of testing all the loops are tested to all the limits possible. The following exercise was adopted for Document Management System App – “M-Files” all loops:

- All the loops were tested at their limits, just above them and just below them.
- All the loops were skipped at least once.
- Unstructured loops were resolved into nested loops or concatenated loops and tested as above.
- Each unit has been separately tested by the development team itself and all the input have been validated.



# Output Screens

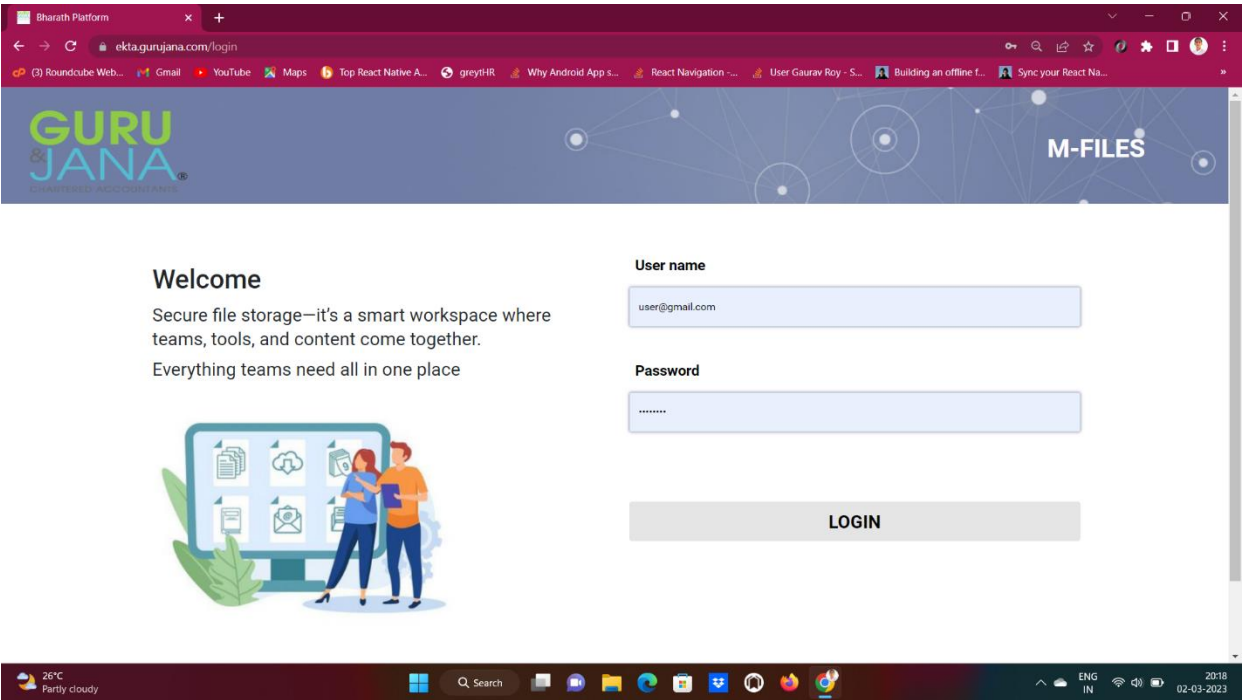


Fig. 1.1



Fig. 1.2



**CREATE A SERVICE** \* Indicates Mandatory Fields

Client

Nature of service

Priority

Financial Year

Assign a Maker

Assign a Reviewer

Assign a Approver

Remarks

Fig. 1.3

**VIEW SERVICE** **MESSAGE BOARD**

Service Id  Nature of Service

Client Name  Financial year

Priority  Status

Reviewer  Maker

Approver  Version

Doc Name	Draft	Review1	Review2	Client Review	Signed PDF	Date/Time
AA1381471 - Talentedge Form DIR-12 for Resignation of Arjun Mohan.pdf (1).pdf						28-02-2023 12:40 PM
Mail Communications - January2023.zip						28-02-2023 12:39 PM

Fig. 1.4

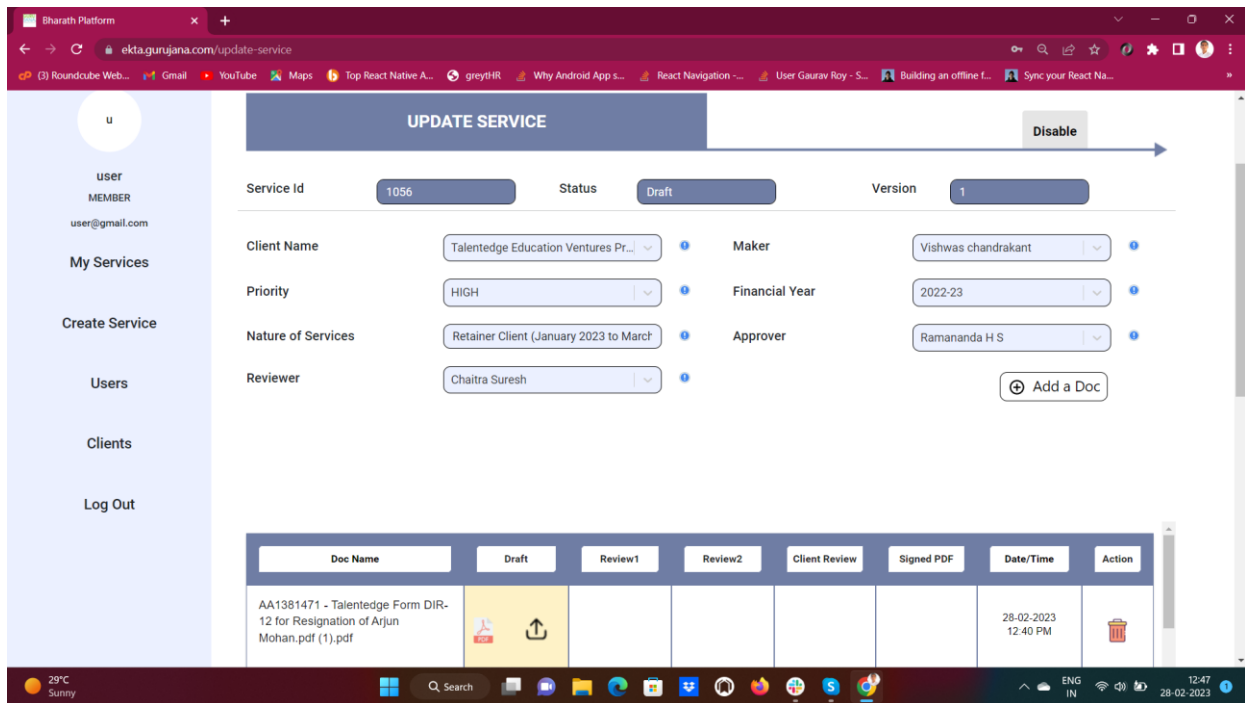


Fig. 1.5

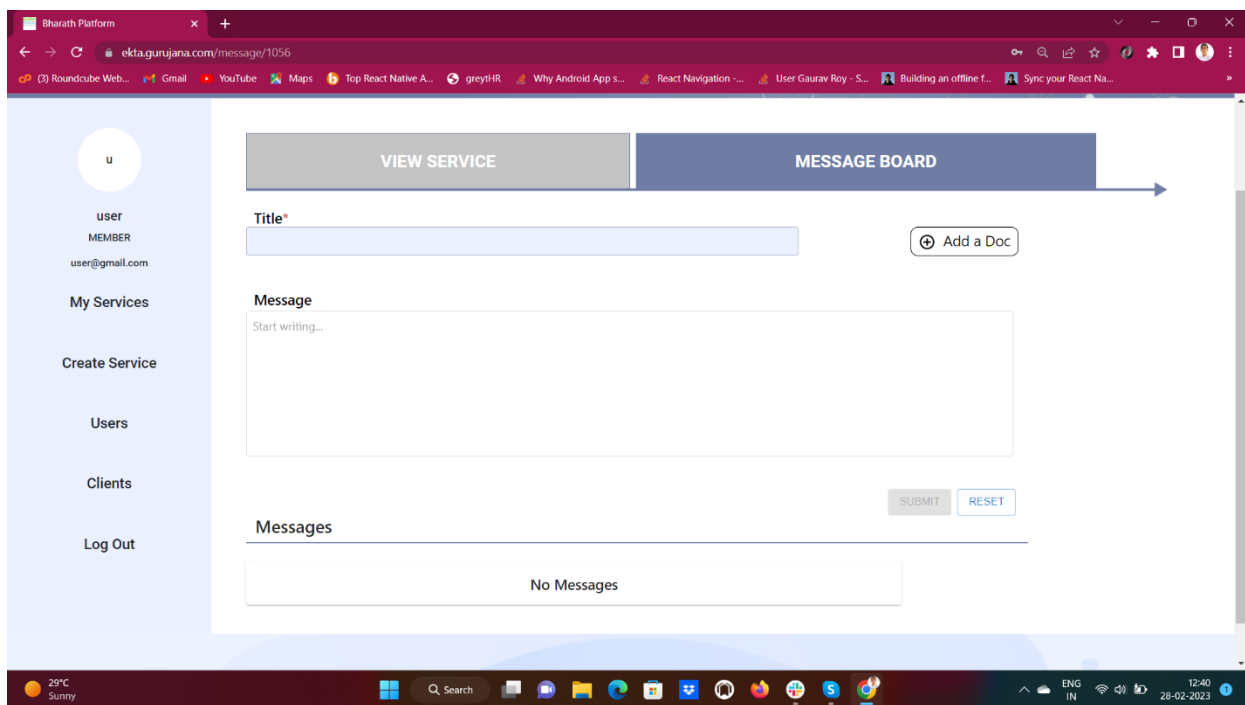


Fig. 1.6

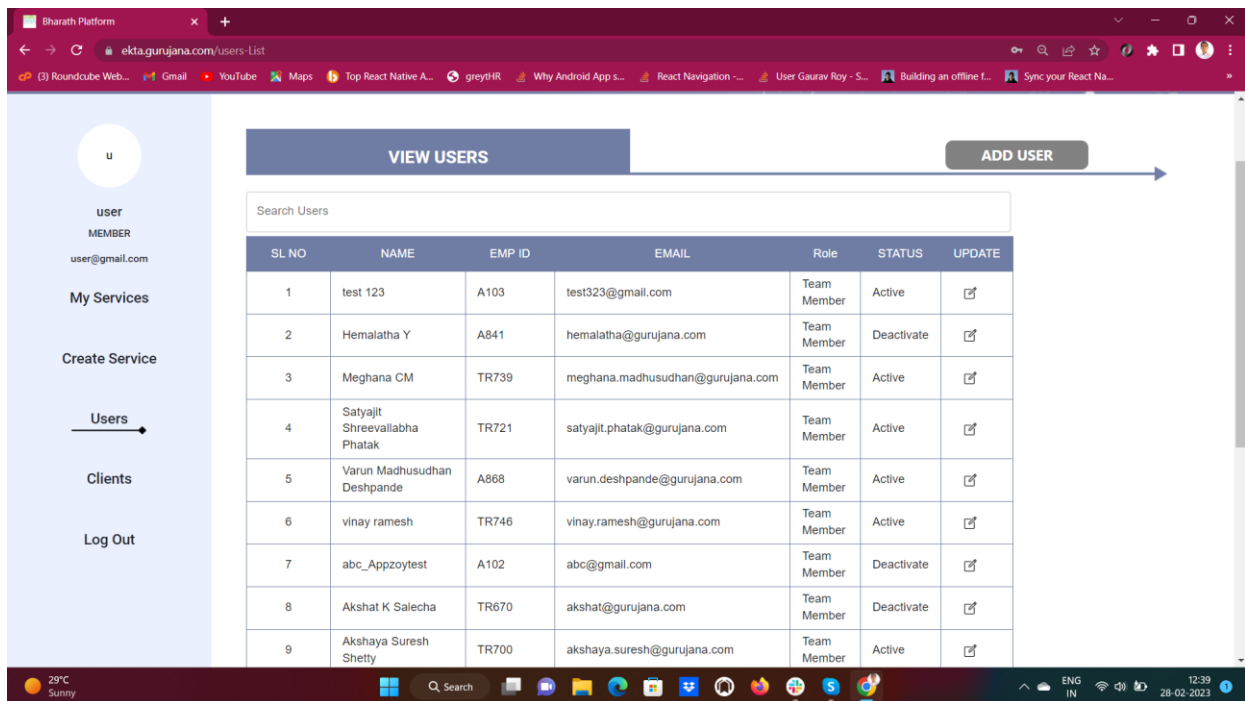


Fig. 1.7

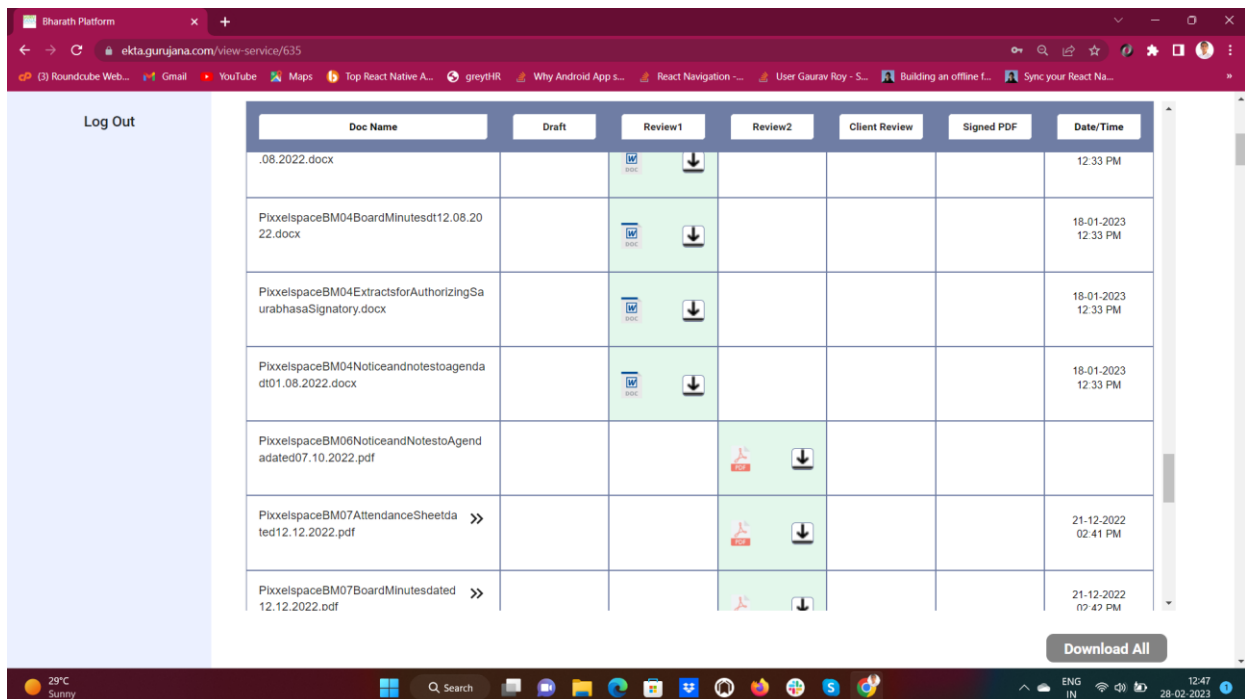


Fig. 1.8

# **Conclusion**

In our Document Management System App – “M-Files” we have only tried to help the people who are suffering from the problems which they have faced in existing system. Our software “M-Files” fulfils their requirements. With the help of “M-Files”, anyone can easily documents from anywhere anytime. Through this “M-Files”, The Users can store every type of documents.

## **8.1 Limitations**

In our Document Management System App – “M-Files”, we are still improving and trying to add new functionalities. “M-Files” still lacks of login and registration module, my services, create service and more filter options to apply on users with better server.

## **8.2 Future Enhancements**

In the future we will upgrade our Document Management System App – “M-Files”. We will also add login and registration functionality and also more filters to apply on service for ease.

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