

# Web Based Data Capturing System

**Author 1: P. Ram Mohan Rao, M.Tech, (P.h.D)**

*(Associate Professor, Department of Computer Science and Engineering, Sphoorthy Engineering College, Hyderabad.*

*Email: [rammohan04@gmail.com](mailto:rammohan04@gmail.com)*

**Author 2: D. Saneeth Reddy, B.Tech**

*(Student, Department of Computer Science and Engineering, Sphoorthy Engineering College, Hyderabad.*

*Email: [saneethdepa@gmail.com](mailto:saneethdepa@gmail.com)*

**Author 3: Vishnu Chand, B.Tech**

*(Student, Department of Computer Science and Engineering, Sphoorthy Engineering College, Hyderabad.*

*Email: [vishnuchand1801@gmail.com](mailto:vishnuchand1801@gmail.com)*

**Author 4: Dachepally Tarun, B.Tech**

*(Student, Department of Computer Science and Engineering, Sphoorthy Engineering College, Hyderabad.*

*Email: [tharundachepally25@gmail.com](mailto:tharundachepally25@gmail.com)*

## ABSTRACT:

Accreditation is the process of measuring quality standards in any engineering institution in India. Accreditation is now made mandatory for all engineering institutions in India. Accreditation typically involves the assessment of 3-5 years of performance in various metrics. Data Capturing System is a system under design that will evolve as a software utility where engineering colleges can capture data that can be useful for them in accreditation processes. Any kind of accreditation agency would like to assess the institution's performance based on five key parameters viz. teaching learning resources, graduate outcomes, research, outreach, and perception. As part of this project, we will identify all the data points, design a database and provide a user interface for uploading the data. The user interface will also provide useful statistics of data captured which will give deep insights into the data. These statistical studies will be utilized to provide answers to difficult questions in many different areas, such as education quality, enrollment, various research programmes, and other institutional domains. Even though these problems may not have existed in the past, statistical analysis's results, such as those from bar graphs, pictorial representations or histograms, have been crucial for both explanation and the expansion of educational institutions.. Data caught once can be used for any accreditation purpose, internal quality audit, and strategic decisions for improving the quality standards and rankings of the institution.

## I. INTRODUCTION:

The purpose of this document is to define and describe the requirements of the project and to spell out the system's functionality and its constraints. Accreditation is the process of measuring quality standards in any engineering institution in India. Accreditation is now made mandatory for all engineering institutions in India. It typically involves assessment of 3-5 years of performance in various metrics. Data Capturing System is a system under design which will evolve as a software utility where engineering colleges can capture data which can be useful for them in accreditation processes.

As part of this project, we will identify all the data points, design a database and provide a UI for uploading the data. UI will also provide useful statistics of data captured which will give deep insights of the data. Data captured once can be used for any accreditation purpose, internal quality audit

and strategic decisions for improving the quality standards and rankings of the institution.

Data Capturing System, a software which performs data manipulations via a web service, This software system contains two component applications. The first component of this software system is the UI, which interacts with outworld users. The second component is an application for querying a database like RDBMS. This system is designed in such a way to retrieve and handle the data in ease. The two components are hereby referred to as a "software system". More specifically, this system is designed for accreditation of all the departments in a university. Any kind of accreditation agency would like to assess the performance of the institution based on five key parameters i.e, teaching, learning resources, graduate outcomes, research, outreach and perception.

## II. LITERATURE SURVEY

## 2.1. Survey of the major area relevant to the project:

The main area that is pertinent to our project is gathering and managing institutional data in one place.

**Administrator:** Administrator can perform all data manipulation operations. He has permission to activate and deactivate the website. Administrator is responsible for securely managing the website frameworks.

**Super User:** Super user can upload documents and certifications related to his organization. He can also retrieve any kind of data from the data capturing system and can be used for further evaluations. Super user is more authorized and has access to delete the data from the database when compared to the user.

**User:** Users can upload documents and certifications related to different activities. A user can modify the documents and certifications which were previously uploaded but is not able to delete them. A user can also view the documents uploaded by other users.

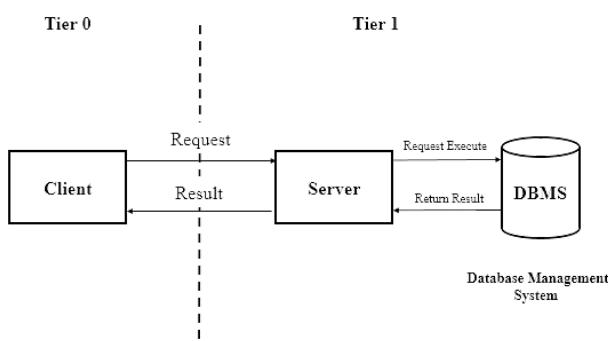
## 2.2. Applications

Data manipulation and Data handling is much more important nowadays. This system helps to manage the data with ease in many fields.

- Educational Sector
- Hospital Sector
- Information Technology Sector

## III. IMPLEMENTATION:

### 3.1. Integration and Development:



**Fig 1: 2 Tier System Architecture**

The goal of project integration is to ensure that all project processes are appropriately coordinated. Project integration management entails the creation of project plans, their implementation, and overall change management. The project plan is a formal, authorized document used to govern and oversee the progress of the project. The project

manager uses techniques like preparation of project planning methodology, and PMIS to develop a project plan. On the basis of the project plan, the project manager executes the project into action. To effectively complete the project, the project manager needs management abilities, product expertise, and the capacity to use tools like the work authorization system and system review meetings. Coordinating changes across processes is the focus of overall change control. If each of these processes is done correctly, the project can result in the intended final delivery(s). In the case of program development, the issue is first identified. It comprises requirements, execution timings, accuracy standards, and input-output specifications. In order to present more information, a necessary system flowchart is created. For each component of the computer program, a logic flowchart is developed. The issue may potentially be resolved by writing an algorithm. The following are the stages for the development of software,

1. Problem definition
2. Program Design
3. Coding
4. Debugging
5. Testing
6. Documentation
7. Maintenance, Extension, and Redesign

### 3.2. Implementation Of Module:

Data Capturing System is a software that stores and manages the overall data of an institution. This Project includes mainly modules:

#### Admin Module:

- Admin can perform all data manipulation operations.
- Admin has access to remove permissions of any user in the organization.
- Admin can activate and deactivate the website.
- Admin is responsible for securely managing the website frameworks.

#### Super-Admin Module:

- Superuser can also upload documents and certifications related to his organization.
- Superuser can retrieve any kind of data from the DCS and can be used for further evaluations.

- In addition to the user, the superuser is more authorized and has access to delete the data from the database.

**User Module:**

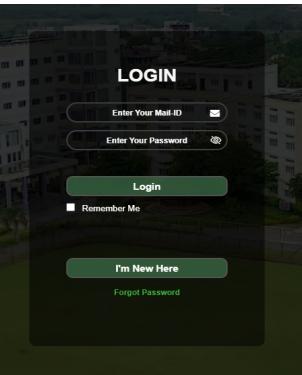
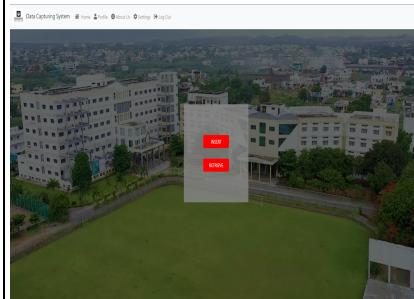
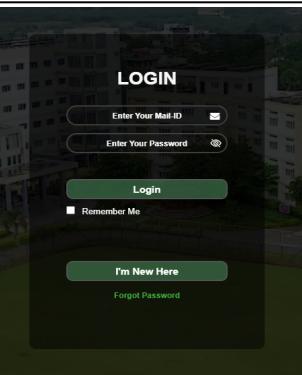
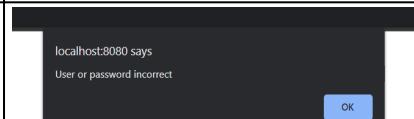
- The user can upload documents and certifications related to different activities.
- The user can modify the documents and certifications which were previously uploaded but is not able to delete them.
- The user can view the documents and certifications which were uploaded by other users in the organization.
- The user can retrieve the data as per his needs.

**IV. RESULTS AND ANALYSIS:**

In order to utilize this online application, we need some hardware, such as a CPU with a minimum clock speed of 1 GHz, a hard disc with a minimum capacity of 32GB, and RAM with a minimum capacity of 1GB.

In terms of software needs, this web application is compatible with all operating systems, including Windows, Mac, and Linux.

We used several technologies to construct this application, such as HTML to design web pages, CSS to add elegance to these pages, and Java script to make web pages more responsive. We used SQL as a database to store data provided by the user. JSP is used as a server-side scripting language. Web Hosting is done with the help of Tomcat Apache server.

Test Cases	User Interface	Input	Output	Success
1		Username, Password		Pass
2		Username, Password		Fail

Test Cases	User Interface	Input	Output	Success
3		Click action - I'm New Here		Pass
4		Depending upon the form		Pass
5		Select the options given below		Pass
6		Click action-logout		Pass

Fig 2: Test Cases

## V. CONCLUSION:

A web-based system serves as the data-capturing system. Its primary purpose is to store and retrieve the institution's extremely ancient historical data. This programme will streamline the accreditation process for institutions, which would otherwise need to be completed manually using a

## VI. REFERENCES

spreadsheet, perhaps creating problems with restrictions and making it challenging to determine the data for various regions within an institution. For each of the available options, a separate database table is provided. The project cuts down on the time and discomfort of manually organizing the data.

- National Assessment and Accreditation Council Manual
- <https://www.mysql.com/>
- <https://www.w3schools.com/css/default>
- <https://www.w3schools.com/java/>
- <https://www.phptpoint.com/mysql-tutorial/>
- <https://www.javatpoint.com/>
- <https://stackoverflow.com/>

## VII. APPENDIX

- DCS - Data Capturing System
- UI - User Interface
- RDBMS - Relational DataBase Management System
- HTML - HyperText Markup Language
- CSS - Cascading Style Sheets
- VS Code - Visual Studio Code
- DOM - Document Object Model
- MySQL - My Structured Query Language
- JS - JavaScript
- JSP - Java Servlet Page / Jakarta Server Pages