RESPONSIVE ACADEMIC PORTAL

ABSTRACT

The goal of the proposed project is to create a safe, user-friendly portal for staff, parents, and students in order to improve communication and information exchange in educational institutions. User-friendly buttons allow users to pick staff, parent, or student. When parents enter their child's roll number, the system verifies it against the database and then sends an OTP to the registered cellphone number. Once the OTP has been successfully verified, parents can view their child's attendance or grade history. In a similar vein, personnel and students can access data pertinent to their positions.

By requesting an OTP verification, the portal protects user privacy and data security by preventing illegal access to personal information.To make sure that only authorized users may access critical information, this verification step comprises sending an OTP to the user's registered mobile number. Strong data security and privacy are maintained via the backend system, which also handles authentication, data retrieval, and OTP verification.

Overall, by enabling safe, effective, and role-specific information exchange, the portal encourages openness, participation, and collaboration within the academic community. This solution facilitates good communication between all stakeholders, which not only protects personal data but also fosters a positive learning atmosphere.

TABLE OF CONTENTS

LIST OF ABBREVIATION

MERN	-	MongoDB Express React Node
HTML	-	HyperText Markup Language
CSS	-	Cascading Style Sheets
UI	-	User Interface
SPA	-	Single Page Application
JSON	-	JavaScript Object Notation
OTP	-	One Time Password
NLP	-	Natural Language Processing
LMS	-	Learning Management System

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

INTRODUCTION

For educational institutions, efficient and safe access to academic material is essential in the current digital era. The project " Secure Academic Portal" This need is met by creating a solid, user-friendly platform with MERN Stack. The site, which was developed using the MERN stack makes it simple for students to see their grades, attendance, academic standing, and extracurricular activities.

Only authorized users are able to access critical information through the site thanks to OTP (One-Time Password) verification, which ensures data security. After entering their college roll number and receiving an OTP on their registered cellphone number, users may access their academic data after being verified. This procedure increases user confidence in the security features of the system while also protecting personal data.

This project intends to preserve high standards of data integrity and privacy while optimizing the overall user experience through the integration of robust security procedures with current web technologies. For students looking for dependable and efficient access to their academic data, the portal's secure access methods and user-friendly design make it an indispensable resource. This introduction outlines the goal of the project, its technological underpinnings, and its dedication to provide a safe and effective method of handling academic data in learning environments.

CHAPTER 2

LITERATURE SURVEY

LITERATURE SURVEY

2.1 Design and Development of an Academic Portal [1]

Heila Pienaar ,University of Pretoria, taken into account while designing and developing an academic portal are examined in this article. Academics were personally interviewed to determine the purpose, look, content, and use of an academic portal. The Infoportal, an operational academic portal, was created to aid in the task performance of academics.

2.2 Chatbot for College Website [2]

Kumar Shivam, Indian Institute of Technology Roorkee suggested many applications feature human-like bots designed to simulate conversation, typically relying on databases curated by human experts. However, few studies have explored creating chatbots with artificial personalities and identities derived from web pages or plain text about specific individuals.

2.3 Design of Chatbot System for Student Counselling [3]

Sarang Balkrushna Sonawane, Asmita Sanjay Badwar, Gathering external information poses challenges for content-based strategies. Collaborative filtering, crucial in recommendation systems, often relies on static models. However, in many applications, including online platforms, the dynamics of relationships over time remain a significant consideration in data mining and machine learning.

2.4 Enquiry Chatbot Using Artifical Intelligence Algorithm [4]

Prof. Ram Manoj Sharma , developed chatbot system designed to answer college inquiries It is constructed using artificial intelligence algorithms. The bot interprets user messages and evaluates user queries. The system includes modules for online noticeboards, chatbots, and other things. They use database information to design a chatbot. The online inquiry and chatbot systems are features of the proposed system. Several programming languages are used in the development process to create an intuitive graphical user interface for sending and receiving responses.

2.5 Smart College Event Management System Using MERN Stack [5]

Akansha Pansare, Athang Patil, Nikita Patil, Yatin Patil, Mrs. Aparna Bhonde, Spreadsheets and conventional databases become less useful for managing details, and sharing event information also becomes challenging. A new Smart Event Management System that leverages web development to manage many activities was developed in order to address the shortcomings of traditional event management systems. The goal of the project is to provide our college with an event management system. Our project's main goal is to build an automated system that can help with data management and report production, as there are many defects and inefficiencies in college event management systems.

CHAPTER 3

PROBLEM STATEMENT

PROBLEM STATEMENT

In the current educational environment, universities have a difficult time communicating with students, parents, and staff members and successfully distributing information. Emails, phone conversations, and in-person inquiries are examples of traditional communication methods that frequently produce fragmented encounters, which cause delays, misunderstandings, and inefficiencies.

Moreover, the dispersion of data across multiple platforms and systems impedes accessibility, making it more difficult for stakeholders to promptly access vital resources, grades, attendance records, and administrative processes.The creation of college chatbots appears to be a useful remedy. The goal of the college chatbot is to function as a virtual assistant that can comprehend and reply to a range of questions and duties about the lives of students, academic services, campus resources, and administrative procedures.

CHAPTER 4

OBJECTIVE OF THE PROJECT

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- Provide a simple, easy-to-use interface with interactive features and unambiguous navigation.
- Give users access to student data by putting in place a safe authentication system.
- Create a system that allows users to retrieve and view attendance data or student grades in accordance with their demands.
- To retrieve data and manage procedures, integrate with the current Information Database.

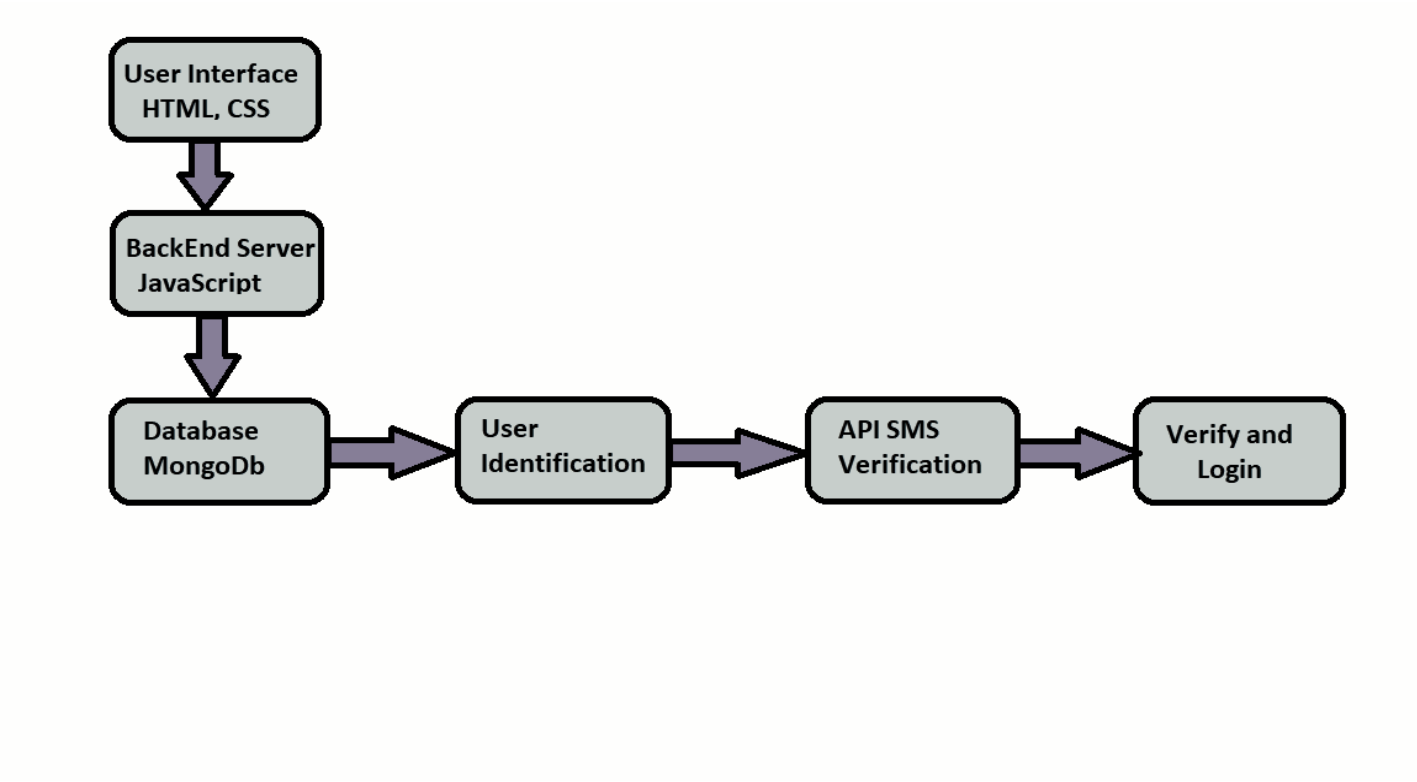
CHAPTER 5

PROPOSED SYSTEM

PROPOSED SYSTEM

By adding additional features that give users like parents and students a complete access to student-specific data including grades, grades, and attendance, the proposed system seeks to improve the current educational platform. The suggested solution will incorporate a safe and user-friendly portal where users can log in to access comprehensive information about their academic progress and accomplishments, building on the current chatbot interface.

5.1 CIRCUIT/BLOCK DIAGRAM



5.2 MODULE DESCRIPTION

5.2.1 Login Page

With the use of their individual roll numbers, students may securely and conveniently access their college portal by logging in to the College Roll Number Login Page module. This module verifies the roll numbers against the college database to make sure that only authorized users may use the site.

5.2.2 OTP Page

An additional layer of authentication is added to the login process with the OTP (One-Time Password) Verification Page module. Following the initial roll number login, an OTP is sent to the mobile number associated with the user's roll number in the college database. This module makes sure that the user is authenticated using both their roll number and their associated mobile number.

5.2.3 Main Page

After successfully completing the OTP verification procedure, users are able to view the primary dashboard, known as the Main Page module. Users can choose from a variety of choices on to examine data about their Academic Performance, Co-curricular Activities, Attendance, and Marks.

5.2.4 Mark Page

Users may examine their academic marks with the Mark Page module.

5.2.5 Performance Page

A thorough overview of a student's overall academic accomplishments is provided via the Academic Performance Page module.

5.2.6 Attendence Page

Users may get comprehensive details about their attendance history via the Attendance Page module.

5.2.7 Co-activities Page

Users may get comprehensive information about their participation in different co-curricular activities using the Co-curricular Activities Page module.

CHAPTER 6

HARDWARE AND SOFTWARE DETAILS

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6.1 Software Requirements:

- Operating System: Any computer system like Windows, Mac, or Linux.
- Development Tools: Programs like Visual Studio Code or Sublime Text for writing code.
- Backend Development: Tools like Node.js for handling the logic behind the scenes.
- Database: Software MongoDB to store information.
- Frontend Tools: Libraries like React.js or Angular to create the website's look and feel.
- API : Plateform like Firebase is useful for OTP generation and verification.

6.2 Hardware Requirements:

- Development Machine: A computer with a decent processor (like Intel Core i5), at least 8GB of RAM, and some storage space.
- Network: A stable internet connection for both development and hosting.

CHAPTER 7

RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

The "Responsive Academic Portal" project has been successfully implemented, yielding a stable and intuitive platform for academic information access. Utilizing the MERN stack which consists of MongoDB, Express.js, React, and Node.js—the project offers a strong technological base for flawless operation and a pleasant user experience.

Ensuring data security and privacy through the incorporation of OTP verification limits access to critical academic information to only authorized individuals. Users can increase confidence in the system's security safeguards by entering their college roll number and receiving an OTP on their registered mobile number.

The project's overarching objective of enhancing user experience while upholding strict guidelines for data integrity and privacy has been accomplished. The portal is a priceless resource for students looking for dependable and efficient access to their academic data because of its secure access methods and user-friendly design. By providing a safe and efficient means of accessing academic data, this project meets the needs of the modern digital age and effectively manages academic material in educational field.

CHAPTER 8

CONCLUSION AND FUTURE WORK

CONCLUSION & FUTURE WORK

8.1 Conclusion

We are able to create a chatbot that can view the student's mark, attendance and other activities in college website. To create a Responsive Academic Portal, researchers need to collaborate and choose a shared approach. In this study, we looked into how Academic Portal are developed and used in various businesses. In general, the Portal should be condensed, friendly, and easy to navigate

In conclusion, the developed an Academic Portal integrated with a comprehensive database offers a seamless solution for college inquiries, enhancing accessibility and efficiency for students, teachers, and parents. Leveraging the MERN stack, the Academic Portal facilitates easy access to student marks, attendance records, academic performance metrics, and co-curricular activities, providing a centralized platform for academic and extracurricular management. This innovative system streamlines communication between faculty and students while saving valuable time and labor, ultimately fostering a more productive and informed educational environment.

8.2 Future Work

In order to actively engage students and encourage involvement inside the academic portal, incorporate real-time collaboration tools like discussion boards and group study sessions. This will promote interactive learning experiences and collaborative knowledge-sharing possibilities.

LMS Integration which enable easy access to course materials, assignments, grades, and other academic resources, the chatbot will be integrated with the college's LMS.

Extension of Services results in extending the portal's service offering to include more services related to career services, financial aid, campus activities, student groups, and admissions, among other facets of college life. As a result, the portal would become a thorough resource for teachers, staff, students, and potential applications.

CHAPTER 9

REFERENCES

REFERENCES

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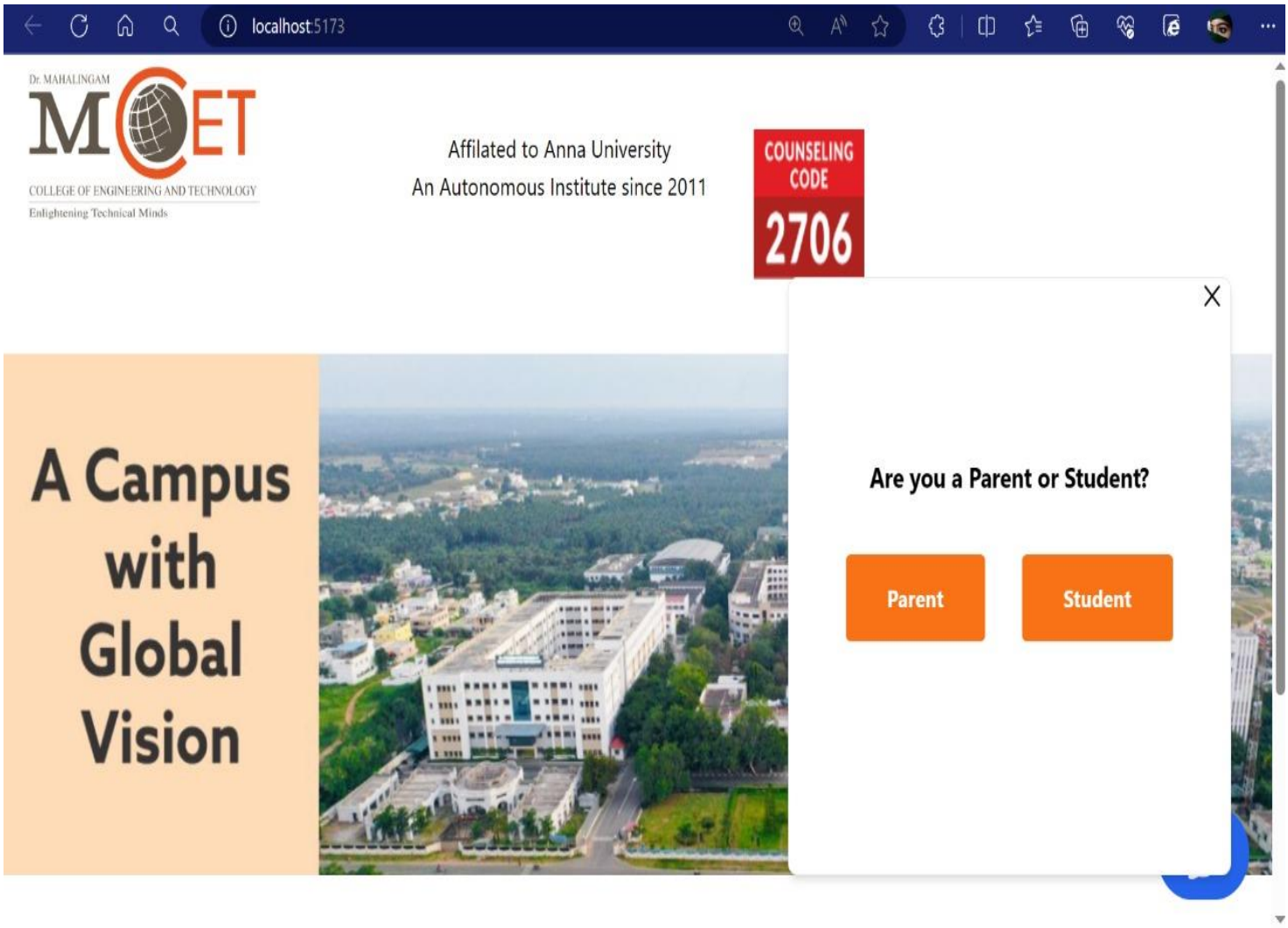
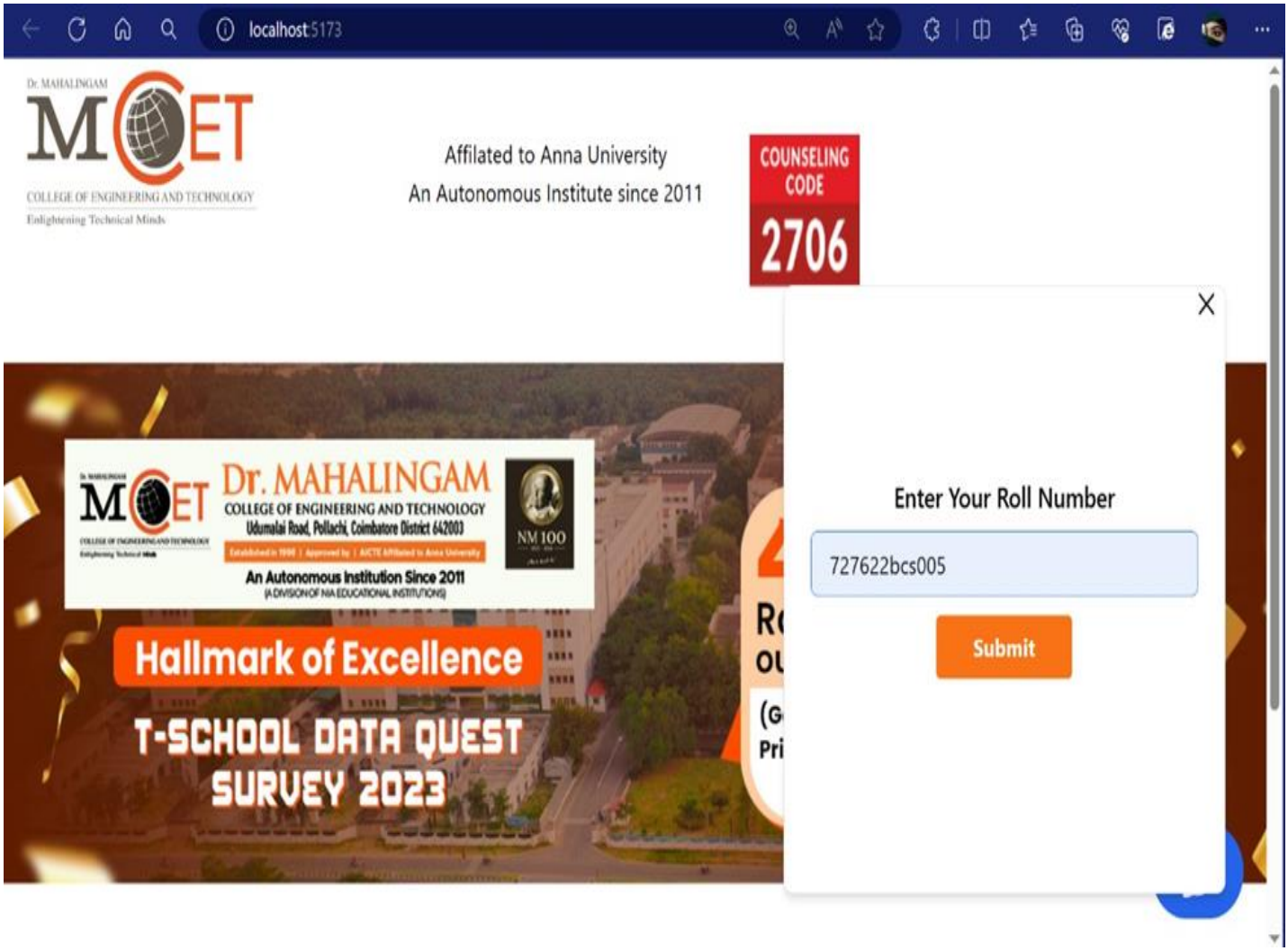
SNAPSHOTS

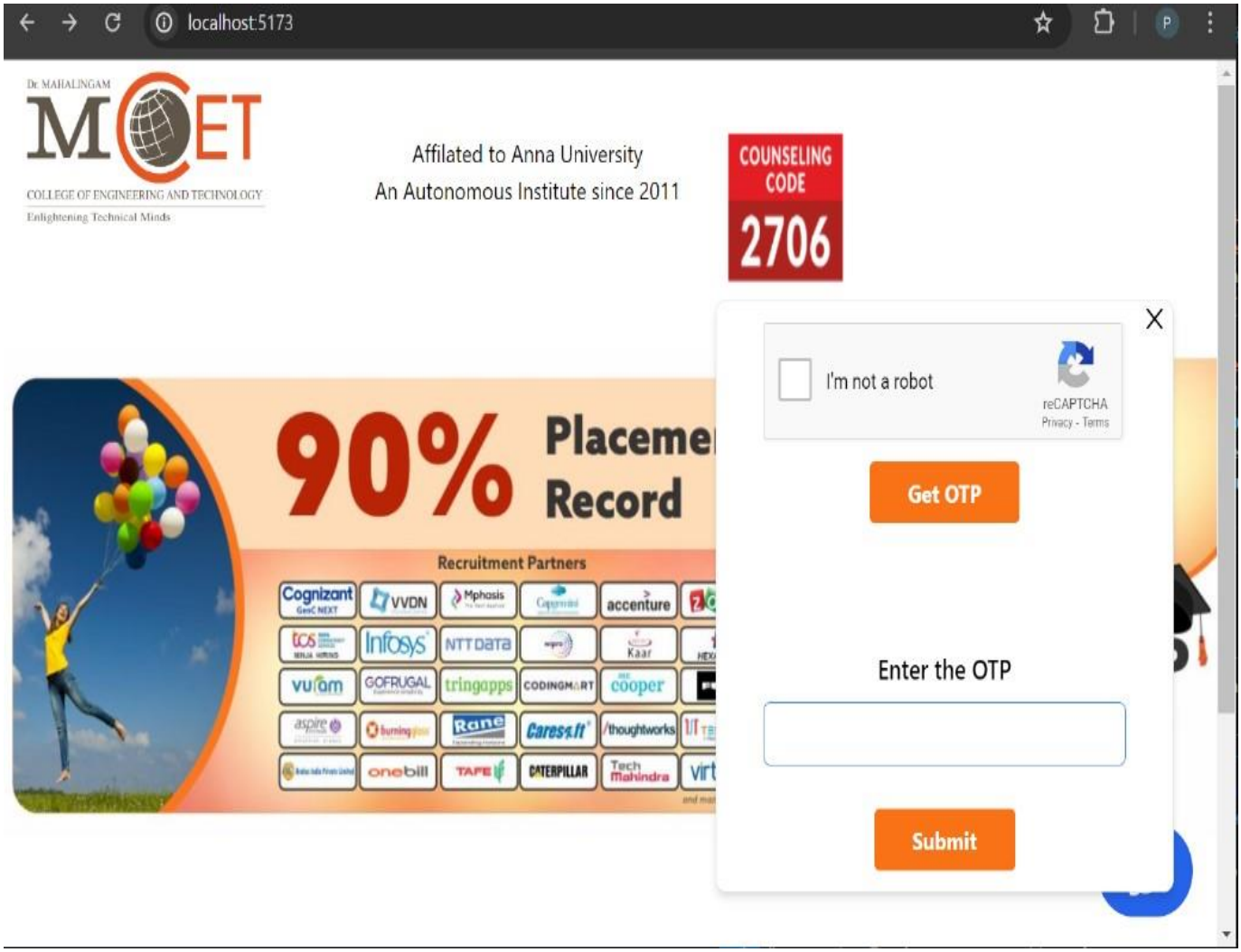
APPENDIX B : SNAPSHOTS



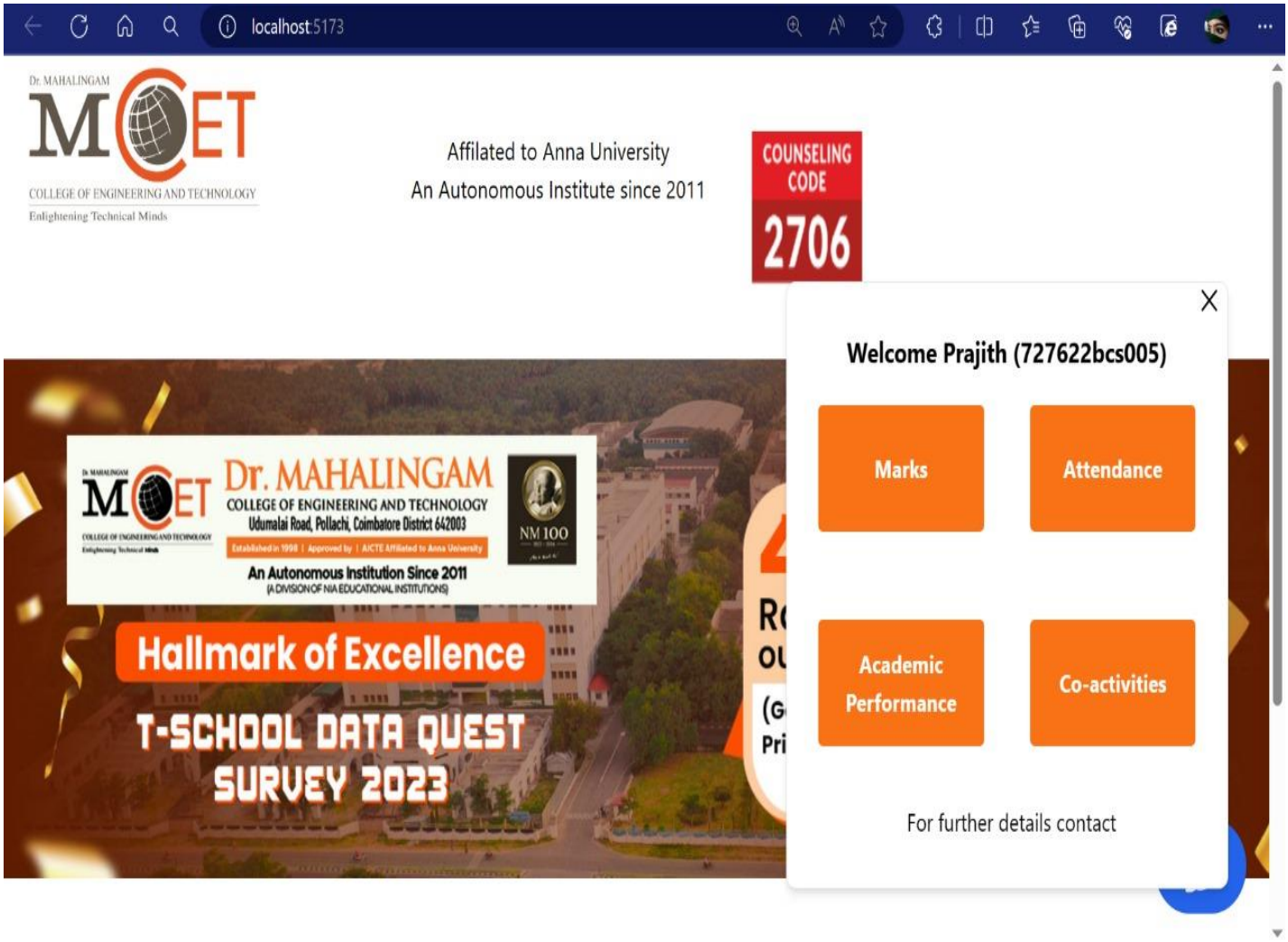
B.1. Home Page



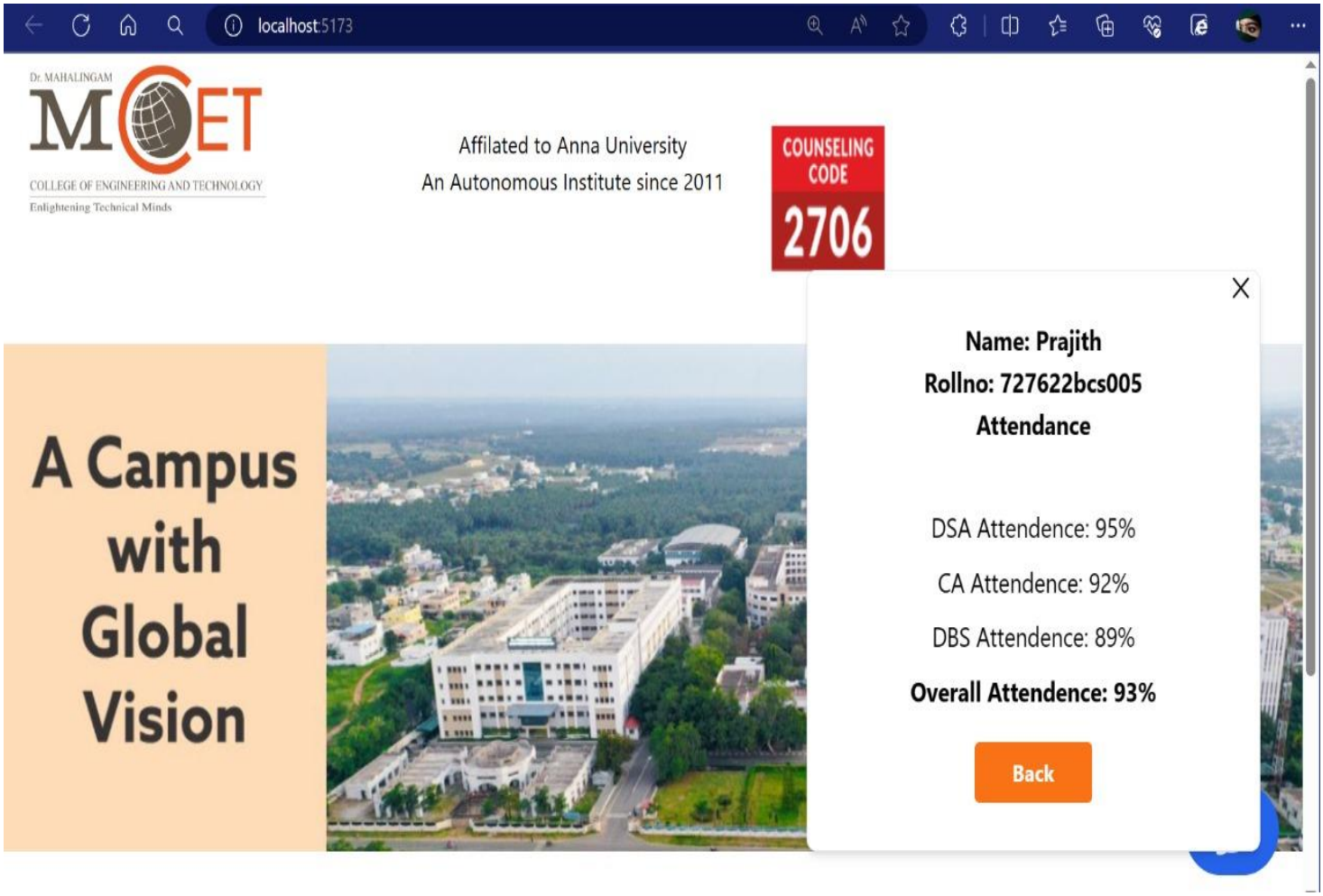
B.2. Roll no Page



B.3. OTP generation and verification Page

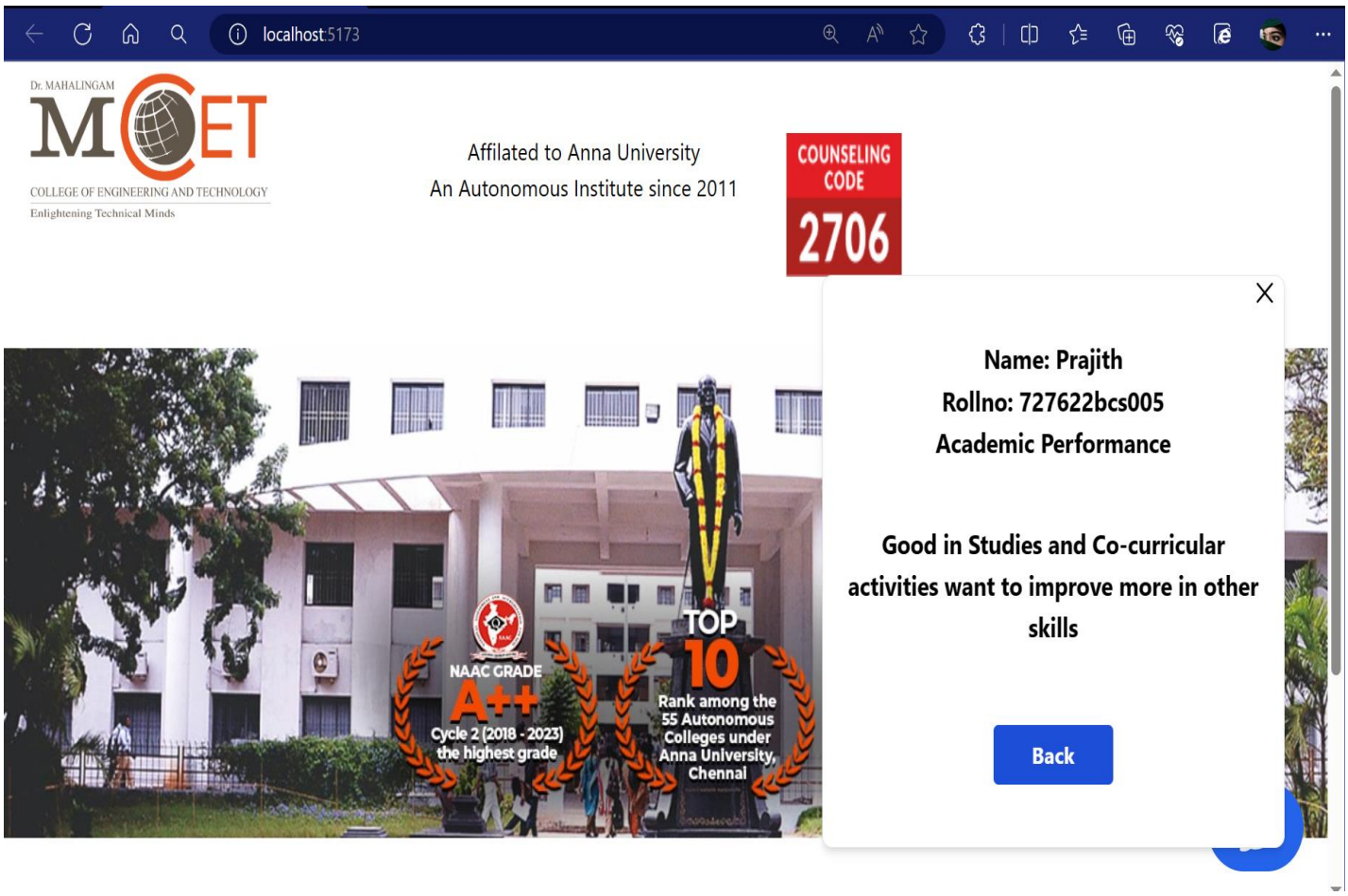

localhost:5173
Dr. MAHALINGAM
MCET
COLLEGE OF ENGINEERING AND TECHNOLOGY
Enlightening Technical Minds
Affilated to Anna University
An Autonomous Institute since 2011
COUNSELING CODE
2706
Welcome Prajith (727622bcs005)
Marks
Attendance
Academic Performance
Co-activities
For further details contact
Dr. MAHALINGAM
COLLEGE OF ENGINEERING AND TECHNOLOGY
Udumalai Road, Pollachi, Coimbatore District 642003
An Autonomous Institution Since 2011
(A DIVISION OF NIA EDUCATIONAL INSTITUTIONS)
NM 100
Hallmark of Excellence
T-SCHOOL DATA QUEST
SURVEY 2023

B.4. Main Page

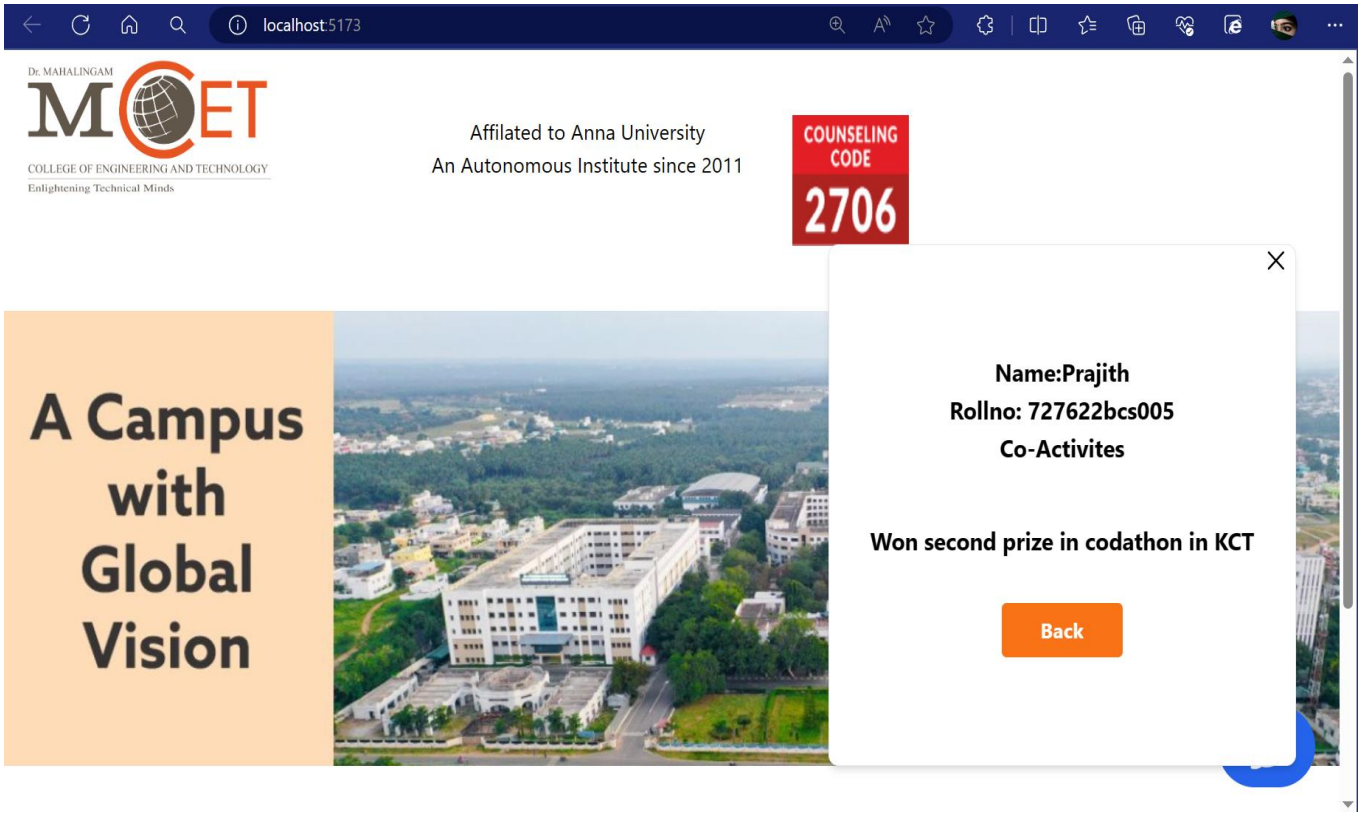


B.5. Attendance Page

B.6. Marks Page



B.7. Academic Performance Page



B.8. Co-Activities Page

COURSE COMPLETION CERTIFICATE

udemy

Certificate no: UC-d073100d-20d3-45d9-bf76-2b988d534900
Certificate url: ude.my/UC-d073100d-20d3-45d9-bf76-2b988d534900
Reference Number: 0004

CERTIFICATE OF COMPLETION

Node.js, Express, MongoDB & More: The Complete Bootcamp 2024

Instructors **Jonas Schmedtmann**

Prajith P

Date **May 7, 2024**
Length **42 total hours**

REPORT 1

ORIGINALITY REPORT

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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