

**A Student Academic Portal for Educational  
Institutes to be used by Students and Faculty**

*The Project report as part of Internet and Web  
Programming (CSE3002)*

**FINAL PROJECT (J COMPONENT)  
REPORT**

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# **CONTENTS**

1. Abstract
2. Keywords
3. Introduction
4. Related work/literature survey
5. Proposed work
6. Experiments/results
7. Conclusion /future work
8. References
9. Appendix A

# **1. ABSTRACT**

Education Industry is rapidly growing and making its reach to grow great lengths and breadths. Keeping in mind the current situation with COVID-19 having greatly impacted the education/school life of the kids. Everything now is online and thus not only teaching but the admin structure is also online.

Using modern technology and the internet to minimise work and improve productivity is a way to digital country and using technology helps to provide a smart working mechanism to enforce in educational institutes.

This is why there is a great need for a student/faculty portal system to ensure that the information/study material is passed on to the kids without any glitches. A student portal system can be of great help as it would act as a one stop where the student can login with his/her credentials and access all information/resources ( from details about faculty to assignments to be submitted and study material provided by the teacher).

In a similar way it acts as a great help for the faculty too, as it is easy to send or pass information to each and every student without any issues. It thus reduces the manual labor of both the faculty as well as the children and makes maintaining records easier.

# **2. KEYWORDS**

Student, portal, login, records, database, html, CSS, JavaScript, NodeJS, mongo dB, homepage, timetable

# **3. INTRODUCTION**

In this project we have used many languages such as HTML, CSS, JS, NodeJS to create a student portal, with many added features. With everything being online today, and students uploading their friend's assignments by just changing the name. An advance student portal as this one, is the need of the hour. As our student portal will let the teachers know if any 2 students have uploaded similar documents. In addition, it has many other features such as downloading course files for uninterrupted study, and Assignment deadline alert, so that no student can make an excuse that they forgot about the deadline. The students can also find all the required information about their faculties, including their free hours, in case they need

to ask any doubts. In our student portal, the students can easily check their time table and attendance for the classes. So they know if they really need to attend the class, keeping in mind the 75% quota. All the data available to the students are personalized for them, as they have to authenticate themselves by logging in, using their email id and password.

#### 4. RELATED WORK/LITERATURE SURVEY

SR. NO.	AUTHOR/ YEAR	TITLE	DESCRIPTION	RESULTS/ ADVANTAGES
1.	Prof. Ms. Manali R. Raut, Trupti P. Lokhande, Karishma D. Godbole YEAR - 2019	PCE Staff/Student Portal	The objective of PCE Staff/Student portal is to provide an online web based solution for academic use. Easy to use futures help our students and staff organize and access information about all aspects of the Alumni student, T&P data, Paper Publication data and Workshop Attended in college.Problem Statement Today's education scenario is rapidly changing and demanding.	It cut down the manpower required and provides accurate information. Malpractice can be pare. All years together huddled information can be saved and can be accessed at any time. For this reason the data stored in the repository helps in taking decision by management. So it is improved to have a Web Based system.
2	Angelos Rodafinos, Filia Garivaldis, Stephen McKenzie YEAR 2019	A FULLY ONLINE RESEARCH PORTAL FOR RESEARCH STUDENTS AND RESEARCHERS . Year-2018	This paper describes the context, development, implementation, and the potential transferability of an integrated online research environment that allows its users to conduct all aspects of research online.	The Research Portal is now providing an online research and research teaching capacity beyond the GDPA to other online and on-campus Monash University student and staff users from the Graduate Diploma of Professional Psychology, other Psychology courses, and other Monash Schools and Faculties such as the Nursing School. Eventually it will be expanded to allow use by universities beyond Monash. The next steps in the development of the Research Portal include further refinement, personalization, and expanded implementation and dissemination of its components, possibly

				<p>assisted by grants and other funding opportunities. The formation of networks and working partnerships to operate, maintain, and promote Research Portal initiatives are required to reduce operational costs, increase access, and create an impact.</p>
3	<p>Percia V.SECRETO, Rhodora L. PAMULAKLAKIN YEAR -2015</p>	<p>Learners' satisfaction level with online student portal as a support system in an open and distance elearning environment (ODeL)</p>	<p>Learner support in an open, distance and online learning is defined as "all activities and elements in education that respond to a known learner or group of learners, and which are designed to assist in the cognitive, affective, and systemic realms of the learning process".Teaching and tutoring, advising and counseling, and information and administration are the main institutional systems involved in learner support. The UP Open University functions under an open and distance e-learning (ODeL) framework of distance education where most of its academic and non-academic processes are done through the Internet.</p>	<p>The study determined the satisfaction level of the learners who used the existing online student portal(OSP) of the university of the philippiness open university . The study conducted a purposive online survey involving learner who have experienced both the manual and online systems.Learner have also suggested features that can be added to the existing functionalities of the portal.</p>

4	Molola B.O. Ajoye, Williams E. Nwagwu YEAR- 2018	INFORMATION SYSTEMS USER SATISFACTION: A SURVEY OF THE POSTGRADUATE SCHOOL PORTAL, UNIVERSITY OF IBADAN, NIGERIA	The study was designed to investigate how information system IS measures (such as system quality, information quality, service quality, technological/infrastructural issues, users' IT self-efficacy) influence user satisfaction of the university of Ibadan postgraduate school portal using a conceptual model adapted from Delone and McLean (2003).	The study found all the information system attributes to significantly predict user satisfaction, however, the same measures did not predict significantly on users satisfaction on account of users' IT self-efficacy.
5	Kimeshan Naidoo, Dr Graham Roberts Year-2016	A web application connecting high school applicants to enrolled university students.	This project is about building a web application that connects high school students to current university students. The key challenge was developing an application that would attract high school teenagers and students by possessing a rich variety of features while providing a practical and easy to use platform that enables high school students to chat online with university students.	While there are vast amounts of research and best practices, completing and evaluating a software project in entirety is not a trivial task. Reflecting on this project, it is clear that regardless of the amount of analysis and design conducted for a software project, there will almost always be unexpected challenges and changes that arise. Hence, the Agile approach that embraces change was validated by this project and the author understands why Agile has reached such a high degree of popularity in the software engineering community.
6	Ruofan Ding, Thomas Grimshaw, Penelope Over Year-2015	HackBox Admin Portal	This project was created to design and implement an Administrator Portal for Microsoft's new hackathon management tool. The Admin Portal provides administrators the ability to view, create, modify and delete hackathon related data. This data includes the basic information about a hackathon, the hackathon's participants, and the hackathon's projects. The Admin Portal allows administrators to easily perform these functions through a data centric user interface. We created the Admin Portal using the latest	Our research showed that tools to manage a hackathon were few. The Admin Portal successfully complements the front end website using the database developed by another team at Microsoft. The Admin Portal allows admins to manage their hackathons in a simple and clean interface that is more data oriented than the front end website.

			web development technology and with design inspiration from other major Microsoft products. We developed this tool in Microsoft's Cambridge office in collaboration with the Microsoft Garage team in Redmond.	
7	ADEDAYO BABAFEMI ALAO, Associate Professor Dai Yu, Professor Shi Gang Year-2016	Design and Implementation of SaaS Based School Management System	This chapter explains in detail about the research background, problem statement, the objective, a little to the possibility that is cloud computing and also Software as a Service (SaaS) platform and its benefits, scope and the thesis organization of this project for this system.	This introduces cloud computing, the different aspects of cloud computing, software as a service, cloud database, Microsoft Azure services, Azure SQL database and elastic pool databases and finally school management system. Finally the design and the implementation of a SaaS based School management system was described. Also this system uses the latest technologies like NodeJs, Microsoft Azure services, HTML, JavaScript and a lot more.
8	Feras Qawasmeh , Abdulhadi Tahir, Haris Tresnjo, Amina Zilic,, Jamaludin Ibrahim Year- 2017	The student portal performance-comparative study (GSM-IIUM)	People in general and even some studies tend not to clearly being aware of the differences between data, information and knowledge. However, data has no functionality or benefits unless human interpretation is being involved in transferring these data into information that is useful and has functionality	Quality of student portal services provided for IIUM as well as GSM students have a significant impact on how students perceive their educational institution at large. It is important for IIUM as well as GSM to better their understanding of the services needed by their students, creating an encouraging system for feedback to be given by students and finally making.

## 5. PROPOSED WORK

The website offers students and faculty the ability to connect in terms of the academic requirements , online via a web application, called the student/faculty academic portal. This would provide services like checking and updating attendance ,getting the study material from the faculties , uploading assignments within the prescribed dates etc. This resolves all the manual process drawbacks and reduces the room for error, improves the productivity and speeds up the work that needs to be done. On the side of college management, a person can easilty see the details of students than print the student details on paper.

The database maintained by the university will ensure thatvery student and faculty has a unique username and password for login in and accessing their account. A ll data stored regarding the student will be validated by the servers from the college . This method also leads to ensuring integrity of data and coherence.

We have ensured to provide all the basic functionalities that a student portal must have to ensure smooth function of the system.

There will be two kinds of Login :-

- a) Student Login
- b) Teacher Login

**STUDENT LOGIN :** The student login as the name suggests will be used by the students for accessing and submitting their works. The following are the functionalities included in the student login :-

- **Home Page :** The home page provides all the information regarding the student which includes his personal details, academic details, hostel details etc. The homepage will also be a host for the latest news from the college which will be shown using the ASIDE feature from HTML. This would include updates about the college, new announcements, assignment deadlines etc. The homepage will also talk about the activities related to clubs and chapters.  
All this information will be updated dynamically as and when required.
- **Time Table:** This page shall talk about the timetable of the student.
- **Faculty Info :** This page will provide the student about information regarding faculties (i.e. their name, contact number, cabin number, free hours etc) and student can make use of this info to get their doubts cleared.
- **Course Page:** This page will provide the students with the study material that the faculty has used for teaching. The students can access this data at any moment and thus use it for better understanding at a



later time after the class.

- **Submit Assignment:** This page will allow the student to submit their assignment well within the due date. Once the due date shall pass the student will not be allowed to submit his/her works.

**FACULTY LOGIN:** This login will only be used by the faculty members of the educational institute. The following are the functionalities included in the teacher login :-

- **Add Details of a Student:** This option will be given to the faculty to update/modify/enter/delete the data that was visible on the homepage of the student. This option is given only to the faculties to ensure that the data entered and maintained in the database is legitimate.
- **PLAGIARISM CHECKER:** This is the novelty of our project The students will be allowed to upload assignments from their login. The teachers will have the privilege to check plagiarism between the documents uploaded to ensure that students do not copy the assignment. Plagiarism will be checked among the contents uploaded by students.
  - We have used the concept implemented by search engine crawlers to store indexes of words of web pages called the tf-idf approach.
  - We will store indexes of words, their location in document and document id.
  - After making such inverted index we will compare location of each word and their document id.
  - Various similarity measures can be used for result.

### **Technology Used:**

- **TF-IDF-** This technology/methodology has been used to implement the plagiarism checker in the project. This is a very known concept used and implemented by almost all search engine crawlers these days to store indexes of words in the web pages. We will store the indexes of words and their location in the document and their document id in a table. We will then construct an inverted index for the same. This would then be repeated for the second document, with which we will compare the first one. After making such inverted index we will compare location of each word and their document id in both the tables. Then, Various similarity measures can be used for presenting the final output, the plagiarism percentage.
- **HTML** - HTML is a language that is used alone to build a static webpage. HTML is an abbreviation for HyperText Markup

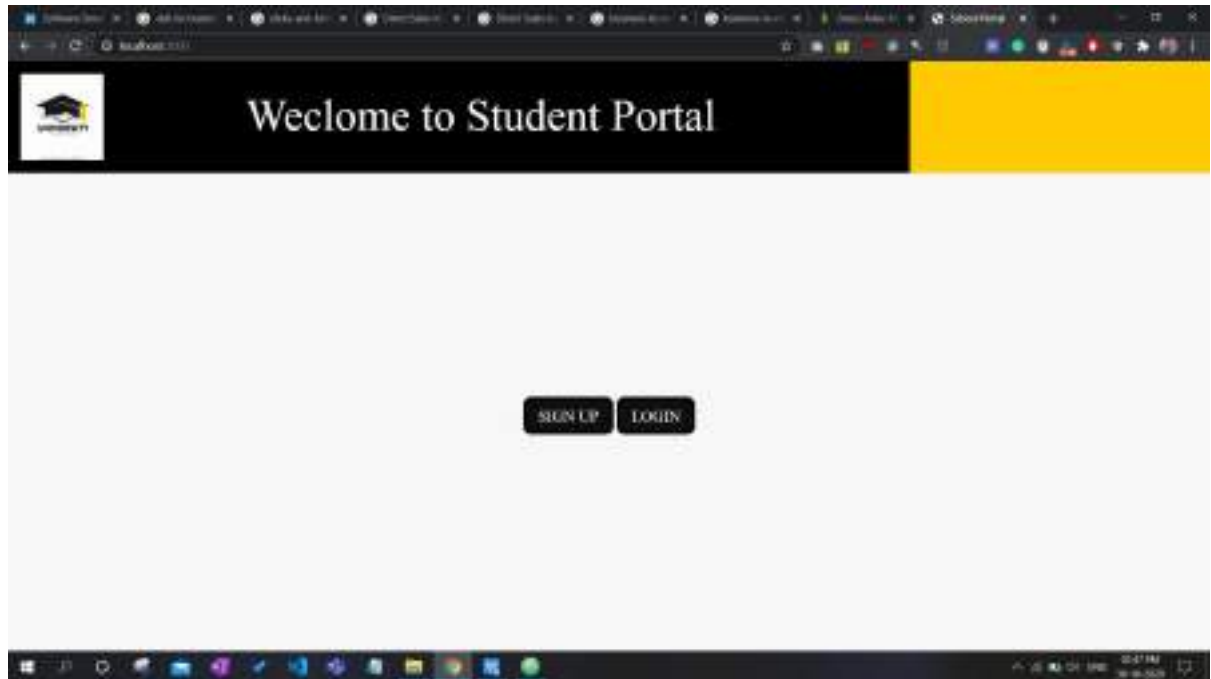
Language.HTML is the basic framework of any website, thus without its knowledge creating a website is impossible. If we just build our website using html, we can not add many of the powerful web page properties for the effective and interactive making of a web page. Different frameworks are used, like CSS for beautification , JS , NODEJS for dynamic attributed etc. So we use these technology to enable and optimise our web sites efficiency and engagability. And to make our web app dynamic Java script,nodejs is used by us.

- **CSS** - The CSS stands for "Cascading Style Sheet." As the name suggests this used to format and style the online pages. You can Use this for styling text , tables and other components of the Page which could only be previously specified in an HTML page. It aims to minimise the time used for the tedious and tough job of presenting the web app in a beautiful way.
- **JAVASCRIPT** - JavaScript is a text-based, client- and server-side programming language that helps you to create web sites which are interactive, i.e the user can interact with it. JavaScript offers web pages with interactive features while HTML and CSS are languages that offer web pages structure and design. The various features that js provides are dropping down a menu on a click, making a carousel of images move, etc.
- **NODE JS** - Node js is used to create the backbone structure i.e. the backend of the web application. The server side part of the application is developed using nodejs. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux. Nodejs is preferred over its counter parts because it is and asynchronous approach and is non blocking in nature. It is extremely fast and highly scalable.
- **MONGO DB** – From the mid 2000s mongodb has been the go-to approach for developers as a database. Mongo DB works as a database and stores information gathered from the respective web page. It is a document oriented NoSQL Database system. It is highly popular for its ability to store huge amounts of data efficiently and maintain the integrity and security of the same. Rather than using the traditional method of using tables and rows

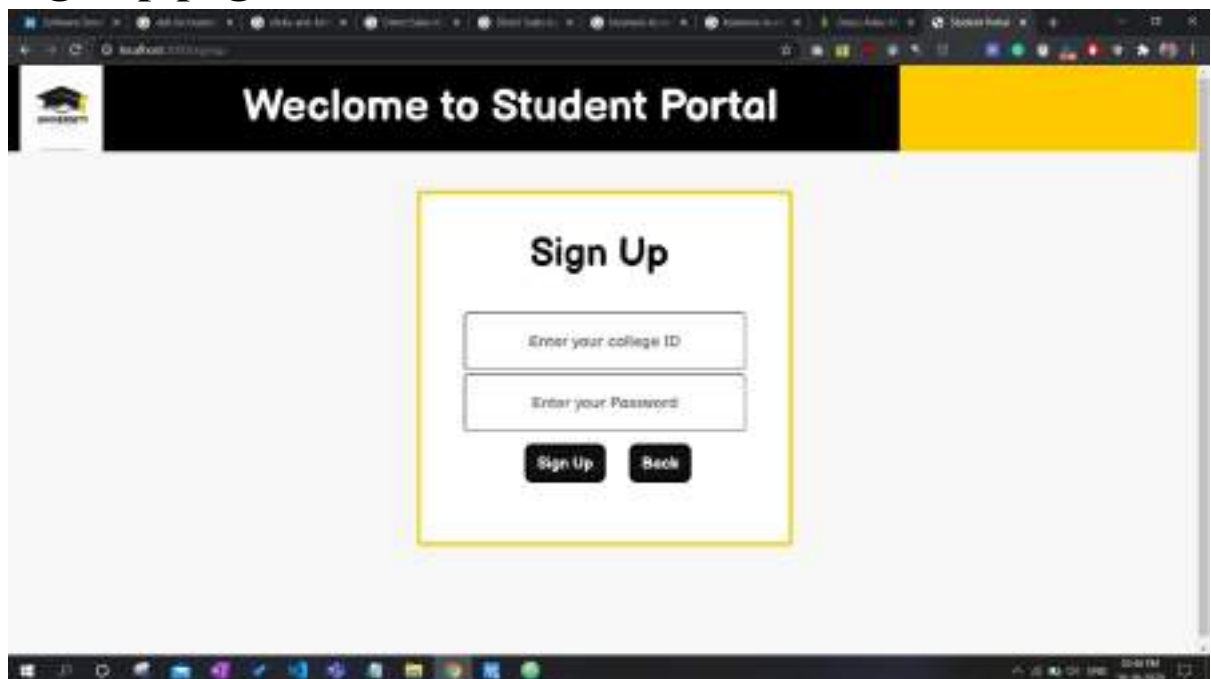
and columns to store data, Mongo db uses a more futuristic approach. It divided data to key value pairs and thus uses collections and documents to store data.c

## 6. EXPERIMENT/RESULTS

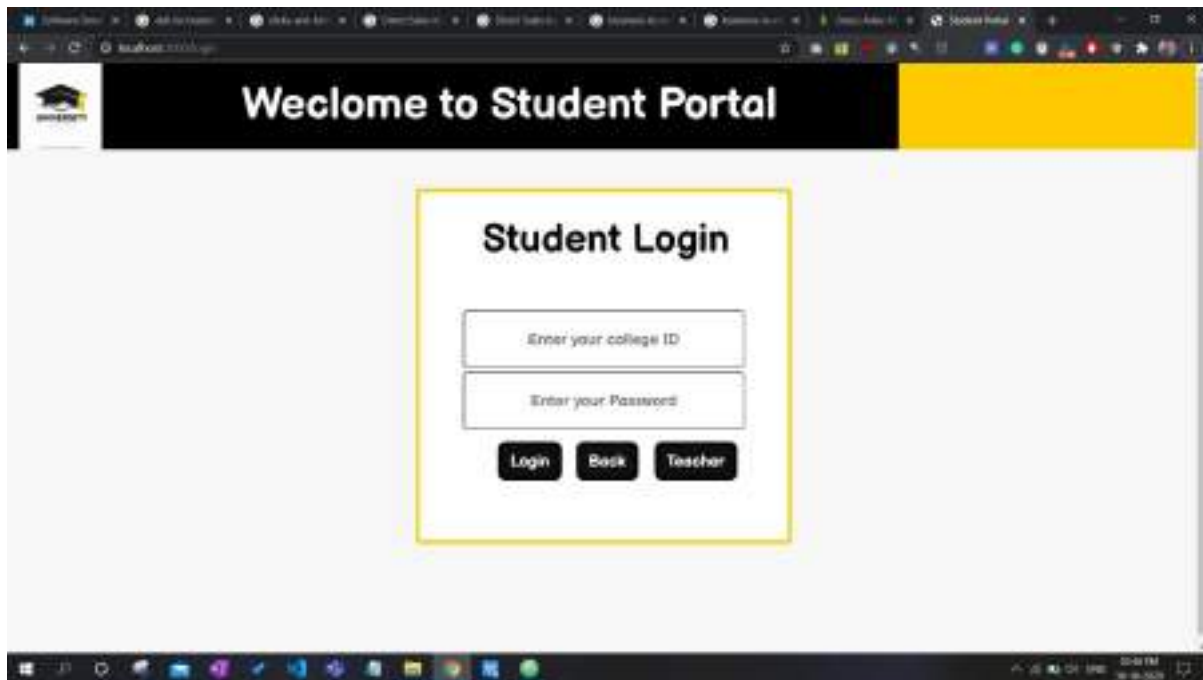
### Main page-



### Sign up page-



## User Login page-



The screenshot shows a web browser window with the URL [localhost:3333/studentLogin](http://localhost:3333/studentLogin). The page has a black header with a logo on the left and the text "Weclome to Student Portal" in the center. A yellow bar is on the right. The main content area is white and contains a yellow-bordered box titled "Student Login". Inside this box, there are two input fields: "Enter your college ID" and "Enter your Password". Below these fields are three buttons: "Login", "Book", and "Teacher".

Weclome to Student Portal

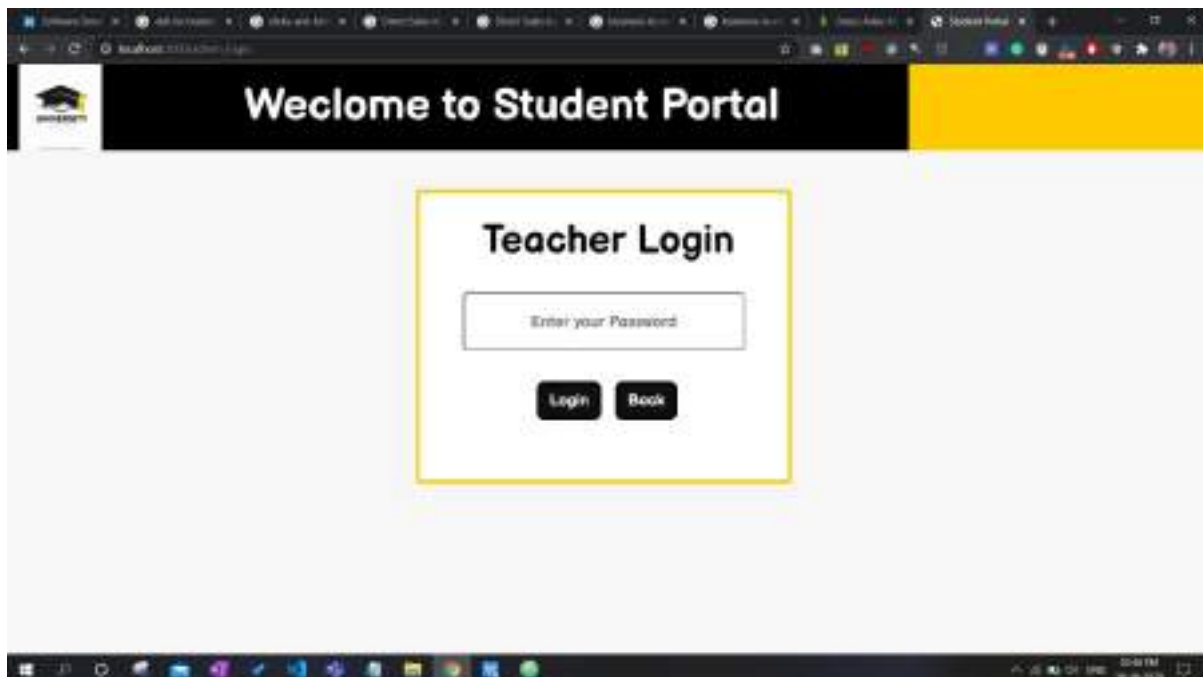
### Student Login

Enter your college ID

Enter your Password

Login Book Teacher

## Teacher Login-



The screenshot shows a web browser window with the URL [localhost:3333/teacherLogin](http://localhost:3333/teacherLogin). The page has a black header with a logo on the left and the text "Weclome to Student Portal" in the center. A yellow bar is on the right. The main content area is white and contains a yellow-bordered box titled "Teacher Login". Inside this box, there is one input field: "Enter your Password". Below this field are two buttons: "Login" and "Book".

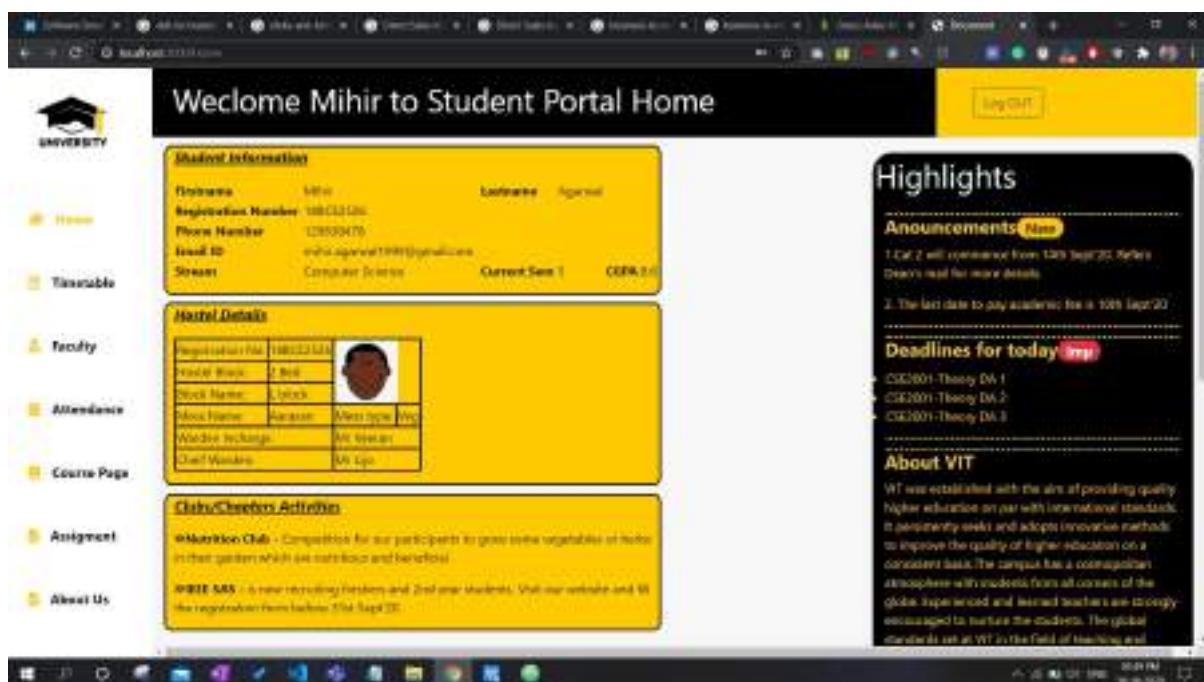
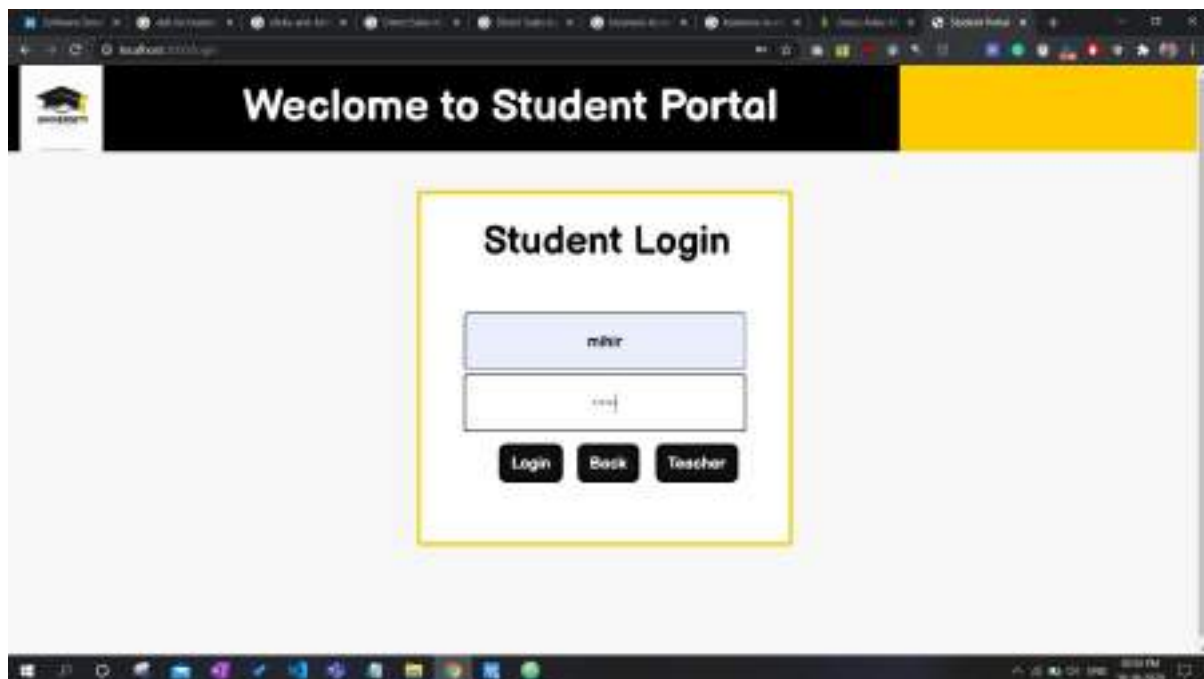
Weclome to Student Portal

### Teacher Login

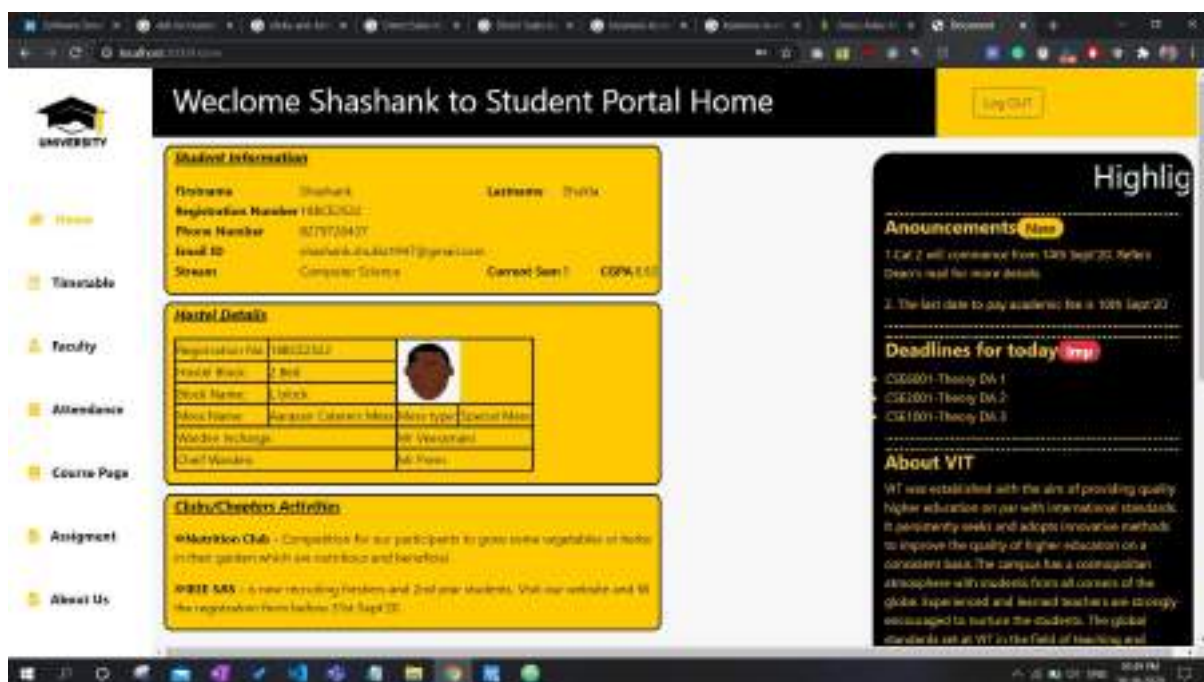
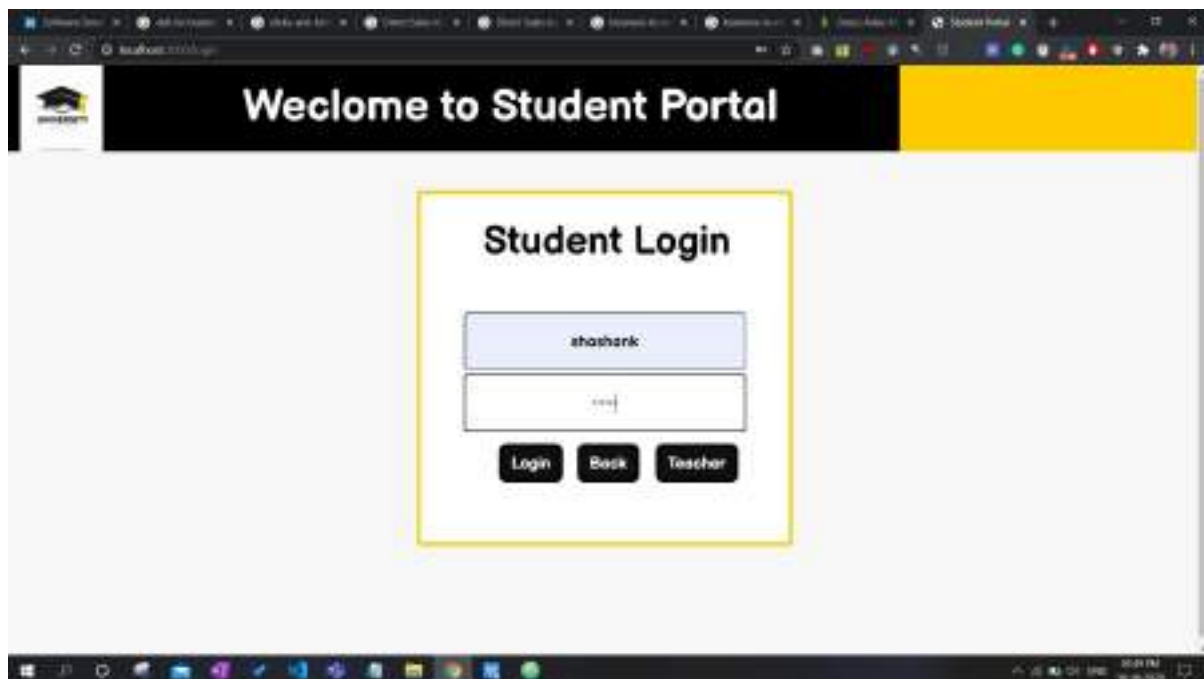
Enter your Password

Login Book

## Login from account of 1 user-

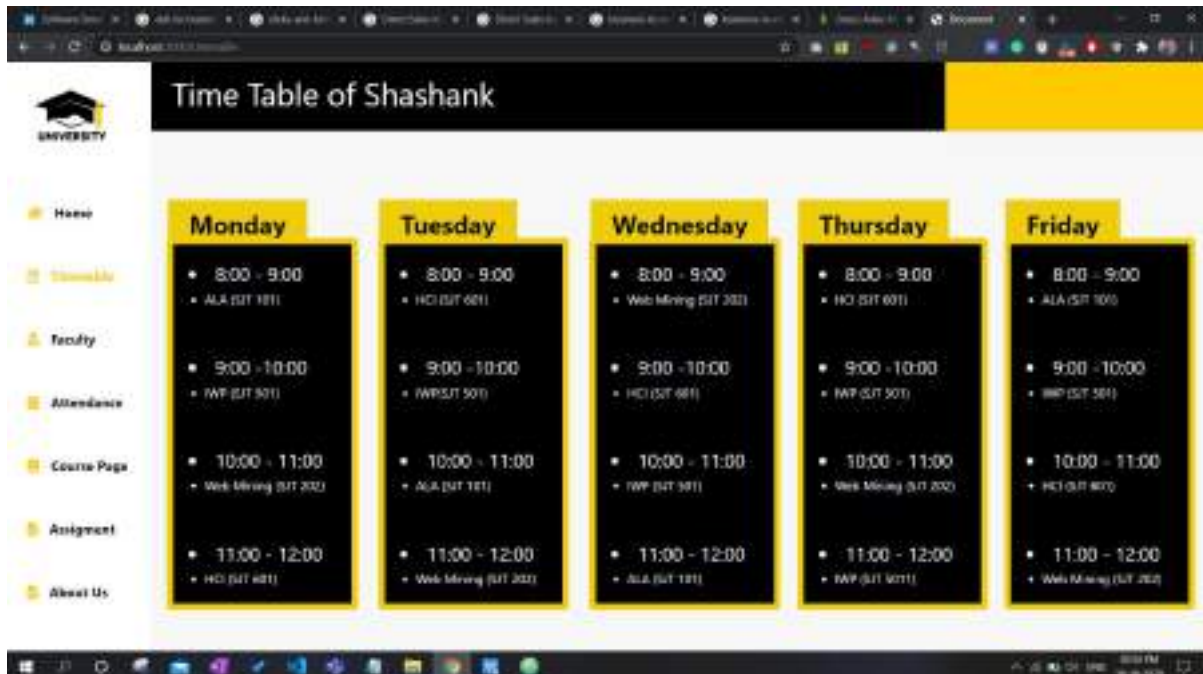


## Login from account of 2 user-



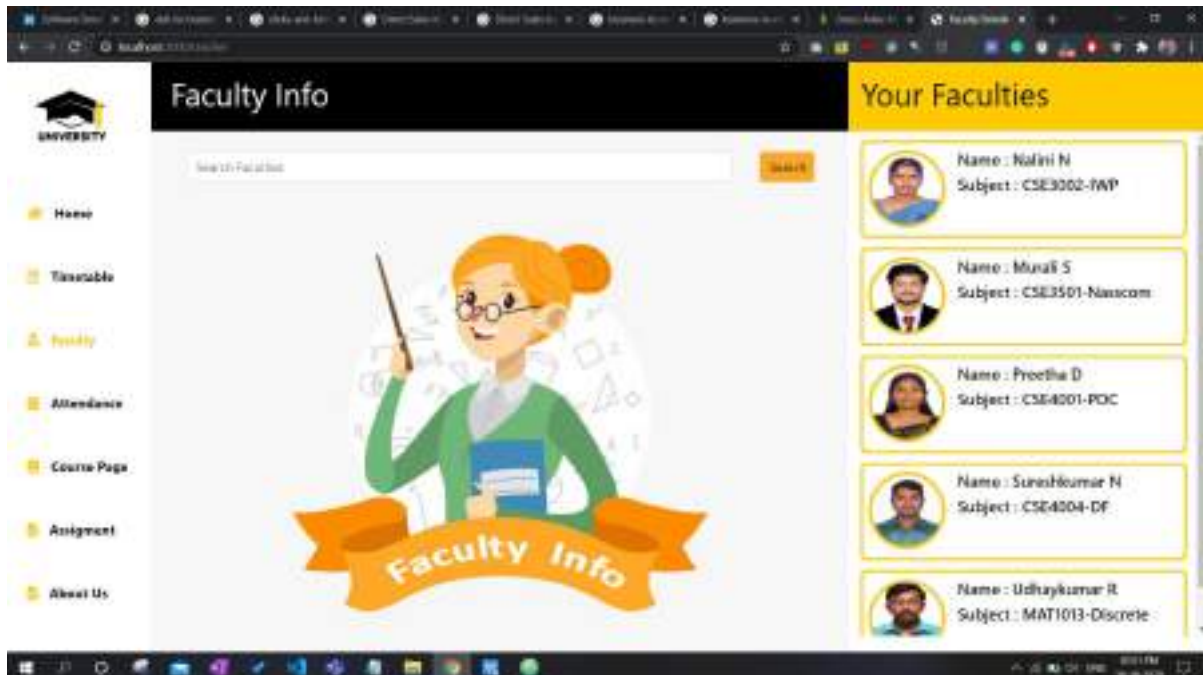
All remaining pages-






Time Table –




	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 - 9:00	ALA (SJT 181)	HCI (SJT 601)	Web Mining (SJT 202)	HCI (SJT 601)	ALA (SJT 181)
9:00 - 10:00	IWP (SJT 501)	IWP (SJT 501)	HCI (SJT 601)	IWP (SJT 501)	IWP (SJT 501)
10:00 - 11:00	Web Mining (SJT 202)	ALA (SJT 181)	IWP (SJT 501)	Web Mining (SJT 202)	HCI (SJT 601)
11:00 - 12:00	HCI (SJT 601)	Web Mining (SJT 202)	ALA (SJT 181)	IWP (SJT 501)	Web Mining (SJT 202)

Faculty Info



Your Faculties	
	Name : Nafini N Subject : CSE3002-IWP
	Name : Murali S Subject : CSE3501-Nanocom
	Name : Preetha D Subject : CSE4001-POC
	Name : Sunishkumar N Subject : CSE4004-DF
	Name : Udhaykumar R Subject : MAT1013-Discrete







- Home
- Timetable
- Faculty
- Attendance
- Course Page
- Assignment
- About Us

## Faculty Info






**Name :** Dr. Nalini N  
**Designation :** Assistant Professor (Senior)  
**School :** School of Computer Science and Engineering




**Name :** Mrs. Nalini E  
**School of Bio Sciences and Technology**  
**School :** School of Bio Sciences and Technology


## Your Faculties




**Name :** Nalini N  
**Subject :** CSE3002-PWP




**Name :** Murali S  
**Subject :** CSE3501-Nanocom




**Name :** Preetha D  
**Subject :** CSE4001-POC



**Name :** Sureshkumar N  
**Subject :** CSE4004-DF



**Name :** Udhaykumar R  
**Subject :** MAT1013-Discrete



- Home
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- Assignment
- About Us

## Faculty Info

**Name of the Faculty** : DR. NALINI N

**Designation** : Assistant Professor (Senior)

**Name of Department** : Department of Information Security


**School / Centre Name** : School of Computer Science and Engineering

**E-Mail ID** : nalini@uic.ac.in






**Cell No** : 9876543210

**Open Hours :**

Monday	10:00 AM - 11:00 AM
Thursday	04:00 PM - 05:00 PM



## Top Reviews



**Faculty Info**

Cable Number: TIT-413-31A

Open Hours:

Monday: 10:00 AM - 11:00 AM

Tuesday: 09:00 PM - 05:00 PM

Top Reviews

**Mihir**  
She is the best teacher for Web Programming  
★★★★★

**Shashank**  
She is the best teacher for Web Programming  
★★★★★

**Mahima**  
She is the best teacher for Web Programming  
★★★★★

**Rohan**  
She is the best teacher for Web Programming  
★★★★★

**Add a Review**  
★★★★★

## Attendance

**Attendance Display**

CSE3002 Internet and Web Programming

Attended Classes	Total Classes	Attendance Percentage
18	18	100

CSE3002 Internet and Web Programming

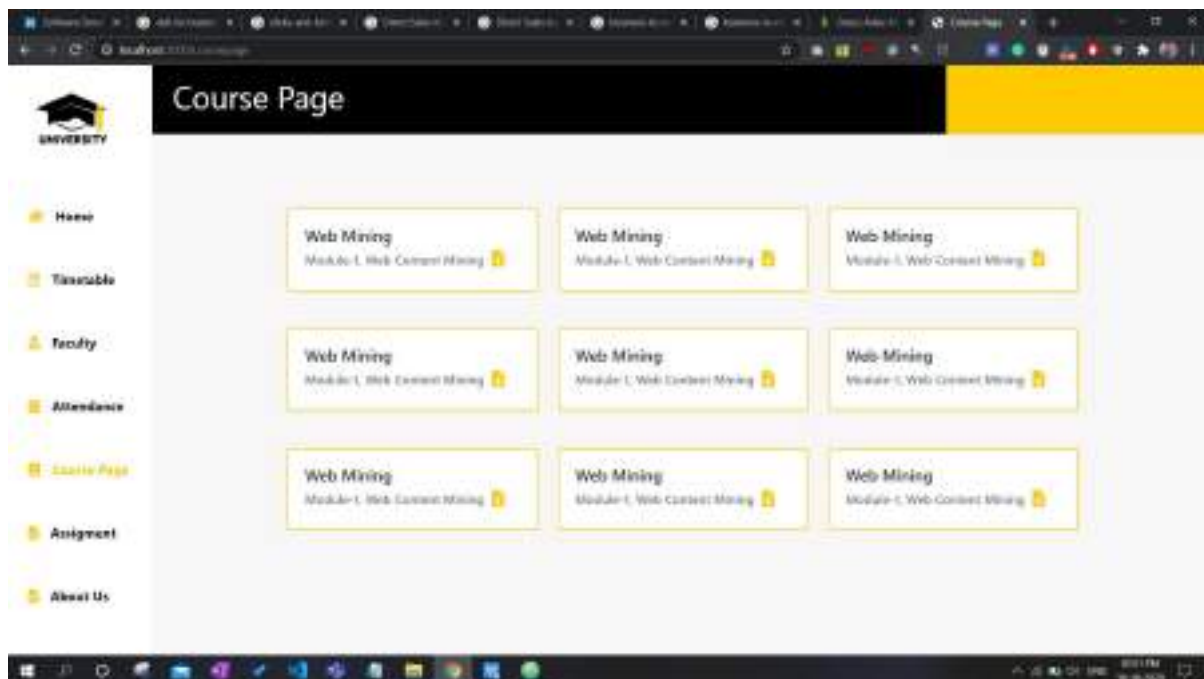
Attended Classes	Total Classes	Attendance Percentage
18	18	100

CSE3002 Internet and Web Programming

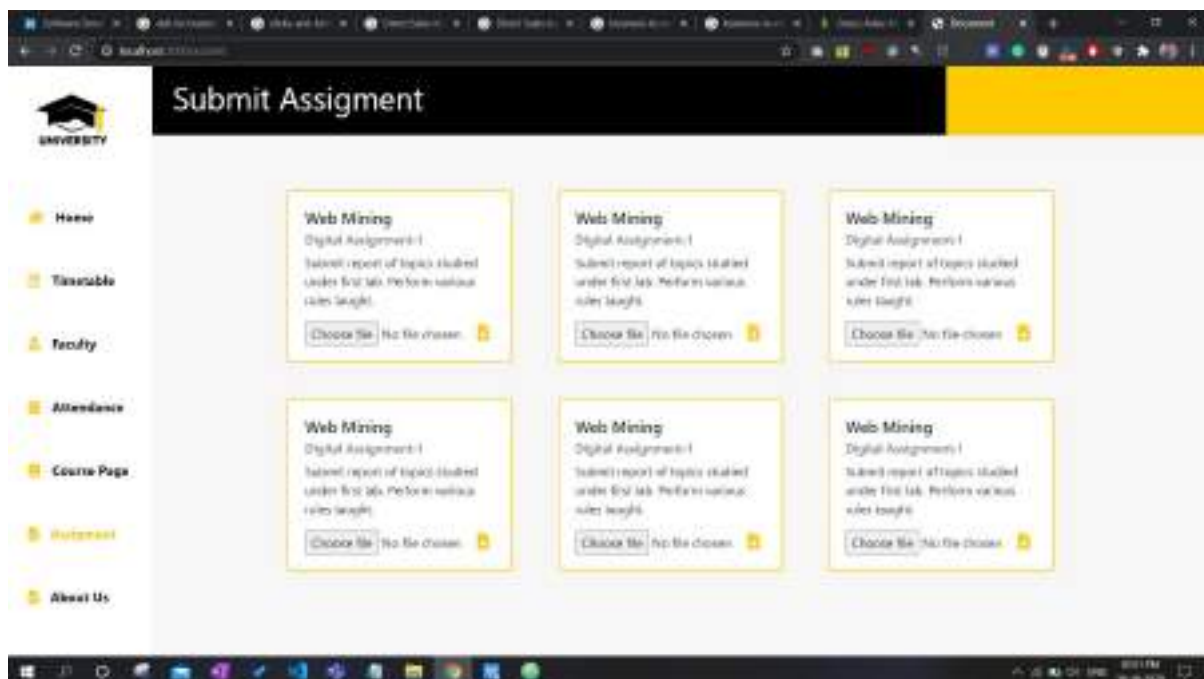
Attended Classes	Total Classes	Attendance Percentage
18	18	100

CSE3002 Internet and Web Programming

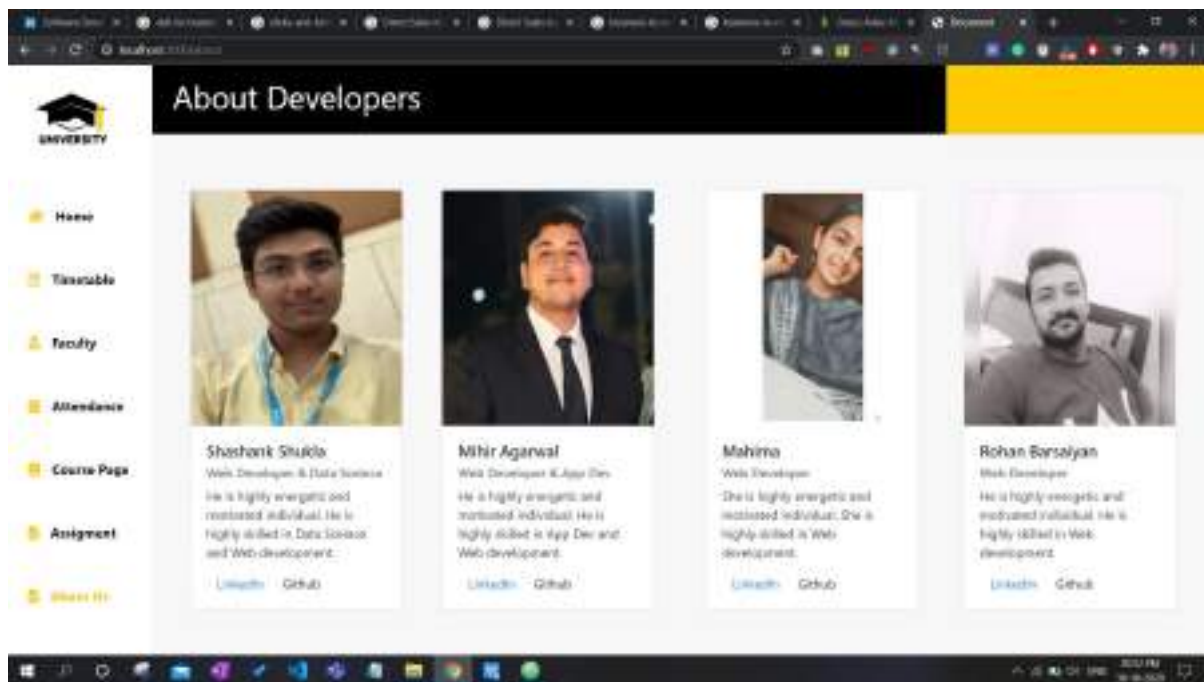
# Course Page



# Assignments

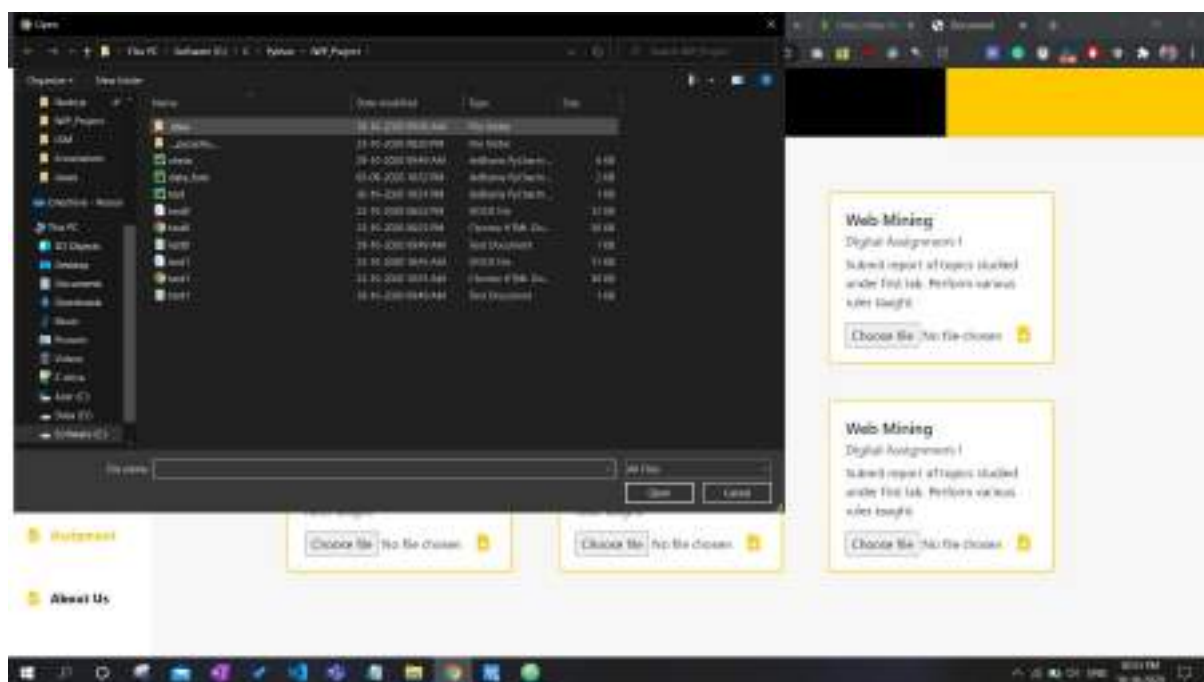


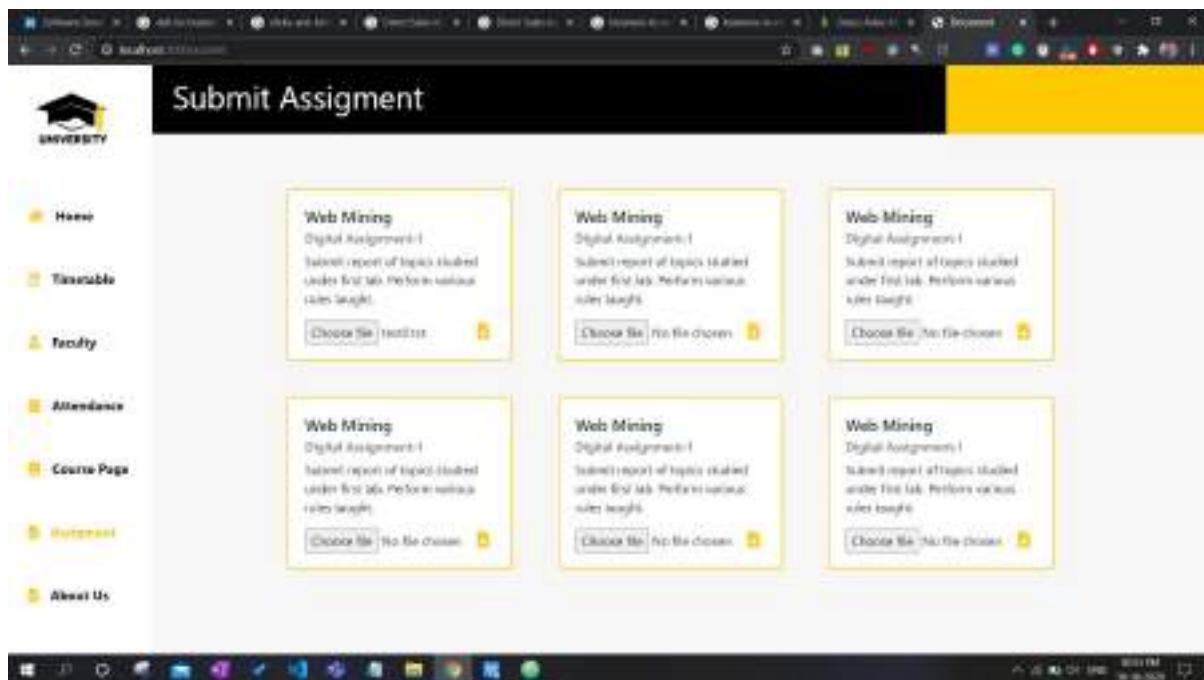
## About Developers



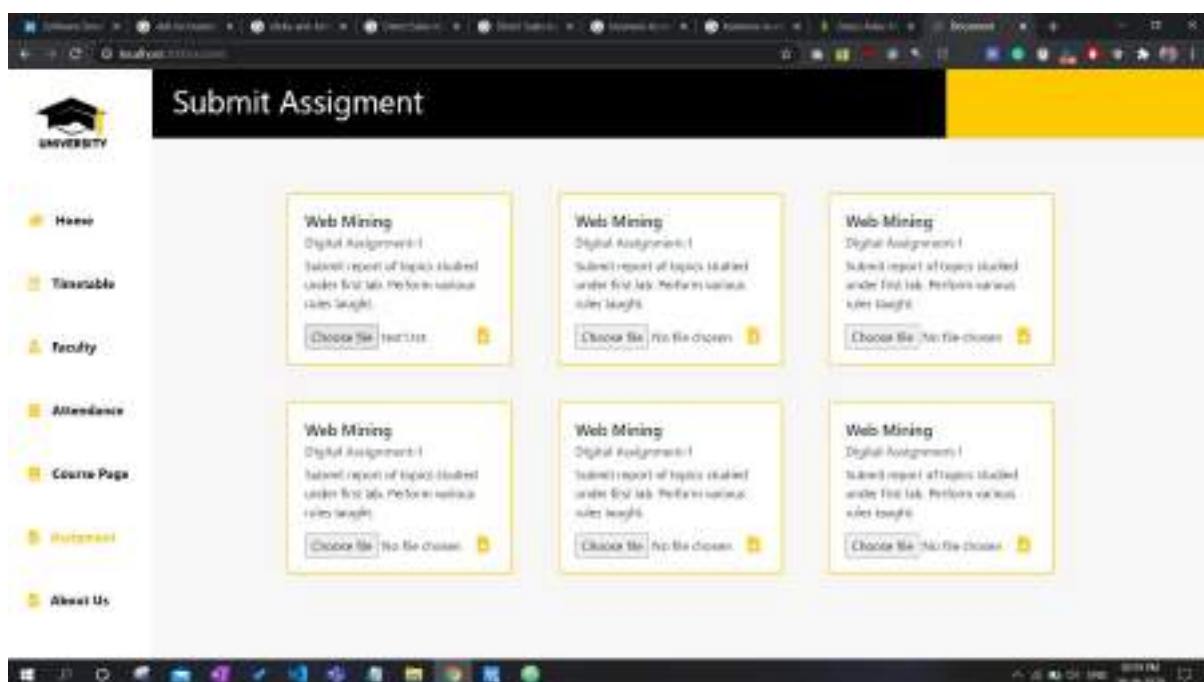
## Plagiarism info for the faculty

### File upload from user 1-

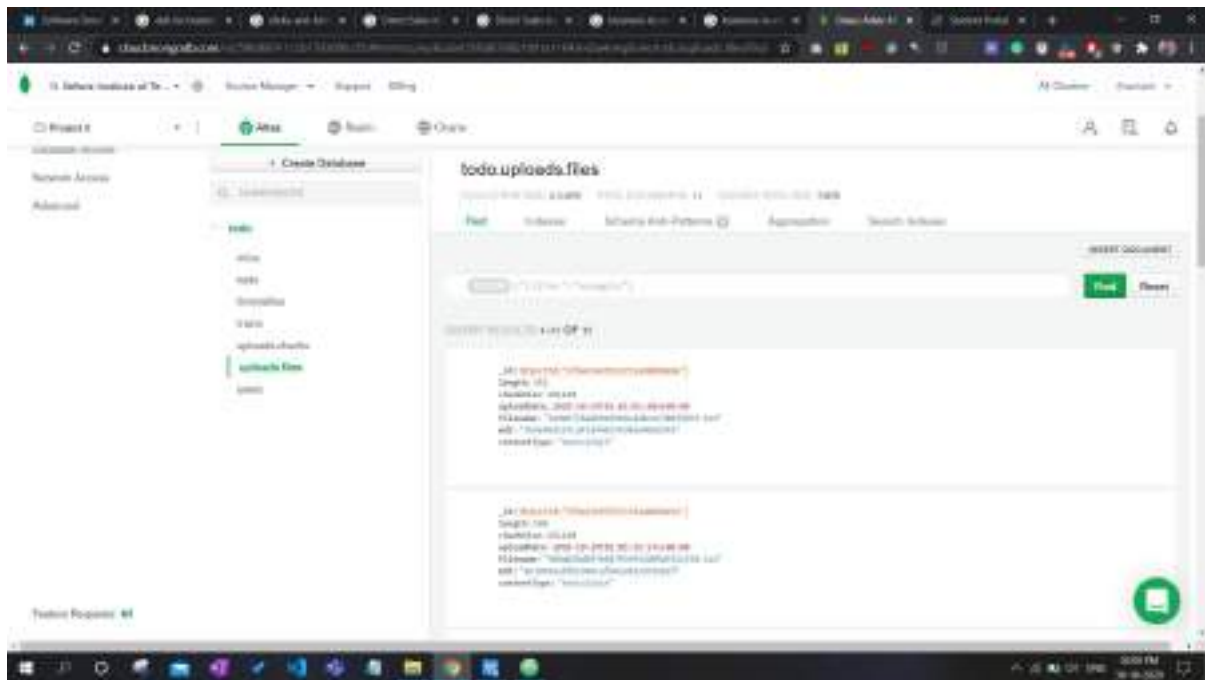




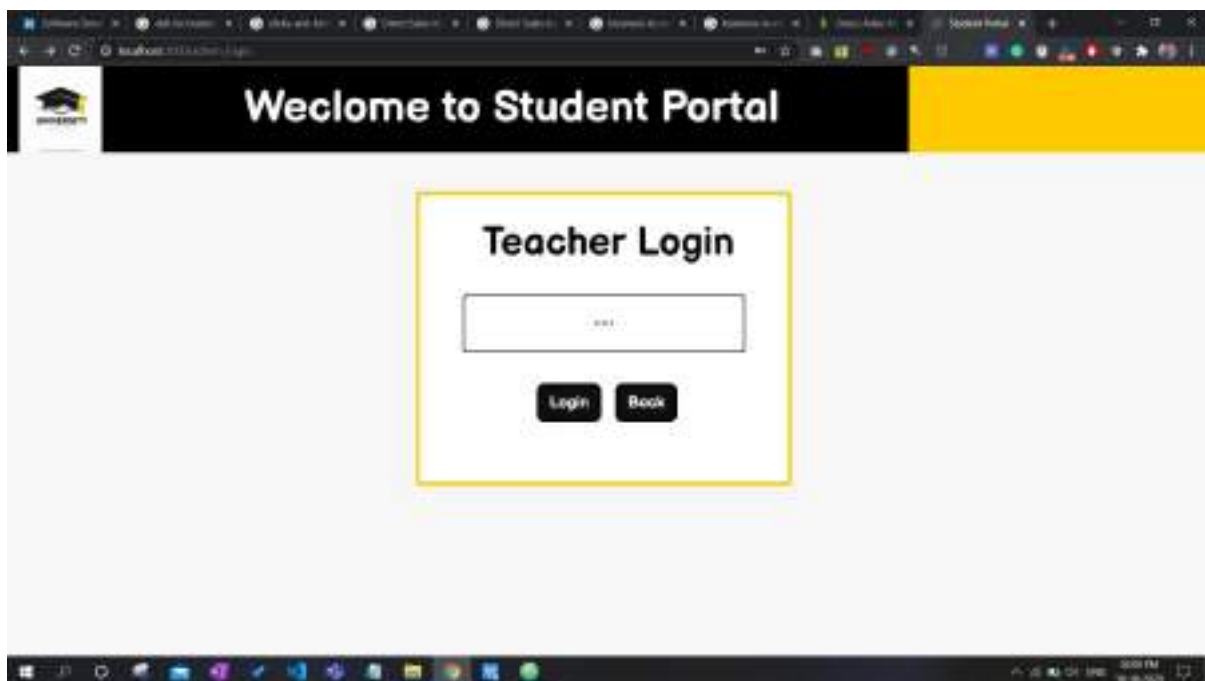
**File upload from user 2-**

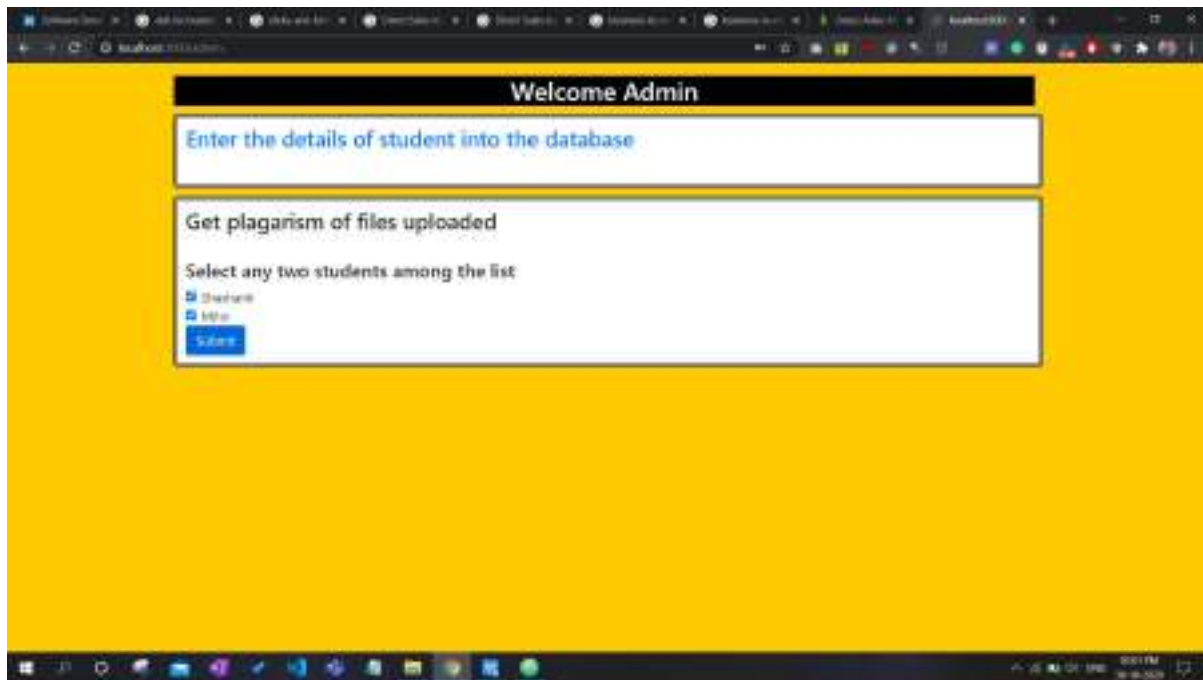


**Both the files in database, uploaded as chunks-**

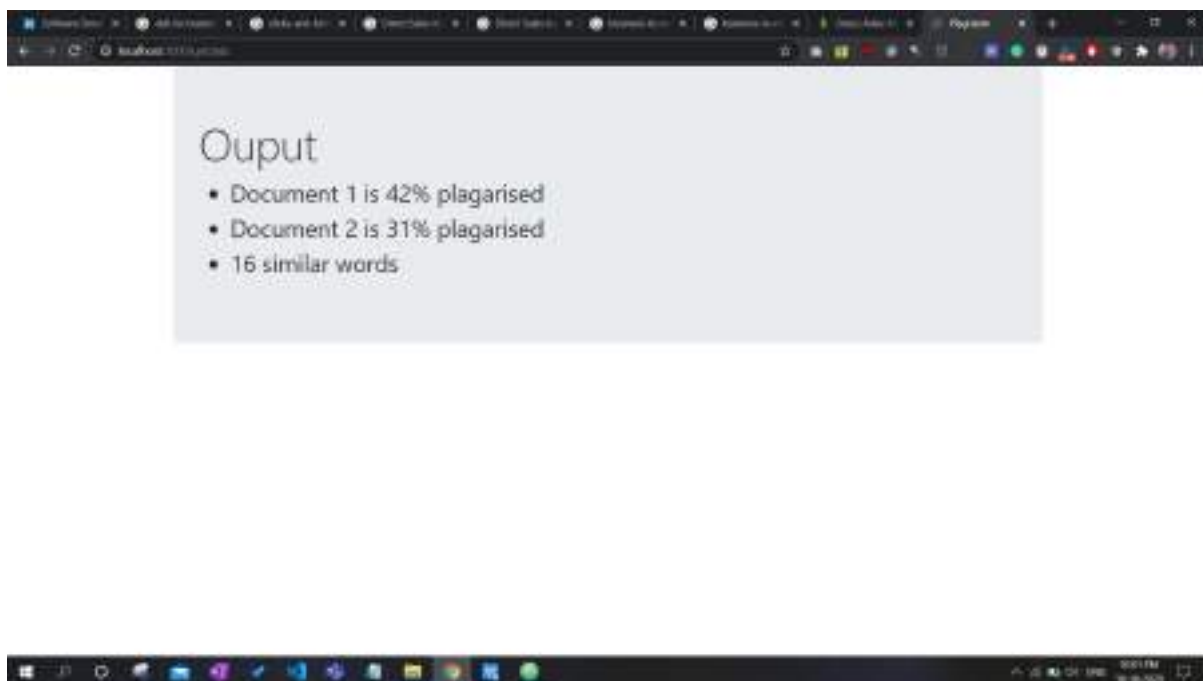


To check plagiarism from teacher login-



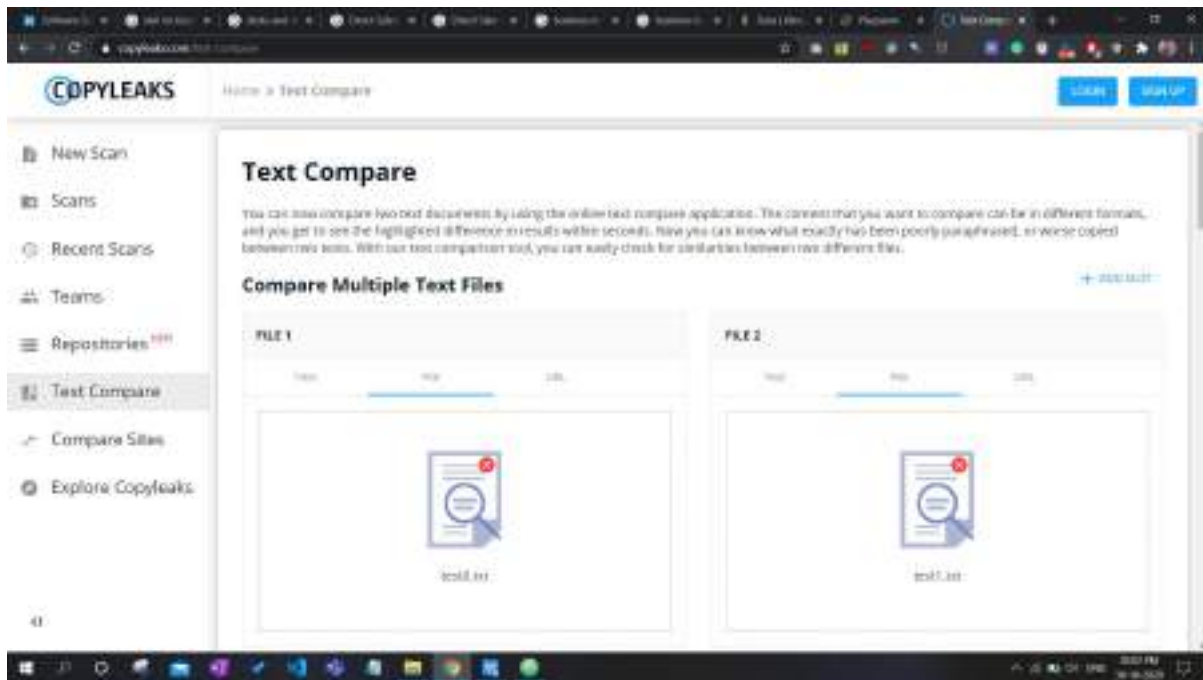


**Final output of plagiarism displayed on web page-**

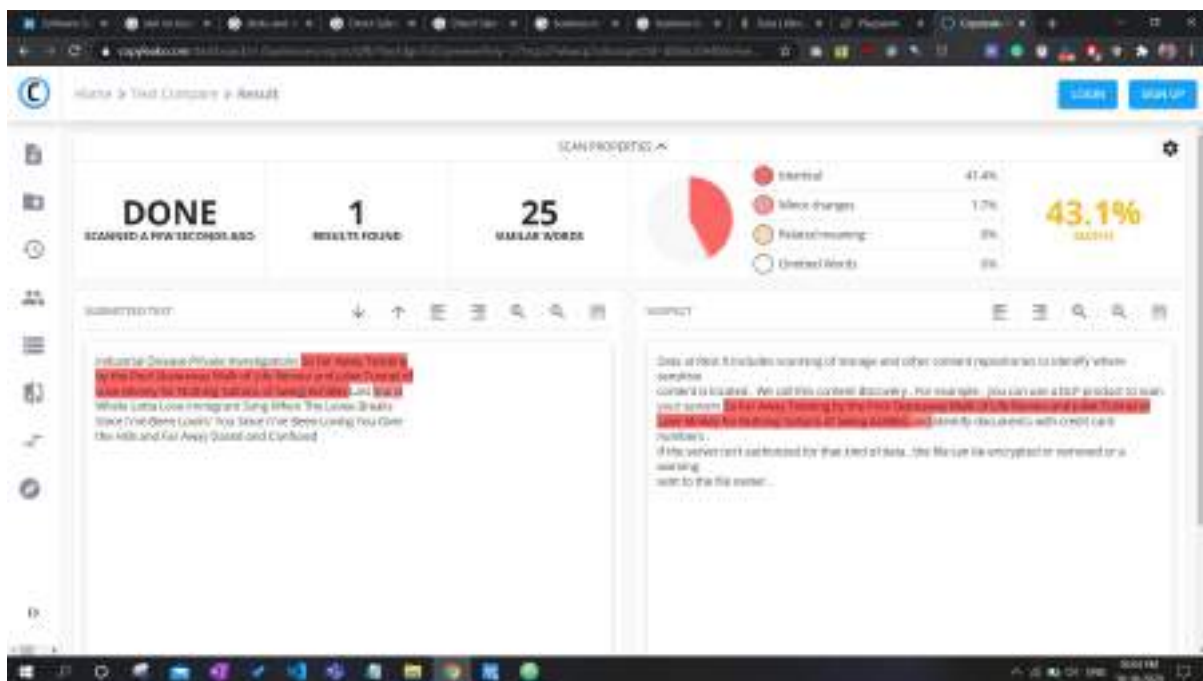


**Plagiarism on online website for the same 2 documents uploaded-**



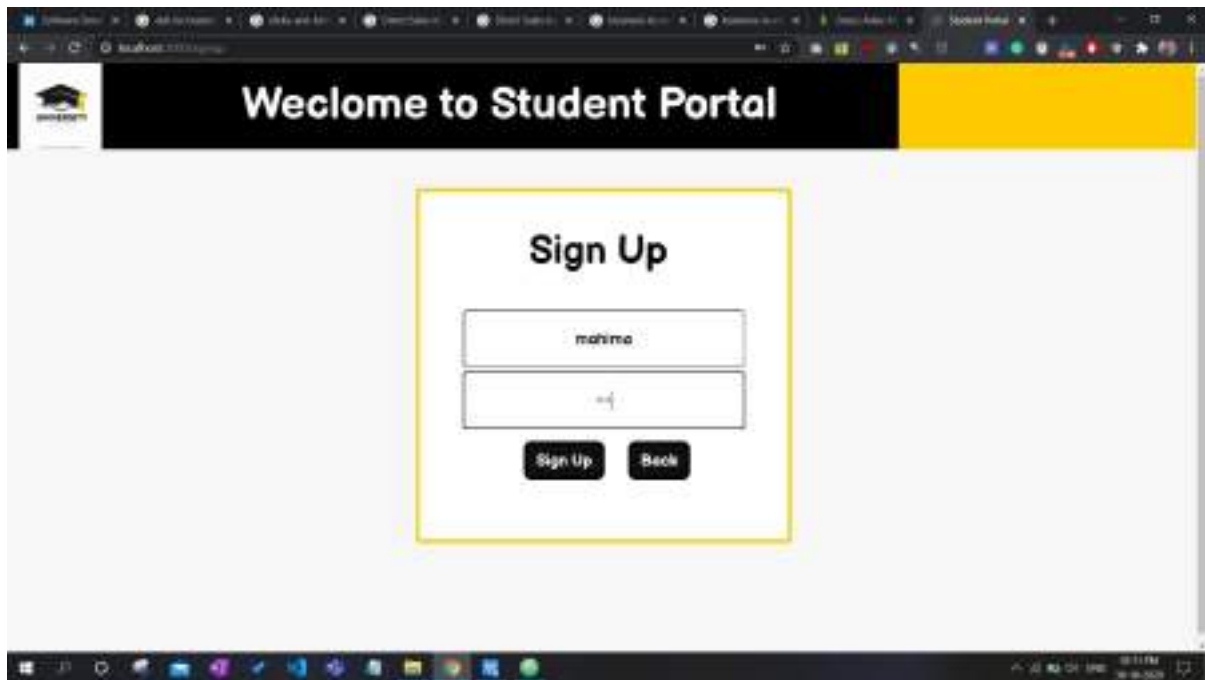


## Output-

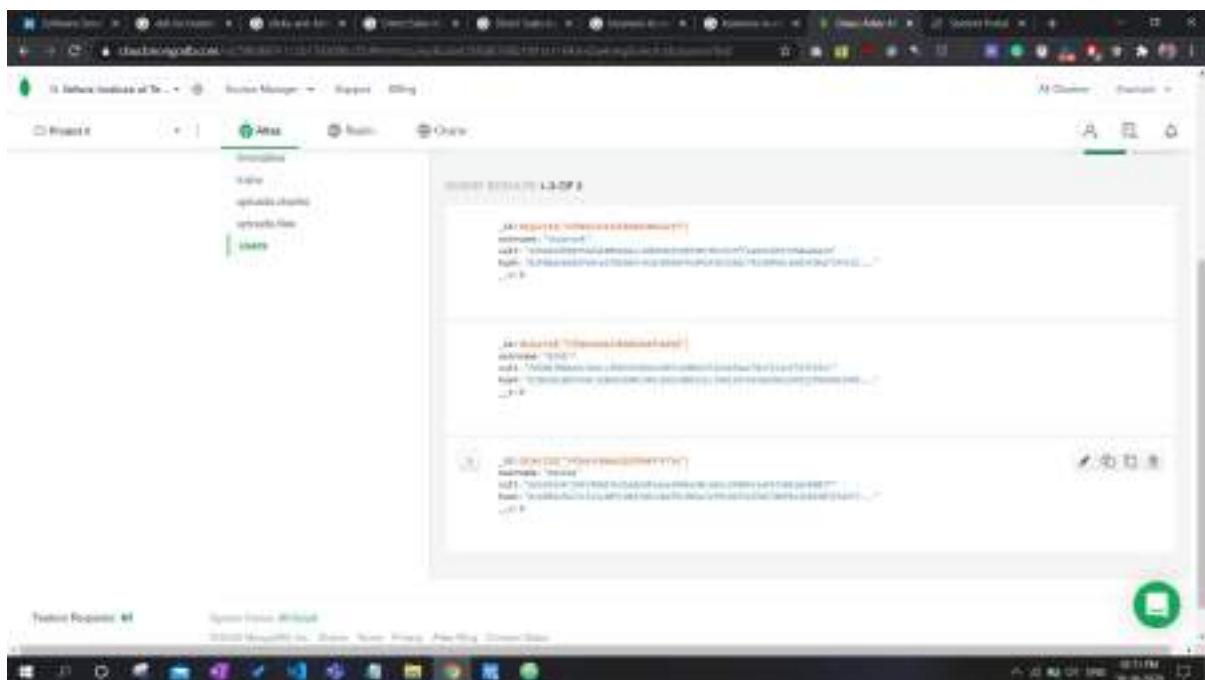


We can see result is almost same, its 25 in website as they are comparing stop words like “the”, “or”, “and” also but we have removed them compared only core words hence its actually 16.

## Registering new user-

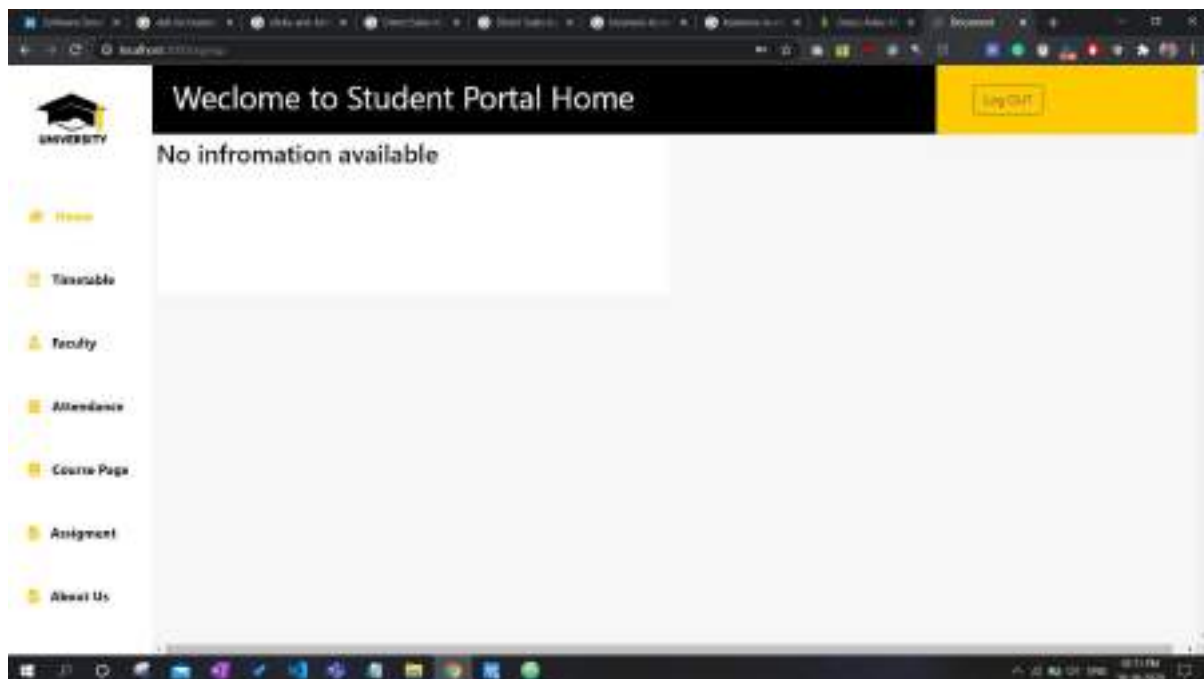


Details gets added into database-

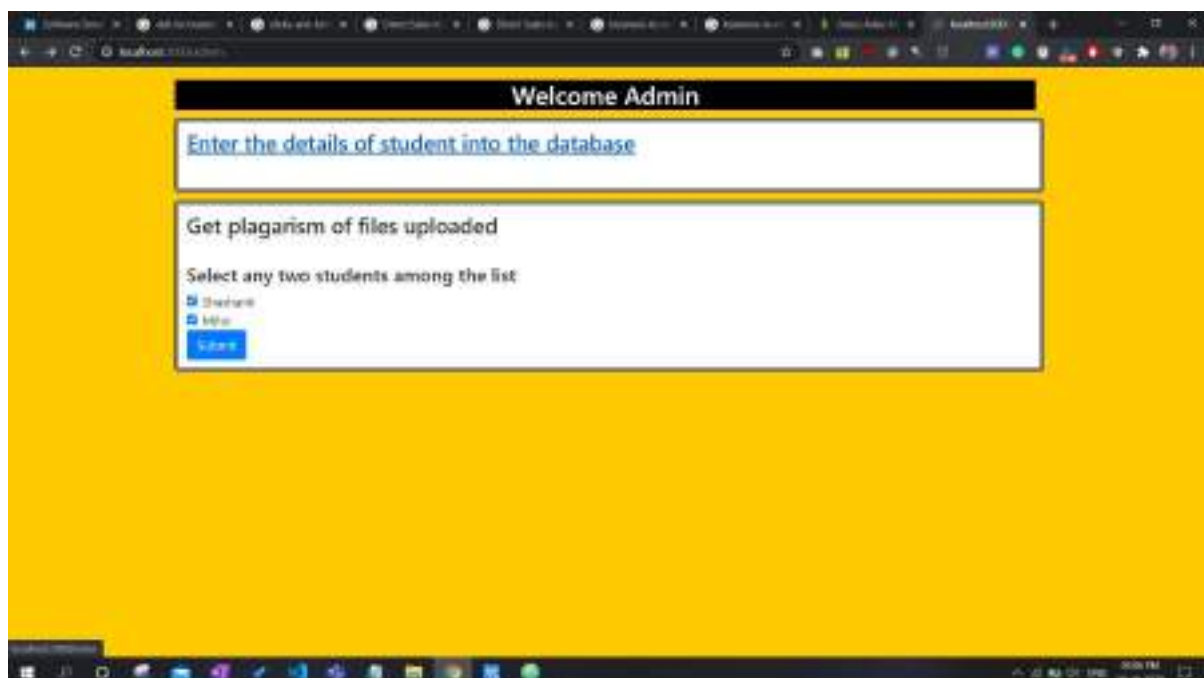




## No information for new user-



## Entering data for new user from teachers login-



Software Dev | All Projects | Java and JS | Java Demo | Java Tutorial | Java Examples | Java Interview | Java Quiz | Java Games | Java Books | Java Tools | Java Resources

localhost:3000

Enter Details

Username  
mahima

Enter personal details

First Name  
Mahima

Last Name  
Singh

Registration No.

Software Dev | All Projects | Java and JS | Java Demo | Java Tutorial | Java Examples | Java Interview | Java Quiz | Java Games | Java Books | Java Tools | Java Resources

localhost:3000

Enter Details

Username  
mahima

Enter personal details

First Name  
Mahima

Last Name  
Singh

Registration No.  
18BCE2322

Phone Number  
12345678

Email  
mahima.singh@vishaldevlax.in

Stream  
CSE

Current Sem  
5

5

CGPA: 8.8

Enter hostel details

Hostel Type: 4 bed

Block Name: H Block

Mess Name: Aravali

Mess type: Special

Mrs. Sudha

Chief warden: Mrs. Anupriya

Enter deadlines

Enter deadline 1: CSE4001-Theory DA 1

Enter deadline 2: CSE4001-Theory DA 2

Enter deadline 3: CSE2001-Theory DA 3

Submit

Details are added dynamically into homepage-

The screenshot shows a web browser displaying the 'Student Portal Home' for a user named Mahima Singh. The page has a dark header with the university logo and a 'log Out' button. A left sidebar contains navigation links: Home, Timetable, Faculty, Attendance, Course Page, Assignment, and About Us. The main content area is divided into three yellow boxes: 'Student Information', 'Hostel Details', and 'Club/Students Activities'. The 'Student Information' box lists details like Name, Registration Number, Phone Number, Email ID, Stream, and Current Sem. The 'Hostel Details' box includes a table for hostel information and a profile picture. The 'Club/Students Activities' box lists various clubs and their activities. On the right, a 'Highlights' section contains 'Announcements', 'Deadlines for today', and 'About VIT'.

**Welcome Mahima to Student Portal Home** [log Out](#)

**Student Information**

Name: Mahima Singh  
Registration Number: 10012322  
Phone Number: 92419000  
Email ID: mahima.singh@vitstudent.vit.ac.in  
Stream: CSE  
Current Sem: 1  
CGPA: 8.0

**Hostel Details**

Registration No.	10012322		
Hostel Block	A-101		
Block Name	Hostel A		
Room Name	Room 101		
Room No.	101	Room Type	Single
Warden Name	Mr. Subha		
Chief Warden	Mr. Ananya		

**Club/Students Activities**

**Nutrition Club** - Competition for our participants to grow some vegetables at home in their garden which are nutritious and beneficial.

**WIT 545** - A new recruiting Freshers and 2nd year students. Visit our website and fill the registration form before 15th Sept 20.

**Highlights**

**Announcements** [New](#)

1. Cat 2 will open from 15th Sept 20. Refer Dean's mail for more details.
2. The last date to pay academic fee is 10th Sept 20.

**Deadlines for today** [Imp](#)

- CSE4001 Theory DA 1
- CSE4001 Theory DA 2
- CSE2001 Theory DA 3

**About VIT**

VIT was established with the aim of providing quality higher education on par with international standards. It consistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has a congenial atmosphere with students from all corners of the globe. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at VIT in the field of teaching and

Data added into the database successfully-

The screenshot shows a database management tool interface. The main window displays a table with student data. The table has columns for Name, Registration Number, Phone Number, Email ID, Stream, and Current Sem. The data is as follows:

Name	Registration Number	Phone Number	Email ID	Stream	Current Sem
Mahima Singh	10012322	92419000	mahima.singh@vitstudent.vit.ac.in	CSE	1

The interface also shows a 'Table Properties' dialog box with various settings for the table, including 'Table Name', 'Table Type', 'Table Columns', and 'Table Constraints'. The 'Table Columns' section shows the following columns:

- Name (VARCHAR(50))
- Registration Number (VARCHAR(50))
- Phone Number (VARCHAR(50))
- Email ID (VARCHAR(50))
- Stream (VARCHAR(50))
- Current Sem (VARCHAR(50))

The 'Table Constraints' section shows the following constraints:

- Primary Key (Registration Number)
- Foreign Key (Stream) to Stream Table

## 7. CONCLUSION /FUTURE WORK

It is an advantage for the consumers whose considerable time and energy is maintained, for the authority of the affected educational college whose workload is significantly reduced, whose facilities are shielded from misuse. This system will also be used to view the full syllabus/course material, update the user's information(only by the faculty). Using this site will dramatically minimise the sharing of engineering document time. The teacher will be able to check the novelty of the work uploaded by the student using the plagiarism checker.

This project 's concept is to get rid of the manual method and create a Paperless labour. It can be remotely monitored and managed. This decreases the human power needed and provides reliable data. Details can be stored and accessed at any time. So, it's easier to have a framework based on the Internet. The required information can be obtained without delay by all stakeholders, faculty and management. In colleges and universities, this system is quite essential, useful and mandatory.

### Future Work:

We plan to extend the portal for parents as well, so that they can keep a track of their child's academics status. We thus plan to introduce a parent login as well.

We aim to extend this facility for the hostel staff as well so that the portal can be used for applying and approving leaves etc.

Apart from the academic facilities we aim to extend the project to allow transfer of fees, to keep a record of the receipts and any other outstanding dues.

## 8. REFERENCES

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