

**Visvesvaraya Technological University, Belagavi –
590010**



**DBMS MINI PROJECT REPORT
ON
Student File Management System**

Submitted by

Pragnya Nagure
Pravin Kumar

4SO19CS110
4SO19CS119

Under the guidance of

Ms Supriya Salian
(Assistant Professor, CSE Department)



**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING**

**ST JOSEPH ENGINEERING COLLEGE
Vamanjoor, Mangaluru -575028, Karnataka
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

*This is to certify that the Mini project entitled “**STUDENT FILE MANAGEMENT SYSTEM**” is a bonafide work carried out by*

Pragnya Nagure

4SO19CS110

Pravin Kumar

4SO19CS119

Students of fifth semester B.E. Computer Science & Engineering, and submitted as a part of the course DBMS Laboratory with Mini Project (18CSL58), during the academic year 2021-2022.

Ms Supriya Salian

Project Guide

Dr Sridevi Saralaya

Head of the Department

Name of the Examiners

1. -----

2. -----

Signature with Date

1. -----

2. -----

ABSTRACT

As the recent days of pandemic has proven to be more online based it is crucial in an administrative institution to have all the managerial activities to be handled in an online mode. An important part of quality distance-learning is the utilization of learning management systems.

This project, Archivo, is designed to make a web-based application for the systematic management of files. The project also focuses on features that help in providing a classroom environment for the students and teachers. Along with providing a user-friendly application, the project also acts as an archive for all the documents that need to be submitted online. Students' works can now be easily managed and reviewed by the teachers.

The project aims to go large scale with classrooms for multiple classes of multiple branches and colleges affiliated to VTU. With HODs being on the top assigning the subjects handled by a teacher, Archivo has four different user roles.

ACKNOWLEDGEMENT

We dedicate this page to acknowledge and thank those responsible for the shaping of the project. Without their guidance and help, the experience while constructing the dissertation would not have been so smooth and efficient.

We are extremely thankful to our Director, **Rev. Fr. Wilfred P D'Souza** our Principal **Dr Rio D'Souza** for their support and encouragement.

We owe our profound gratitude to **Dr Sridevi Saralaya**, Head of the Department, Computer Science and Engineering, whose kind consent and guidance helped us to complete this work successfully.

We sincerely thank **Ms Supriya Salian**, Assistant Professor, Computer Science and Engineering, for her guidance and valuable suggestions which helped us to fulfill the experiments prescribed by the university.

We would like to thank all our Computer Science and Engineering staff members who have always been with us extending their support, precious suggestions, guidance and encouragement through the project.

We also like to extend thanks to our friends and family members for their continuous support.

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CHAPTER 1 - INTRODUCTION

Archivo is a Database Management System Project that focuses on student file management. It facilitates a classroom environment where students can upload assignments as documents which can be reviewed by the teachers to assess. It keeps the homework part online separate from the actual classes. Thus use of papers can be reduced and it also helps a lot in the management of online classes. Students and teachers' university provided identification numbers are made use of in the project for providing roles. These roles include Students, Teachers and Head of the Department. HOD acts as a user admin who can assign a teacher for a particular subject of any of the classes in their department.

1.1. PROBLEM STATEMENT

Due to the Covid-19 outbreak and lockdown the world education system has been compelled to be held online. Thus, it is crucial in an administrative institution to have all the managerial activities to be handled in the online mode smoothly. The learning process requires a classroom environment where teachers can deliver information and review students' assignments. It is also necessary for the students and teachers to be able to remotely access the submitted documents anytime. These documents also create an issue of wastage of papers when submitted directly to the teachers. Without a proper storage mechanism, there is a risk for misplacement or losing of the documents. Thus to fulfill all the needs mentioned a user-friendly web-based application having a classroom environment with an efficient and systematic file storage mechanism is required.

1.2. SCOPE AND IMPORTANCE

The project is basically designed for the Engineering colleges affiliated to VTU. The BE programme inculcates various fields of studies which are known to be the branches. Supporting various branches of each college, Archivo aims to provide a fully functional application for each of the members involved, providing them with a role to perform.

The project provides a comprehensive database. It makes use of the Subject codes and USN provided by the University for its functionalities. The system is able to identify, validate, sort and classify users and assign them with responsibilities. It can store, retrieve, delete and update and summarize the data. Archivo stores semester details, course details, college and branch details and all the basic details of the students and teachers involved. It mainly provides consistent storage for the student files.

The proposed system is intended to make the administrative process involved in an institution easy. The main purpose of the project is to build a student file management system to facilitate easy access to student documents. It allows teachers to access the documents submitted by students and assess them. Teachers can deliver messages to the students for circulation of important notices. The Head of the Department of a particular branch in a college can assign teachers to handle certain subjects for any of the classes. The application provides the users with a classroom environment and all the institutional as well as classroom work can be easily handled online.

CHAPTER 2 - SOFTWARE REQUIREMENT SPECIFICATION

2.1. FUNCTIONAL REQUIREMENT SPECIFICATION

Teacher

- Teachers can sign-in/sign-up into the webapp, fill in or edit their profile details.
- Can assign an assignment to a particular class they are handling.
- Can make announcements to all the students of a particular class they are teaching.
- Download, Review and Remark the files or documents uploaded by the students.

Student

- Students can sign-in/sign-up into the webapp, fill in or edit their profile details.
- Can submit assignments assigned by their Teachers.
- Delete the files uploaded.
- View the marks given by the teacher for each of their submissions.

User-Admin

- User-admin being the HOD assigns the teachers belonging to their department with subjects they are proposed to teach for a class.
- Removes the teacher's authority to handle the subject for a class they're no longer teaching.

2.2. SOFTWARE REQUIREMENT SPECIFICATION

Operating system: Windows 7 or higher, Mac, Linux

Language: Python, SQL

Database: MYSQL

Environment: Python 3.9 or above with following dependencies,

- asgiref==3.4.1
- Django==4.0
- mysqlclient==2.1.0
- sqlparse==0.4.2
- tzdata==2021.5

2.3. HARDWARE REQUIREMENT SPECIFICATION

Processor: Intel i3 or above / AMD Ryzen 3 or above

RAM: 4GB or more

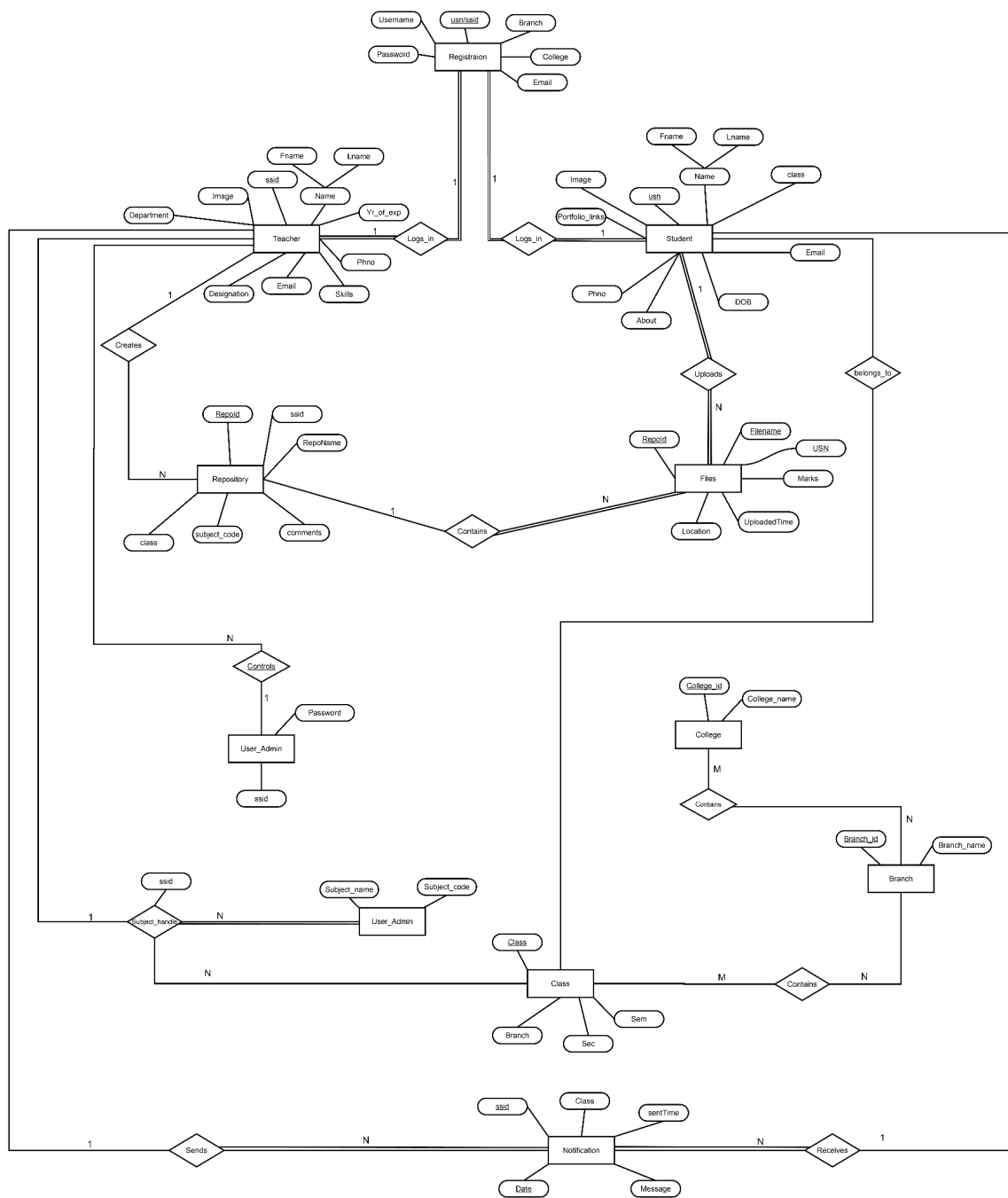
Display: Standard QXGA display or above

Mouse: Standard mouse with CMOS sensor.

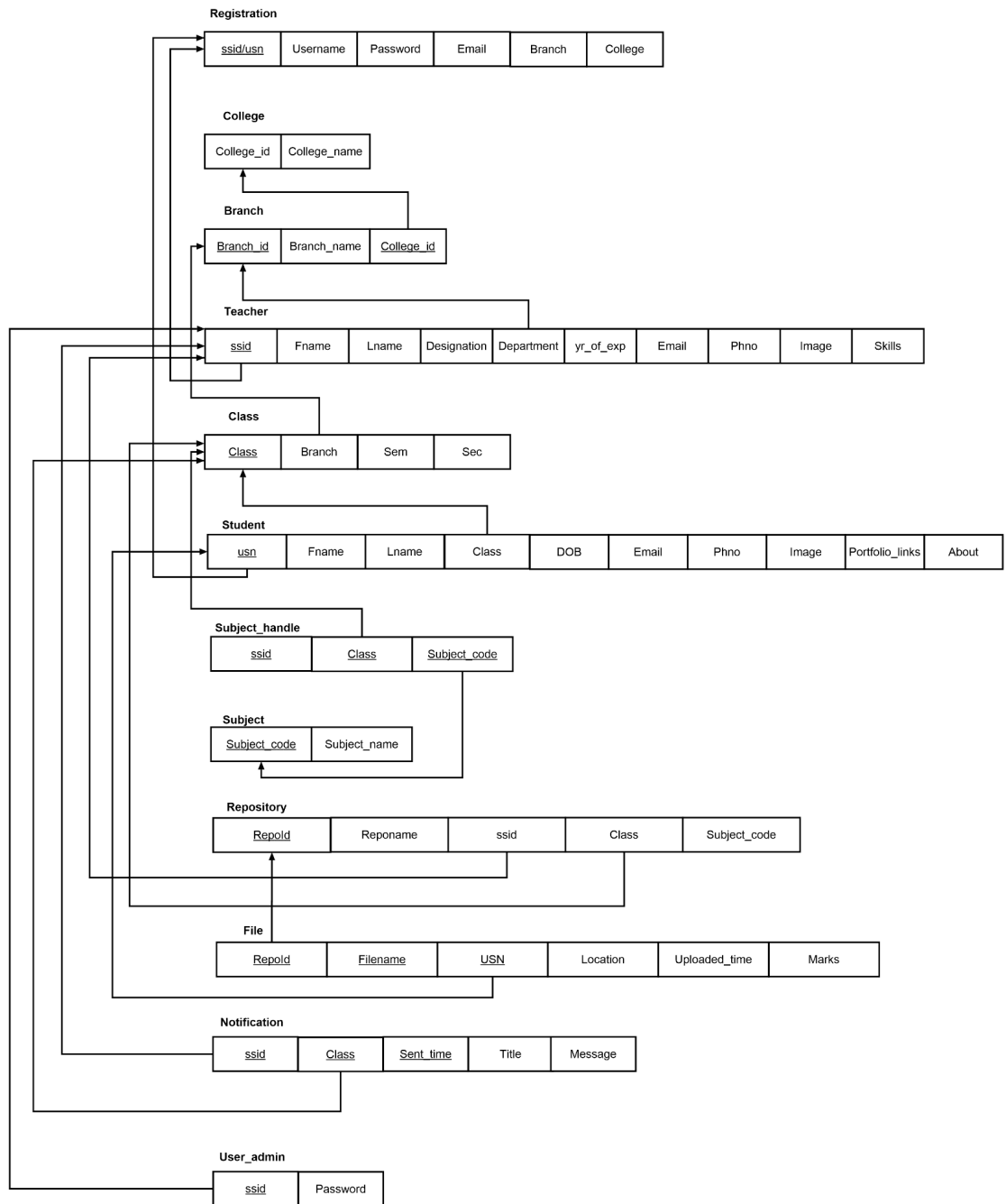
Internet Services: dial-up/ DSL/Cable/Fiber/Satellite.

CHAPTER 3 - DESIGN

3.1. ER DIAGRAM



3.2. SCHEMA DIAGRAM



3.3. TABLE DESCRIPTION

Table 1: College

Attributes	Data Type	Constraints	Description
College_id	varchar(10)	PRIMARY KEY	Unique id for a college
College_name	varchar(255)	NOT NULL	Name of the college

Table 2: Branch

Attributes	Data Type	Constraints	Description
Branch_id	varchar(10)	PRIMARY KEY	Id for branch
Branch_name	varchar(255)	NOT NULL	Branch name
College_id	varchar(10)	PRIMARY KEY	Unique id for a college

Table 3: Class

Attributes	Data Type	Constraints	Description
Class	varchar(10)	PRIMARY KEY	Unique id for a class
Branch	varchar(20)	NOT NULL	Branch name
Sem	decimal(1,0)	NOT NULL	Semester in numbers
Sec	char(1)	NOT NULL	Section as A,B,C

Table 4: Registration

Attributes	Data Type	Constraints	Description
usn_ssid	char(10)	PRIMARY KEY	University Seat Number for student or Employee SSN for teacher
Username	varchar(30)	UNIQUE KEY	Unique username
Email	varchar(255)	UNIQUE KEY	Email id of user with check
Pass	varchar(255)	NOT NULL	Password with md5 hashing
Branch	varchar(255)	NOT NULL	Branch referenced to Branch_id of Branch table
College	varchar(255)	NOT NULL	College referenced to College_id of College table
T_or_S	char(1)	NOT NULL	Determines whether user is a teacher or student

Table 5: Teacher

Attributes	Data Type	Constraints	Description
ssid	char(10)	PRIMARY KEY	Employee SSN references usn_ssid of Registration table
Fname	varchar(255)	NOT NULL	First name of the teacher
Lname	varchar(255)	NULLABLE	Last name of the teacher
Designation	varchar(255)	NOT NULL	Designation
Department	varchar(50)	NOT NULL	Department references Branch_id of Branch table
yr_of_exp	decimal(2,0)	NOT NULL	Year of Experience
Email	varchar(255)	NOT NULL	Email id
Phno	decimal(13,0)	NOT NULL	Phone number
Skills	varchar(255)	NULLABLE	Skills
Image	varchar(255)	NULLABLE	Image location

Table 6: Student

Attributes	Data Type	Constraints	Description
usn	varchar(10)	PRIMARY KEY	USN references usn_ssid of Registration table
Fname	varchar(255)	NOT NULL	First name of student
Lname	varchar(255)	NULLABLE	Last name of student
Class	varchar(10)	NOT NULL	Class code references Class of Class table
DOB	date	NOT NULL	Date of birth of student
Email	varchar(255)	NOT NULL	Email of student
Phno	decimal(13,0)	NOT NULL	Phone number of student
Image	varchar(255)	NULLABLE	Location of Display picture of student
Portfolio_links	varchar(500)	NULLABLE	portfolio links showcasing student skills
About	varchar(700)	NULLABLE	Brief about students in less than 700 characters.

Table 7: Subject

Attributes	Data Type	Constraints	Description
Subject_code	varchar(12)	PRIMARY KEY	Codes of subjects provided by VTU
Subject_name	varchar(100)	NOT NULL	Name of the subject

Table 8: Subject_handle

Attributes	Data Type	Constraints	Description
ssid	varchar(10)	PRIMARY KEY	SSN of teacher
Class	varchar(10)	PRIMARY KEY	Class code references Class of Class table
Subject_code	varchar(12)	PRIMARY KEY	Subject code references Subject_code of Subject table

Table 9: User_Admin

Attributes	Data Type	Constraints	Description
ssid	char(10)	PRIMARY KEY	Teacher SSN references ssid of Teacher table
passw	varchar(255)	NOT NULL	Login password

Table 10: Repository

Attributes	Data Type	Constraints	Description
Repoid	integer	PRIMARY KEY	Id with auto-increment to uniquely identify the assignment created by teacher
Reponame	varchar(255)	NOT NULL	Name of the assignment
ssid	varchar(10)	NOT NULL	Teacher SSN references ssid of Teacher table
Class	varchar(10)	NOT NULL	Class code references class of Class table
Subject_code	varchar(10)	NULLABLE	Subject code assigned by university
Comments	varchar(500)	NULLABLE	Comments to notify students when assignment is created

Table 11: File

Attributes	Data Type	Constraints	Description
Repid	int	PRIMARY KEY	Assignment id
Filename	varchar(255)	PRIMARY KEY	Name of the file uploaded by student
Usn	char(10)	PRIMARY KEY	USN of the student who uploads the file
Location	varchar(255)	NULLABLE	Location of the file stored after uploading
Uploaded	datetime	NULLABLE	Upload Date and Time
Marks	smallint	NULLABLE	Marks received for the assignment

Table 12: Notification

Attributes	Data Type	Constraints	Description
ssid	varchar(10)	PRIMARY KEY	Teacher SSN references ssn of Teacher table
Class	varchar(10)	PRIMARY KEY	Class code references Class of Class table
Sent_time	datetime	PRIMARY KEY	Date and Time of message sent
Title	text	NOT NULL	Title of the announcement
Message	text	NULLABLE	Message content

CHAPTER 4 - IMPLEMENTATION

4.1. IMPLEMENTATION OF STORED PROCEDURES AND TRIGGERS

1. Trigger Name: set_created_date

Description: This trigger is executed when a file is uploaded by the student. The current file upload date and time gets inserted into the File table before all other fields get inserted with values.

Trigger Event: INSERT

Trigger Action: Inserts date and time field, Uploaded, in the File table

Trigger Procedure:

```
CREATE TRIGGER set_created_date
BEFORE INSERT ON File FOR EACH ROW
    SET New.Uploaded = NOW();
```

2. Trigger Name: notification_sent_time

Description: This trigger is executed when an announcement is made by the teacher. The current notification sent date and time gets inserted into the Notification table before all other fields get inserted with values.

Trigger Event: INSERT

Trigger Action: Inserts date and time field, Sent_time, in the Notification table

Trigger Procedure:

```
CREATE TRIGGER notification_sent_time
BEFORE INSERT ON Notification FOR EACH ROW
    SET New.Sent_time = NOW();
```

3. Trigger Name: assignment_notification

Description: This trigger is executed when an assignment is created by the teacher. A new tuple gets inserted into the Notification table every time an assignment tuple is inserted into the Repository table. And the details of the assignment is notified to the students with comments added as the message content.

Trigger Event: INSERT

Trigger Action: Inserts a record into the Notification table

Trigger Procedure:

```
CREATE TRIGGER assignment_notification
AFTER INSERT ON Repository FOR EACH ROW
BEGIN
    INSERT INTO Notification(ssid,Class,Title,Message) VALUES (NEW.ssid,
NEW.Class, CONCAT(NEW.Reponame," ",NEW.Subject_code), NEW.Comments);
END;
```

4. Stored Procedure: greetings

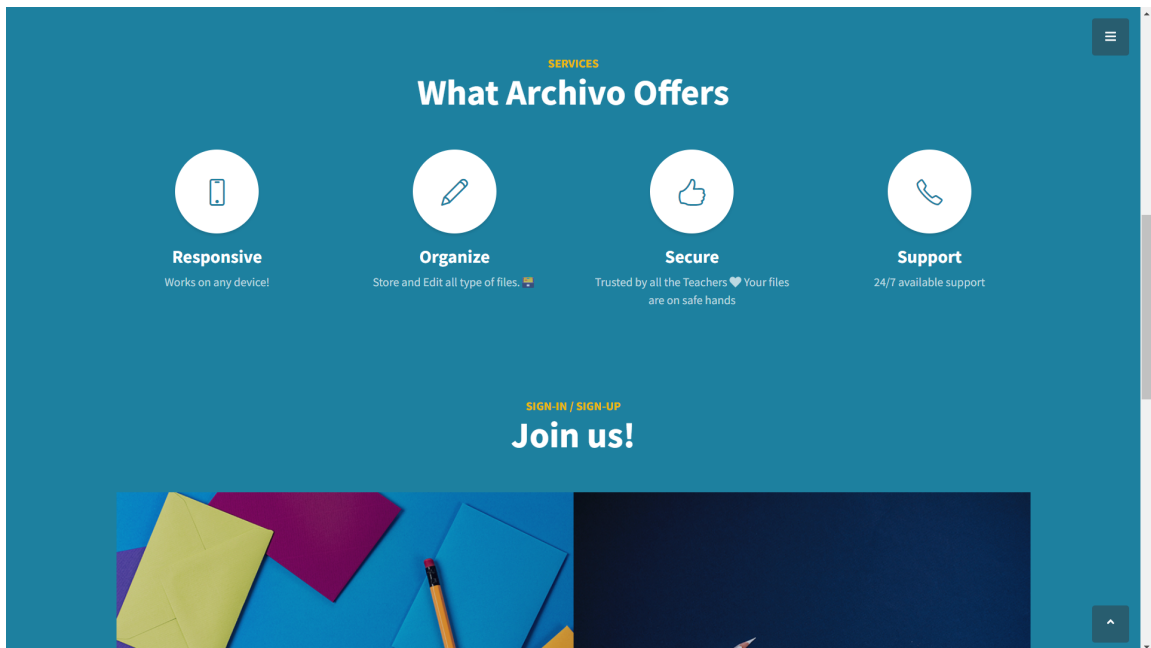
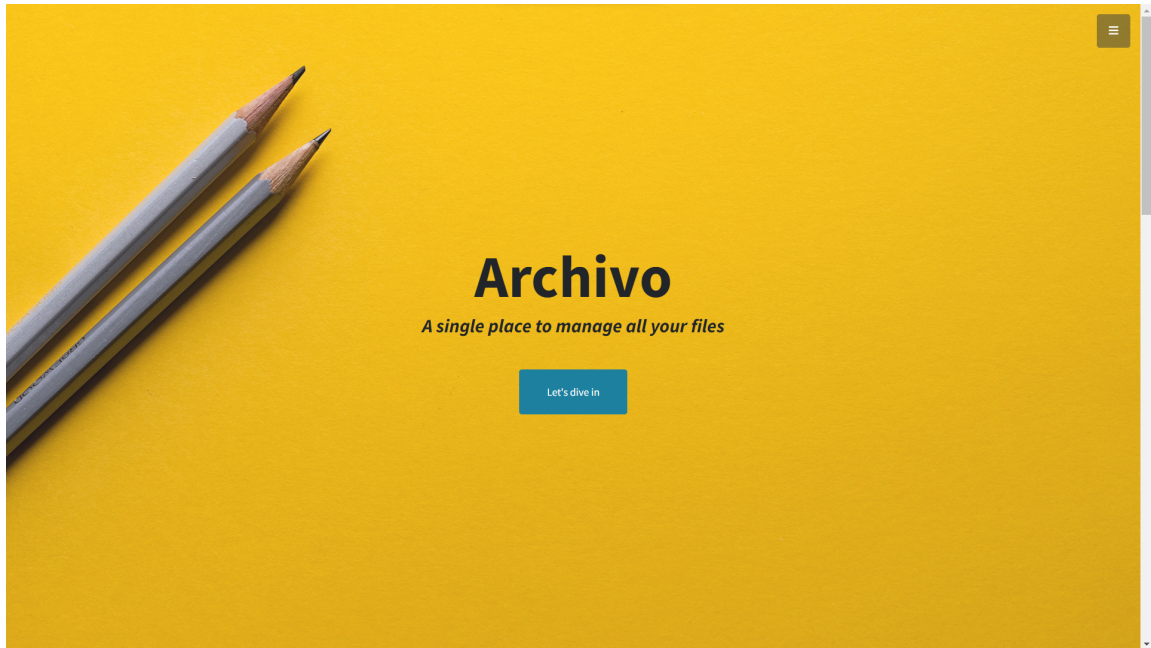
Description: To display a greeting message to the users after they log in to the application. The message is displayed on the navigation bar along with the user's username.

Procedure Definition:

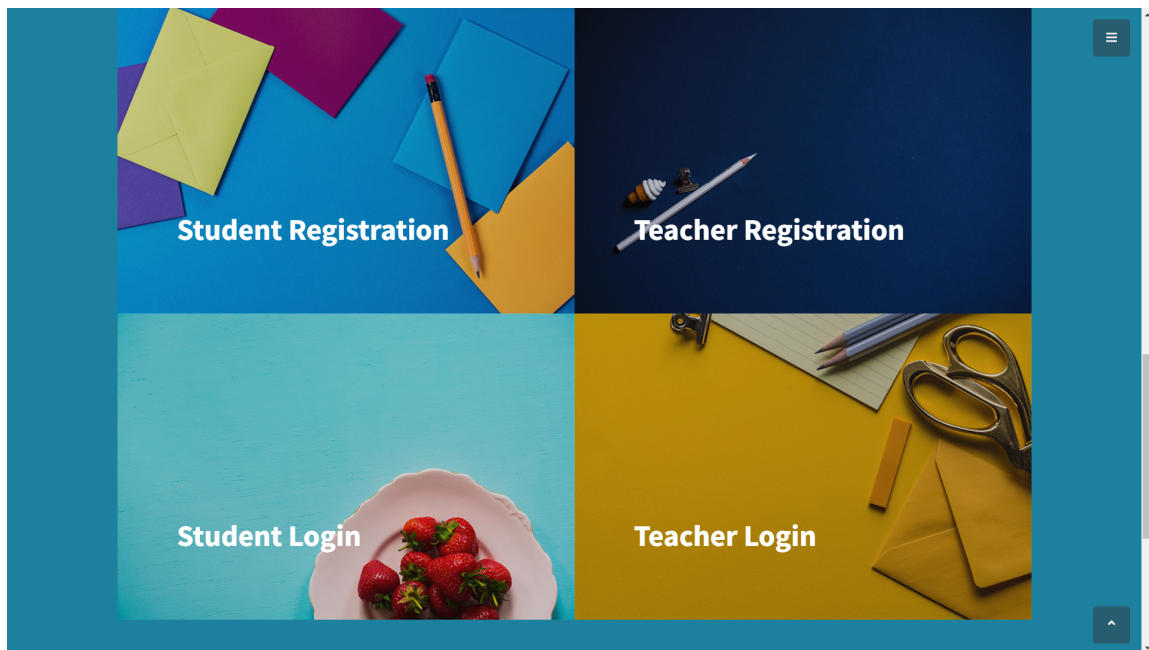
```
CREATE PROCEDURE greetings(IN USN CHAR(10))
BEGIN
    SELECT Username FROM Registration WHERE usn_ssid = USN;
```

CHAPTER 5 - SCREENSHOTS

Home Page



Student File Management System



Sign-up page

Sign up

student

45019CS000

student@gmail.com

St. Joseph Engineering College, t

Computer Science and Enginee

.....

.....

I agree all statements in [Terms of service](#)


Register

I am already a member

Student File Management System


Sign up

I agree all statements in [Terms of service](#)



[I am already a member](#)

Login Page

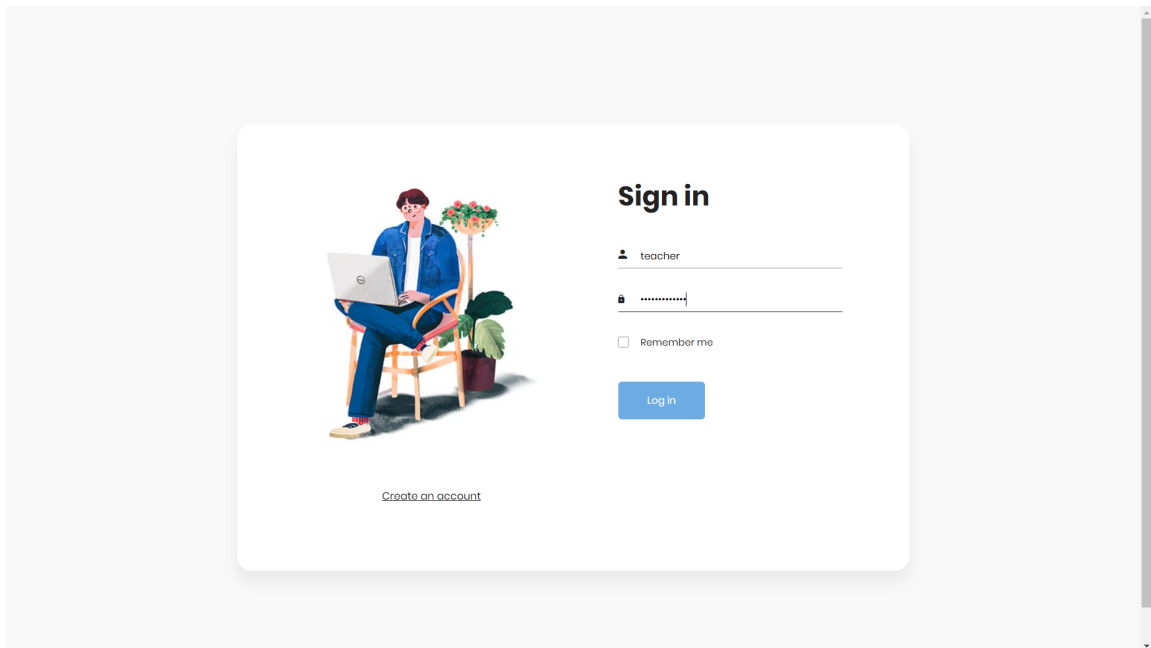


Sign in

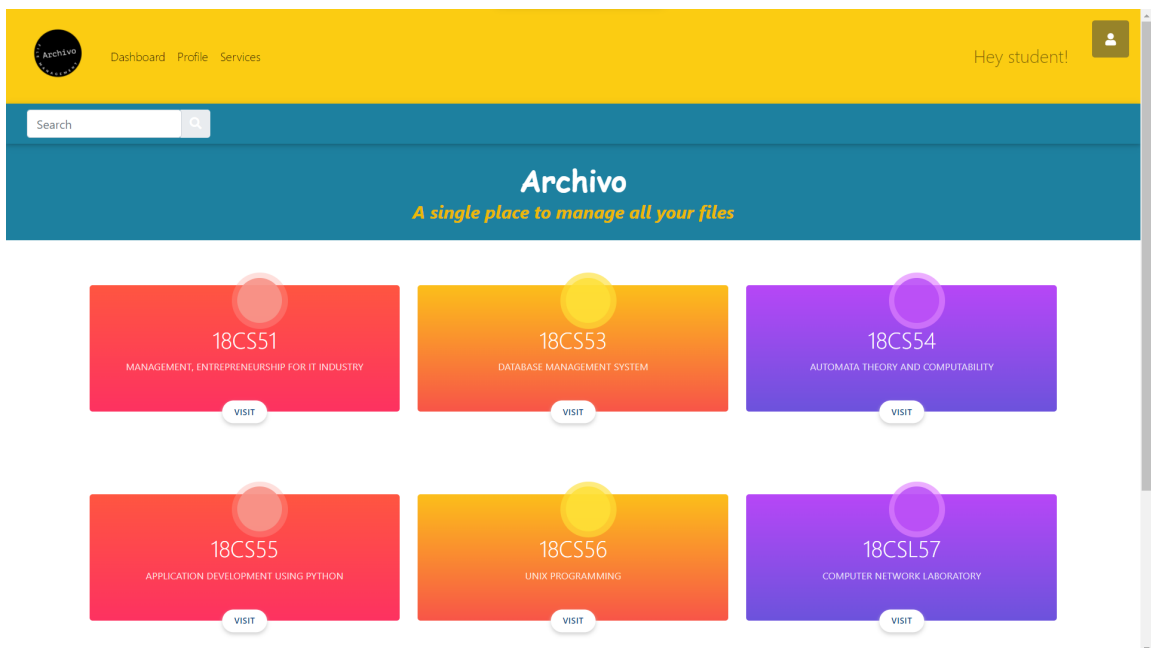
Remember me

[Create an account](#)

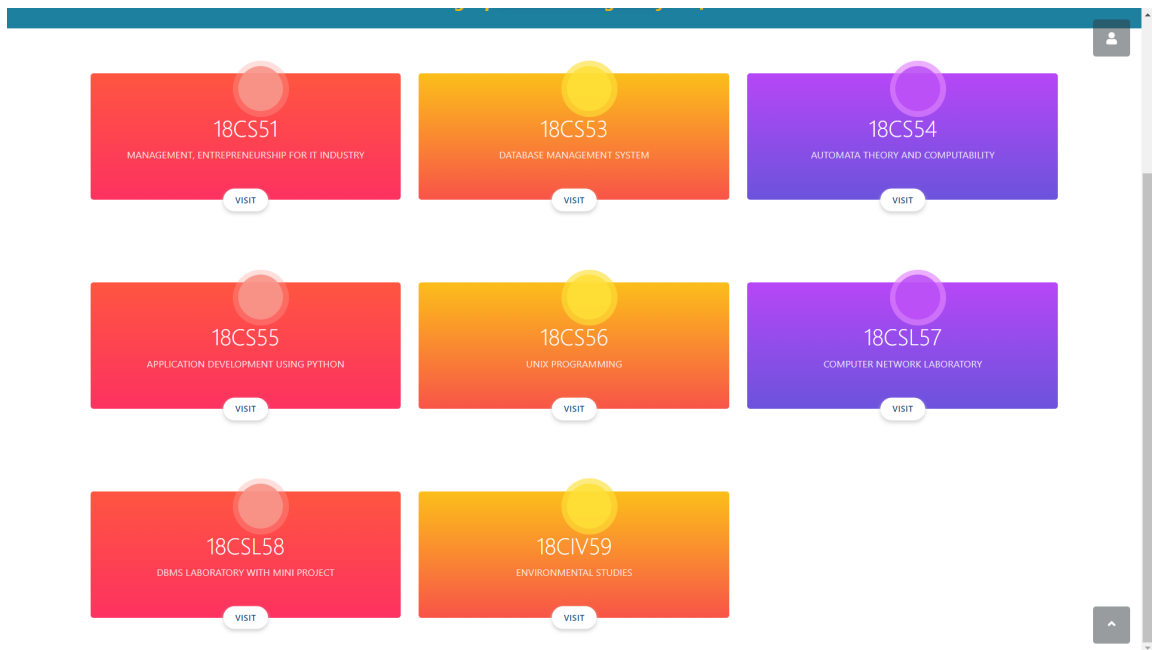
Student File Management System



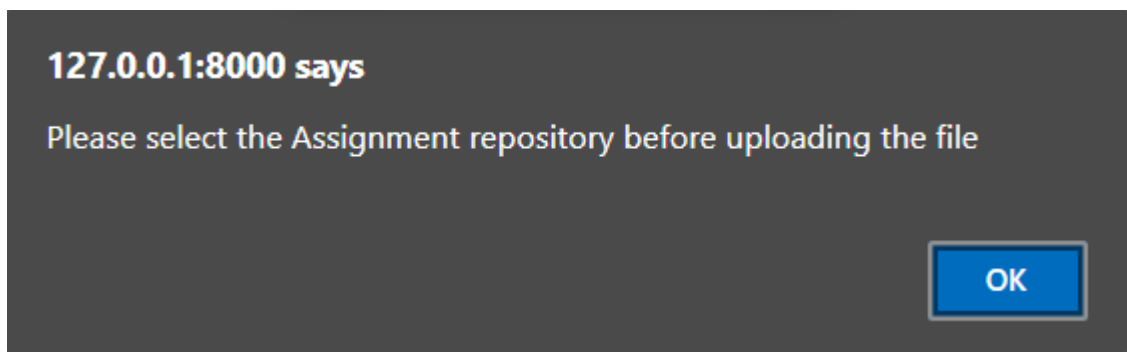
Student Dashboard



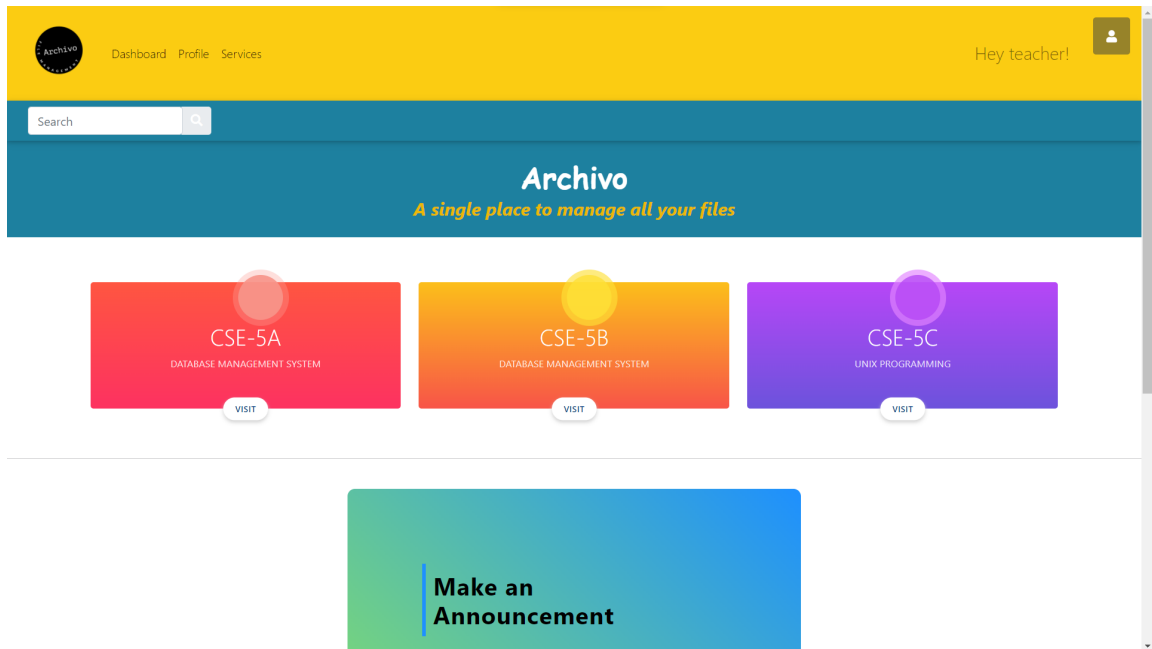
Student File Management System



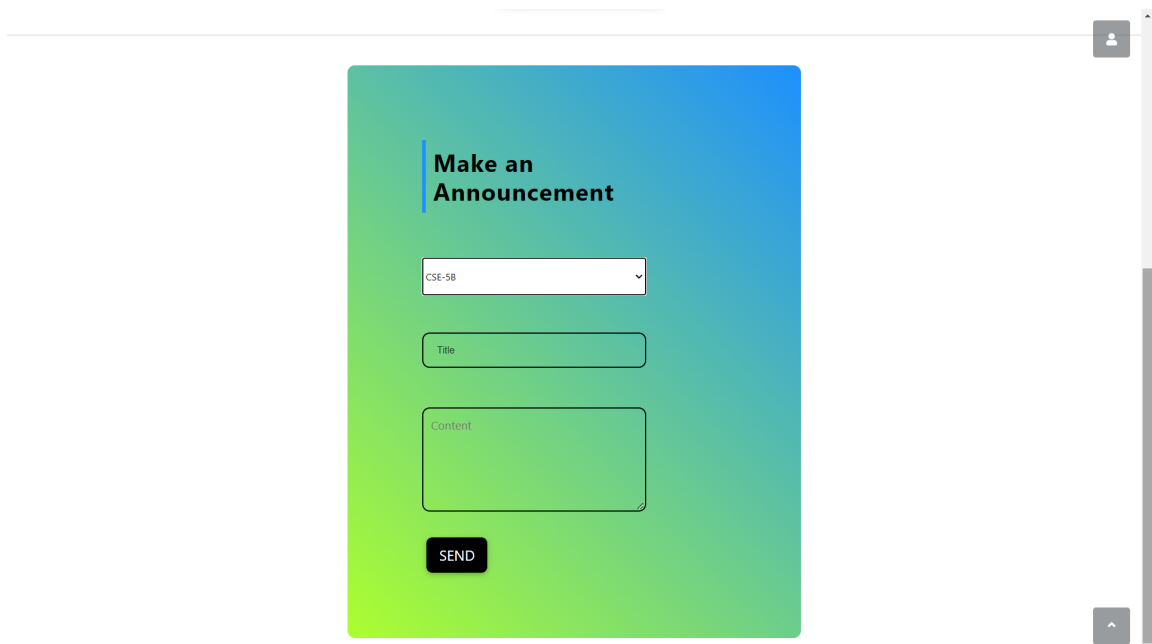
Confirmation messages



Teacher Dashboard

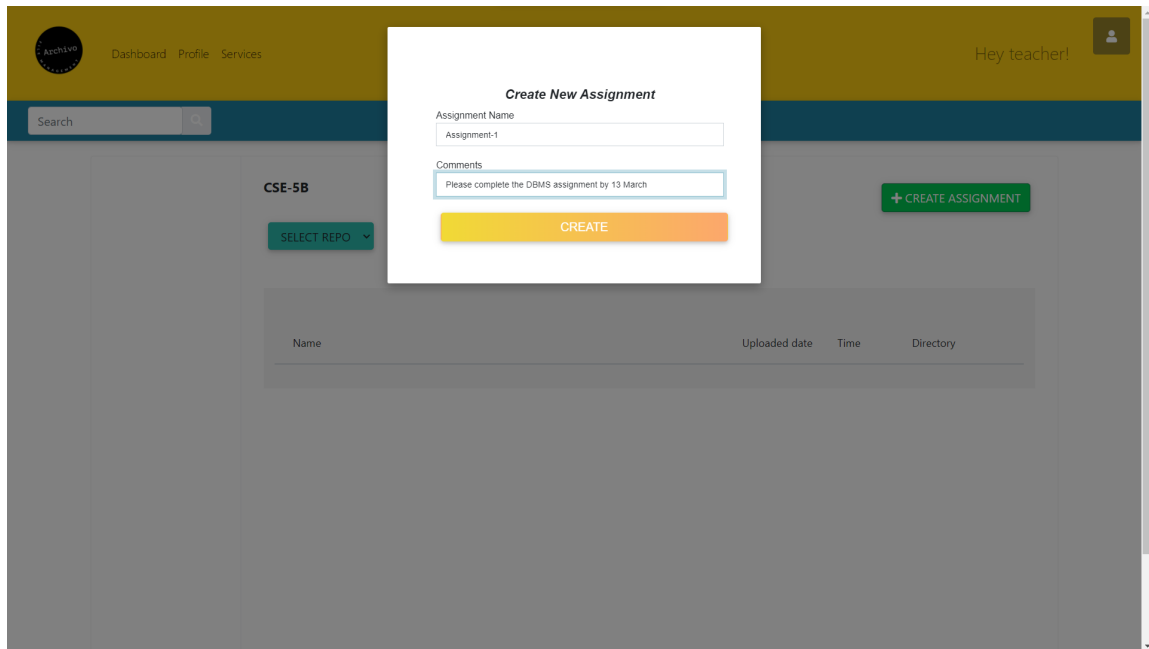


Announcement feature for Teacher

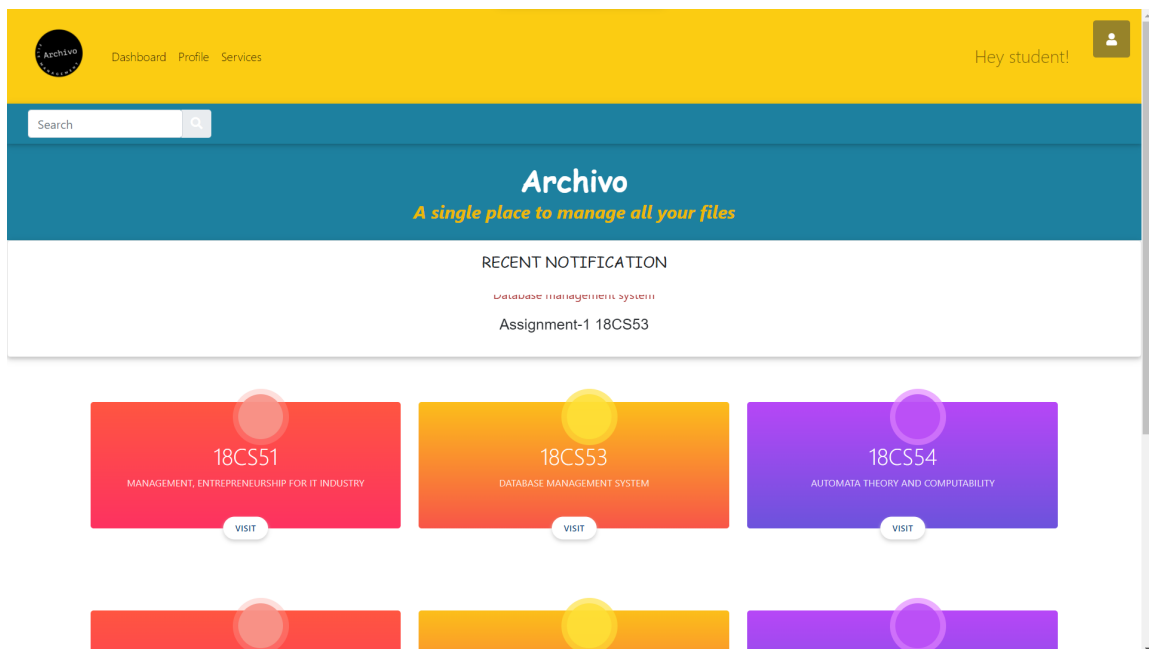


Student File Management System

Teacher creating assignment

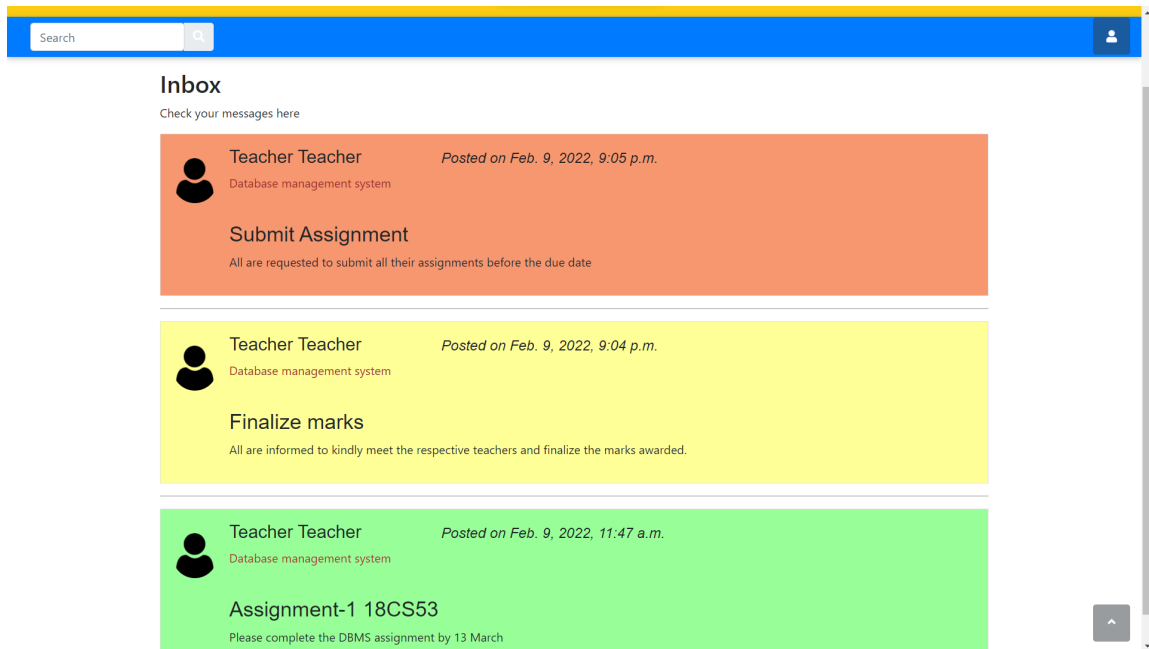


Recent Notification on student dashboard

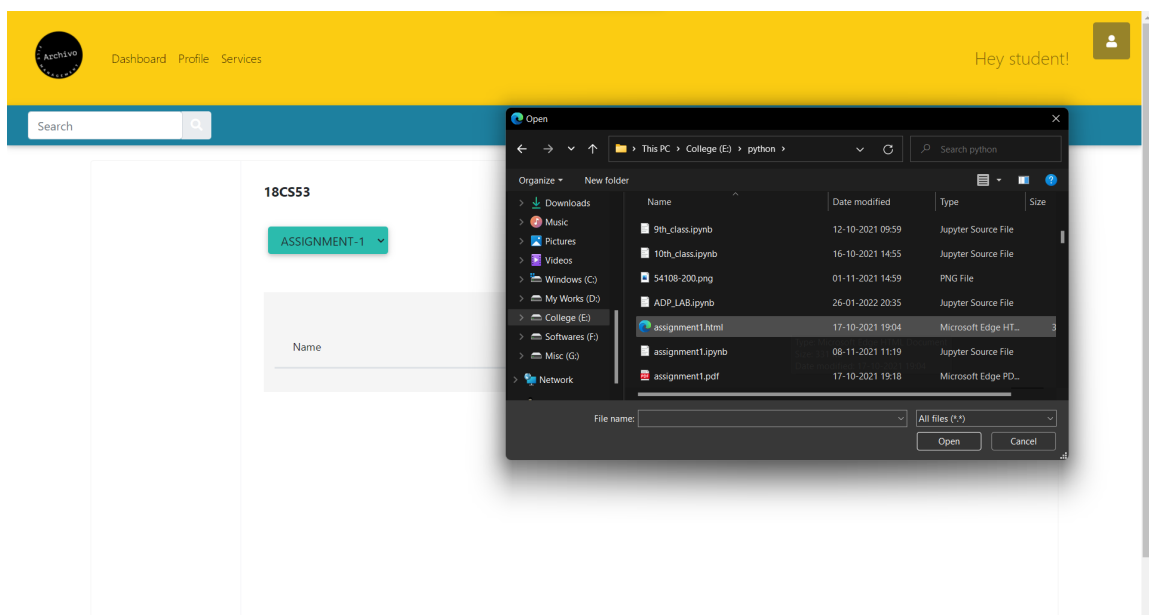


Student File Management System

Notification Page



Student uploading files as part of assignment



File Page

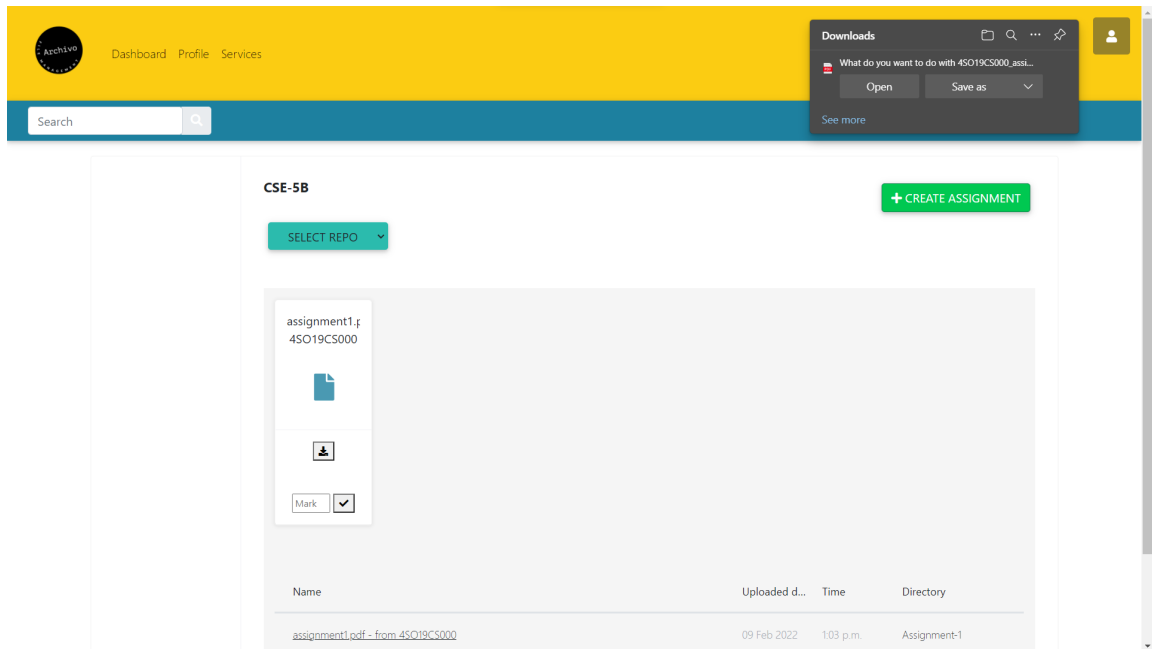
The screenshot shows the student interface. At the top, there is a yellow header with the Archivo logo, navigation links for 'Dashboard', 'Profile', and 'Services', and a greeting 'Hey student!' with a user profile icon. Below the header is a blue search bar. The main content area is titled '18CS53' and includes a '+ UPLOAD NEW ITEM' button and a 'SELECT REPO' dropdown menu. A file management area displays a file named 'assignment1.pdf' with icons for file operations. Below this is a table with the following data:

Name	Uploaded d...	Time	Directory
assignment1.pdf Received marks: None	09 Feb 2022	1:03 p.m.	Assignment-1

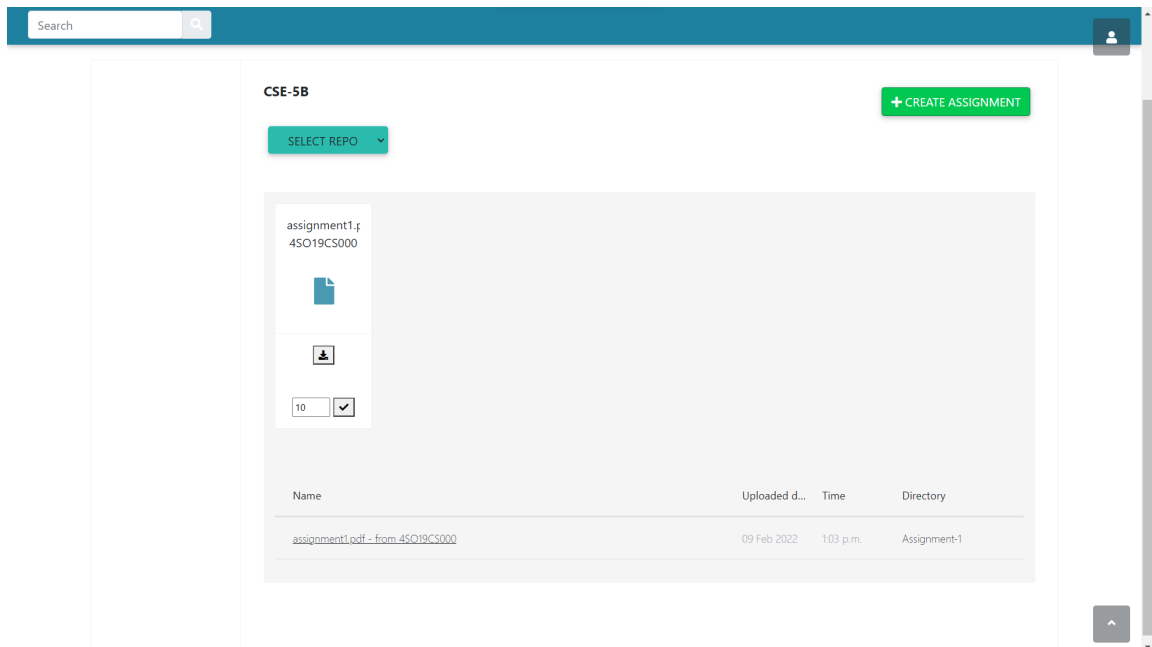
The screenshot shows the teacher interface. At the top, there is a yellow header with the Archivo logo, navigation links for 'Dashboard', 'Profile', and 'Services', and a greeting 'Hey teacher!' with a user profile icon. Below the header is a blue search bar. The main content area is titled 'CSE-5A' and includes a '+ CREATE ASSIGNMENT' button and a 'SELECT REPO' dropdown menu. A table header is visible with the following columns:

Name	Uploaded date	Time	Directory
------	---------------	------	-----------

Download facility of the file



Awarding marks to the uploaded file



Marks reflected to the student

The screenshot shows a web interface for a file management system. At the top, there is a search bar and a user profile icon. The main content area is titled '18CS53' and includes a '+ UPLOAD NEW ITEM' button. Below this is a 'SELECT REPO' dropdown menu. A file named 'assignment1.pdf' is displayed with a document icon and action icons for delete and download. Below the file list, a table shows the file details:

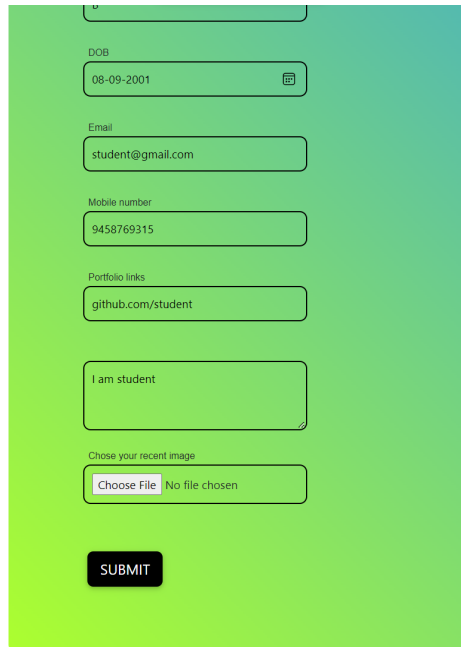
Name	Uploaded d...	Time	Directory
assignment1.pdf Received marks: 10	09 Feb 2022	1:03 p.m.	Assignment-1

Student Profile

The screenshot shows a student profile form on a blue and green gradient background. At the top, there is a circular icon of a student sitting on books. Below the icon, the word 'Profile' is displayed. The form contains the following fields:

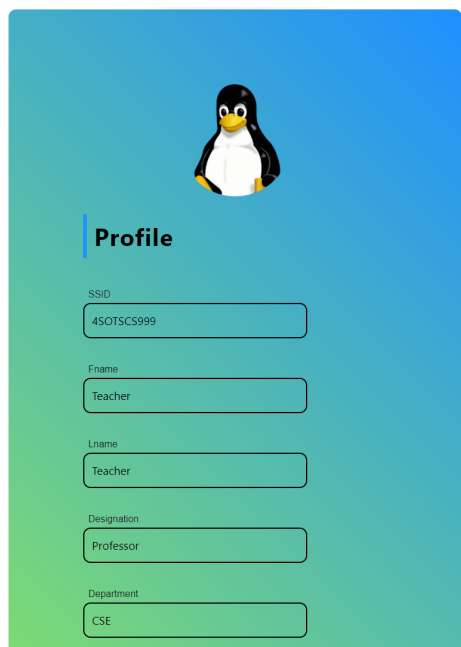
- USN: 45O19CS000
- Fname: student
- Lname: student
- Branch: CSE
- Semester: 5

Student File Management System



A screenshot of a student profile form. The form is set against a green-to-yellow gradient background. It contains several input fields: a date field for 'DOB' with the value '08-09-2001', an email field with 'student@gmail.com', a mobile number field with '9458769315', and a portfolio links field with 'github.com/student'. There is a radio button labeled 'I am student' which is selected. Below this is a file upload section with a 'Choose File' button and the text 'No file chosen'. At the bottom is a black 'SUBMIT' button. To the right of the form is a vertical scrollbar with a user icon at the top and a scroll-up arrow at the bottom.

Teacher Profile



A screenshot of a teacher profile form. The form is set against a blue-to-green gradient background. At the top center is a penguin icon. Below it is the title 'Profile'. The form contains several input fields: 'SSID' with '4SOTSCS999', 'Fname' with 'Teacher', 'Lname' with 'Teacher', 'Designation' with 'Professor', and 'Department' with 'CSE'. To the right of the form is a vertical scrollbar with a user icon at the top and a scroll-up arrow at the bottom.

Student File Management System

Department
CSE

Year of Experience
3

Email
teacher@gmail.com

Mobile number
2358475961

HTML, CSS, JAVASCRIPT, PYTHON,
DJANGO, REST-API

Choose your recent image
Choose File No file chosen

SUBMIT

Student logout

Archivo Dashboard Profile Services Hey student!

Search

Archivo
A single place to manage all your files

Archivo
Profile
Notifications
Log out

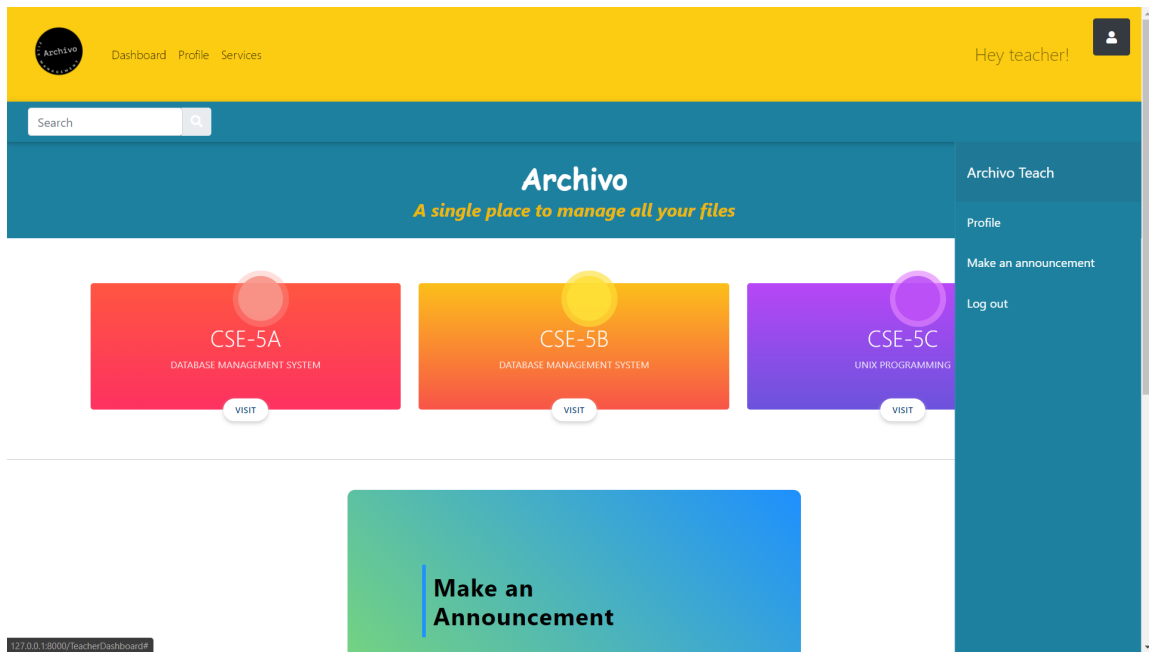
RECENT NOTIFICATION
Database management system
Submit Assignment

18CS51
MANAGEMENT, ENTREPRENEURSHIP FOR IT INDUSTRY
VISIT

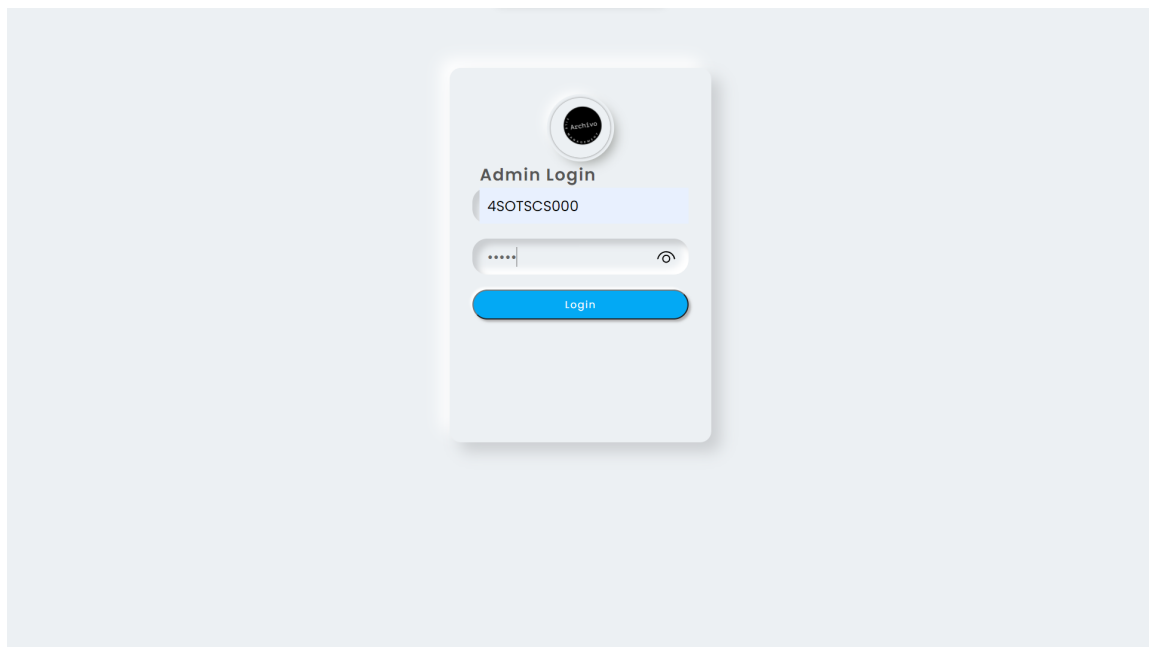
18CS53
DATABASE MANAGEMENT SYSTEM
VISIT

18CS54
AUTOMATA THEORY AND COMPI
VISIT

Teacher logout



Admin Login Page



Admin control panel to add and remove teachers

Welcome Admin

Index	SSID	Name	Class	Code	Subject Name	
1	4SOTSCS000	Sridevi Saralaya	CSE5A	18CS53	DATABASE MANAGEMENT SYSTEM	Delete
2	4SOTSCS004	Harivinod N	CSE5A	18CS54	AUTOMATA THEORY AND COMPUTABILITY	Delete
3	4SOTSCS005	Melvyn D'souza	CSE5A	18CS55	APPLICATION DEVELOPMENT USING PYTHON	Delete
4	4SOTSCS999	Teacher Teacher	CSE5A	18CS53	DATABASE MANAGEMENT SYSTEM	Delete
5	4SOTSEC006	Inactive	CSE5A	18CS56	UNIX PROGRAMMING	Delete
6	4SOTSCS001	Jaishma Kumari	CSE5B	18CS51	MANAGEMENT, ENTREPRENEURSHIP FOR IT INDUSTRY	Delete
7	4SOTSCS003	supriya salian	CSE5B	18CS53	DATABASE MANAGEMENT SYSTEM	Delete
8	4SOTSCS004	Harivinod N	CSE5B	18CS54	AUTOMATA THEORY AND COMPUTABILITY	Delete

CHAPTER 6 - CONCLUSION AND FUTURE WORK

Archivo is the best place to manage all of your files, as the tagline suggests. It aids in the efficient management of files, the accurate monitoring of students' curricula, and the effective engagement of students in their studies.

Future work will involve bringing our project to the college level and making it available to all VTU students and faculty. Backups will be created efficiently in the cloud for faster retrieval and version control. Teachers will be able to see uploaded files in the browser rather than downloading them into their local device. More user-friendly and efficient user interface. Students will be able to contact teachers, have a personal repository to store for their needs and also be able to create documents to upload. All the users should be able to view each other's profile as well.

6.1 References

- Django Documentation (<https://docs.djangoproject.com/en/4.0/>)
- Github Repository (<https://github.com/pravin-pk/FileManagementSystem>)
- MySQL Documentation (<https://dev.mysql.com/doc/>)
- Stack Overflow (<https://stackoverflow.com/>)
- Discord (<https://discord.com/>)
- GeeksforGeeks (<https://www.geeksforgeeks.org/>)
- Free Frontend (<https://freefrontend.com/>)
- Bootdey (<https://www.bootdey.com/>)
- YouTube (<https://www.youtube.com/>)