



PES UNIVERSITY, BANGALORE

Department of Computer Science and Engineering

B. Tech (CSE) – 5th Semester – Aug-Dec 2023

UE21CS351A – Database Management Systems

PROJECT REPORT

INTERNSHIP PORTAL

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1. Introduction:

The Internship Portal is a comprehensive platform designed to facilitate the management of internships for students, managers, and administrators. The system aims to streamline the internship application process, enhance communication between students and managers, and provide administrators with tools to oversee and manage the overall internship program.

1.1 Objectives and Goals:

- Efficient Application Management:
 - Enable students to submit internship applications with essential details.
 - Provide managers with an interface to review and evaluate student applications.
 - Allow administrators to monitor and manage the overall internship application process.
- Enhanced Communication:
 - Facilitate communication between students, managers, and administrators.
 - Automate email notifications to managers upon successful student application submission.
- Comprehensive Database Management:
 - Maintain a robust database schema to store student, manager, internship, and application details.
 - Implement triggers and functions to automate updates and calculations within the database.

2. Project Scope:

2.1 Modules:

- Home Module (home.py):
 - Responsible for handling the initial interactions with the Internship Portal.
 - Allows users to select their role (Admin, Manager, Student) and navigate to specific modules.
- Admin Module (admin.py):
 - Provides administrators with a dashboard to view and manage internship applications.
 - Allows administrators to approve or disapprove applications and view detailed information about students and internships.
- Manager Module (manager.py):
 - Enables managers to submit reviews for students based on predefined criteria.
 - Implements functionalities for managers to assess students' performance during internships.
- Main Module (main.py):
 - Serves as the main control module, facilitating user role selection and navigation to specific modules.

2.2 Database Module:

Database Schema:

- Defines tables such as Student, Admin, Company, Manager, Internship, Manager_Review, Application and more.
- Utilizes foreign key relationships for data integrity.
- Implements triggers and functions to automate updates and calculations.

3. Technologies Used:

3.1 Programming Languages:

- Python
- SQL

3.2 Libraries and frameworks:

- Streamlit
- MySQL Connector
- Pandas
- SMTP Lib (for email functionality)

3.3 Database System:

- MySQL

4. Code Overview:

4.1 Home Module (home.py):

- Handles the initial user interaction and role selection.
- Establishes a connection to the MySQL database.
- Navigates to specific modules based on user roles.

4.2 Admin Module(admin.py):

- Displays confirmed internship applications.
- Sends manager login information via email.
- Allows administrators to approve or disapprove applications.

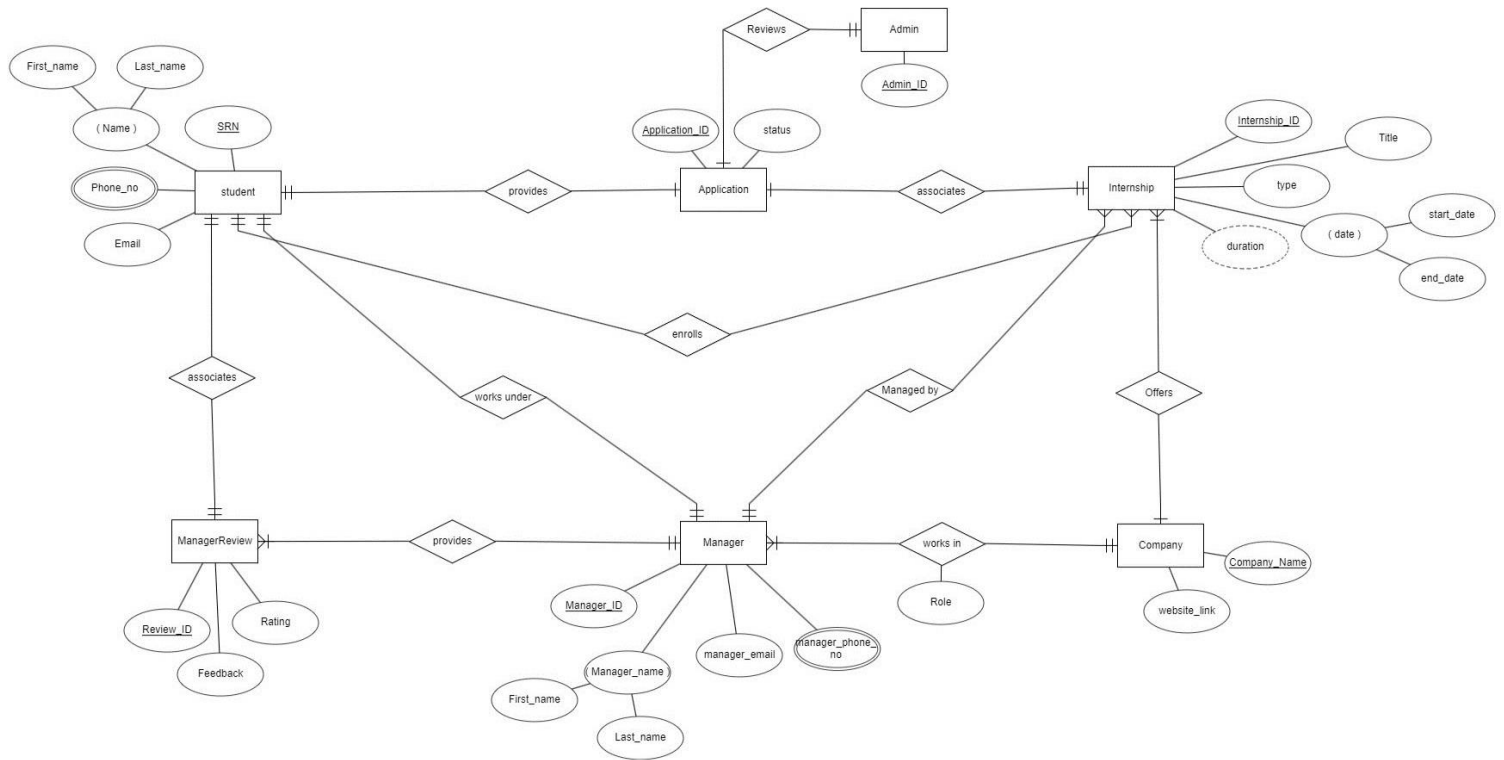
4.3 Manager Module(manager.py):

- Collects manager reviews for students.
- Implements a function to check manager credentials.

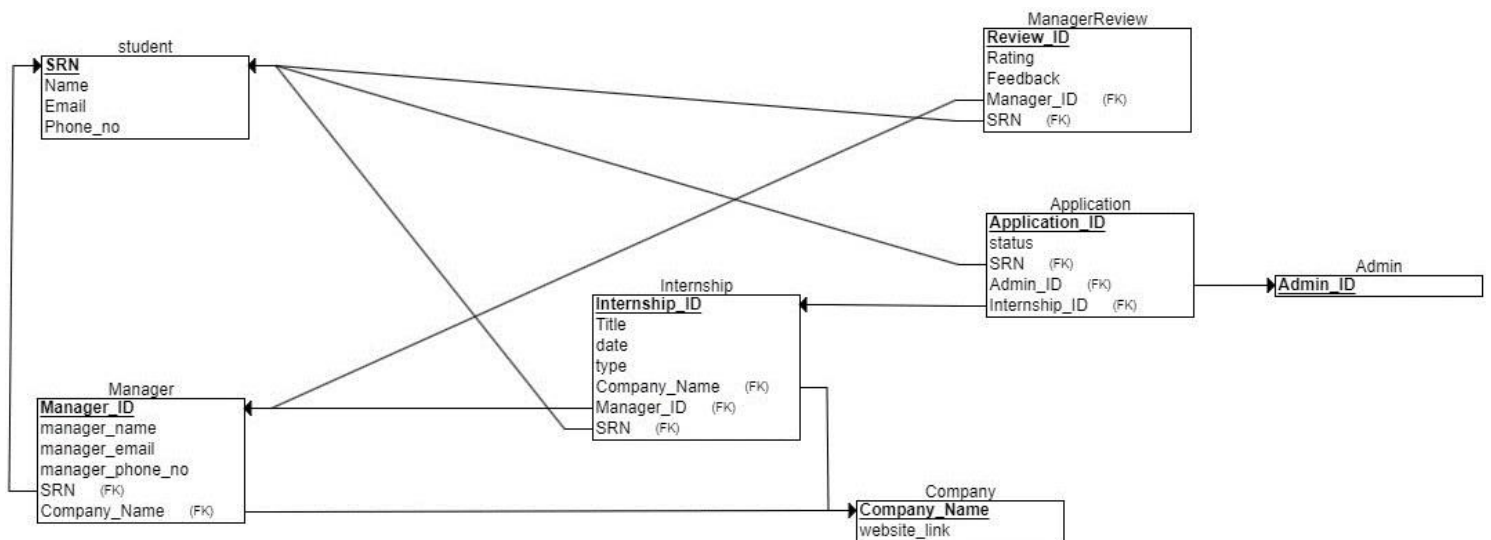
4.4 Main Module(main.py):

- Controls the main flow of the application.
- Allows users to select their role and navigate to specific modules.
- Implements functions to check admin and manager credentials.

5. ER Diagram:



6. Relation schema:



7.Queries

```
CREATE TABLE Student(  
SRN varchar(12) primary key,  
Name varchar(255),  
Phone_no varchar(10),  
Email varchar(255)  
);  
  
CREATE TABLE Admin (  
    Admin_ID INT PRIMARY KEY  
);  
  
DELIMITER //  
  
CREATE FUNCTION GetTotalDurationForStudent(student_srn VARCHAR(12))  
RETURNS INT  
DETERMINISTIC  
BEGIN  
    DECLARE total_duration INT;  
  
    SELECT SUM(Duration) INTO total_duration  
    FROM Internship  
    WHERE SRN = student_srn;  
  
    RETURN total_duration;  
END;  
  
//  
  
DELIMITER ;  
  
CREATE TABLE Company (  
    company_name VARCHAR(255) PRIMARY KEY,  
    website_link VARCHAR(255)  
);  
  
CREATE TABLE Manager (  
    manager_ID INT PRIMARY KEY,  
    manager_phone_no VARCHAR(10),  
    manager_name VARCHAR(255),  
    manager_email VARCHAR(255),  
    company_name VARCHAR(255),  
    FOREIGN KEY (company_name) REFERENCES Company(company_name)  
);
```

```

CREATE TABLE Internship (
    Internship_ID INT PRIMARY KEY AUTO_INCREMENT,
    Title VARCHAR(255),
    start_date DATE,
    end_date DATE,
    Duration INT,
    Type VARCHAR(255),
    company_name VARCHAR(255), -- Foreign Key reference to Company
    manager_ID INT, -- Foreign Key reference to Manager
    SRN VARCHAR(12),
    FOREIGN KEY (company_name) REFERENCES Company(company_name),
    FOREIGN KEY (manager_ID) REFERENCES Manager(manager_ID),
    FOREIGN KEY (SRN) REFERENCES Student(SRN)
);

```

```

create table manager_srn_map
(
    manager_id INT,
    SRN varchar(12),
    FOREIGN KEY (manager_ID) REFERENCES Manager(manager_ID),
    FOREIGN KEY (SRN) REFERENCES Student(SRN)
);

```

```

CREATE TABLE Manager_Review (
    Review_ID INT PRIMARY KEY auto_increment,
    Rating INT,
    Feedback VARCHAR(255),
    manager_ID INT,
    SRN VARCHAR(12),
    FOREIGN KEY (manager_ID) REFERENCES Manager(manager_ID),
    FOREIGN KEY (SRN) REFERENCES Student(SRN)
);

```

```

CREATE TABLE Application (
    Application_ID INT PRIMARY KEY auto_increment,
    application_status VARCHAR(255) DEFAULT 'pending',
    SRN VARCHAR(255),
    Admin_ID INT,
    manager_review_status VARCHAR(255) DEFAULT 'pending',
    FOREIGN KEY (SRN) REFERENCES Student(SRN),
    FOREIGN KEY (Admin_ID) REFERENCES Admin(Admin_ID)
);
use mini_project;

```

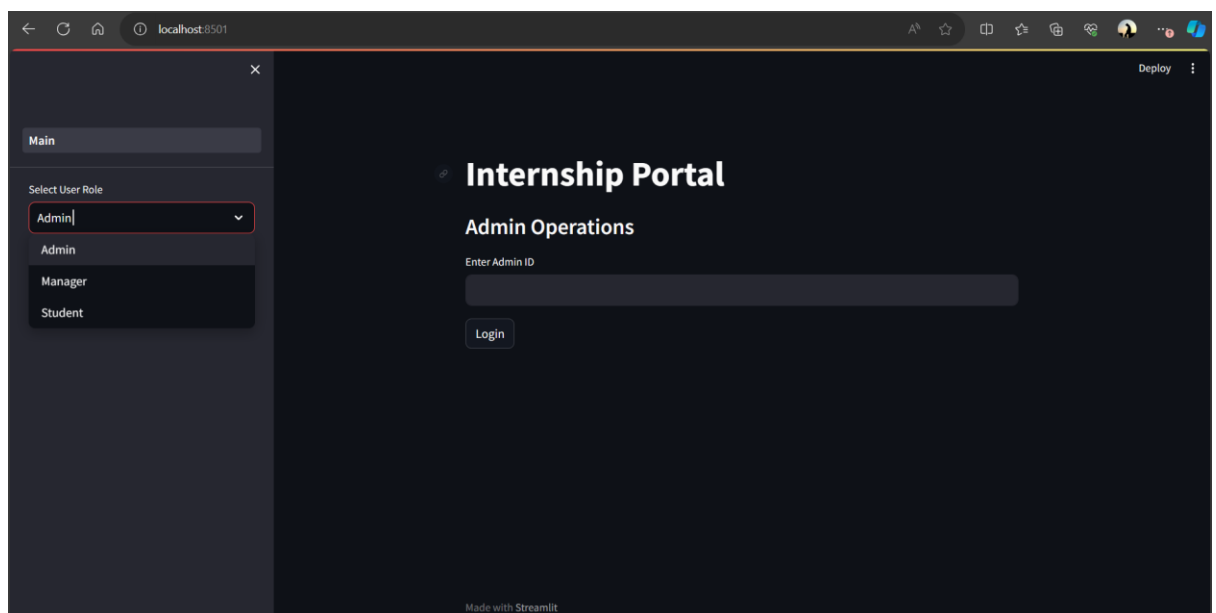


```
-- Delete all entries from child tables first

DELIMITER //
CREATE TRIGGER after_manager_review_insert
AFTER INSERT ON Manager_Review
FOR EACH ROW
BEGIN
    -- Update manager_review_status to 'completed' in Application table
    UPDATE Application
    SET manager_review_status = 'completed'
    WHERE SRN = NEW.SRN;
END;
//
DELIMITER ;
```

8.Output

Upon launching the Streamlit application, users are directed to the start page where they are presented with the option to choose their roles, including Admin, Manager, or Student.



Student:

Main

Select User Role

Student

Internship Portal

Student Operations

Enter your Name

Ritunjay Rao

Enter your SRN

PES1ug490

Enter your Phone Number

6360873076

Enter your Email Address

ritunjay.rao128@gmail.com

Submit

Limit to 1000 rows

1 • `SELECT * FROM mini_project.student;`

SRN	Name	Phone_no	Email
pes098	idk	5574466	idk@GMAIL.COM
pes099	idk	5574466	idk@GMAIL.COM
PES123	Rishabh TA	9894949841	rishabh.ta2812@gmail.com
PES1ug123	Bhupendra Jogi	9894949841	usa@gmail.com
PES1ug490	Ritunjay Rao	6360873076	ritunjay.rao128@gmail.com
pes239	john	1234567	john@gmail.com
pes456	ritun	12345678	ritun@gmail.com
pes7766	rashi	12345585	rashi@gmail.com
PES7878	Ayman	121325	ayman@gmail.com
pes8877	john	4578995	john@gmail.com
pes996	jay	55778998	jay@gmail.com
NULL	NULL	NULL	NULL

localhost:8501/?page=application

Deploy

Main

Select User Role

Student

Internship Portal

Student Application

Upload PDF Form of the Application

Drag and drop file here

Limit 200MB per file

Browse files

Internship.pdf

0.7MB

×

Enter your internship title

DBMS MINI PROJECT - INTERNSHIP PORTAL

Choose your internship type

☒ On Campus Paid
 ☐ On Campus Unpaid
 ☐ Off Campus Paid
 ☐ Off Campus Unpaid

Enter Company Name (if On Campus internship, enter the college name)

PES

localhost:8501/?page=application

Deploy

Main

Select User Role

Student

☐ Off Campus Paid
 ☐ Off Campus Unpaid

Enter Company Name (if On Campus internship, enter the college name)

PES

Enter the company website link

https://pes.edu/

Enter Start Date

2023/09/07

Enter End Date

2023/11/23

Submit

Submitted successfully. Duration: 77 days

Next

Back

Limit to 1000 rows

1 •

SELECT * FROM mini_project.internship;

	Internship_ID	Title	start_date	end_date	Duration	Type	company_name	manager_ID	SRN
▶	6	Data Analytics	2023-08-10	2023-11-17	NULL	Off Campus Paid	HCL	NULL	PES123
	7	hmm	2023-10-20	2023-11-20	NULL	Off Campus Paid	something	NULL	pes456
	8	amm	2023-10-20	2023-11-20	NULL	On Campus Paid	student	NULL	NULL
	9	lol	2023-10-20	2023-11-20	NULL	On Campus Unpaid	hehr	NULL	pes996
	11	whatsapp	2023-10-20	2023-11-20	31	On Campus Paid	facebook	NULL	pes239
	12	us places	2023-09-06	2023-11-20	75	On Campus Unpaid	HCL	NULL	PES1ug123
	13	Something	2023-09-13	2023-11-21	69	Off Campus Paid	WHATSAPP	NULL	PES7878
	16	DBMS MINI PROJECT - INTERNSHIP PORTAL	2023-09-07	2023-11-23	77	On Campus Paid	PES	NULL	PES1ug490

localhost:8501/?page=manager_info

Deploy

Main

Select User Role

Student

Internship Portal

Manager Information

Enter your Manager Name

Rishabh TA

Enter your Manager Phone Number

9894949841

Enter your Manager Email Address

rishabh2812@gmail.com

Submit

Submitted successfully! Thank you for filling out for application

Back

Limit to 1000 rows

```
1 • SELECT * FROM mini_project.manager;
```

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
manager_ID	manager_phone_no	manager_name	manager_email	company_name
315600	123444	jay	jay@gmail.com	NULL
907194	2121212	Kumar	kumar@gmail.com	HCL
967449	225544	Rishabh TA	rishabh2812@gmail.com	PES
NULL	NULL	NULL	NULL	NULL

Manager:

×

Main

Manager

Admin

localhost:8501/Manager

Deploy

Manager Operations

Enter Student SRN

pes1ug490

Confidence (1-5)

145

Proactive approach for Continuous improvement (1-5)

155

Ability to learn fast (1-5)

145

Skill set maturity (1-5)

155

Delivery of work as per commitment (1-5)

155

×

Main

Manager

Admin

localhost:8501/Manager

Deploy

Quality of documentation (1-5)

145

Oral and Written Communication (1-5)

155

Coordination with your team (1-5)

145

Initiative to support and build rapport (1-5)

155

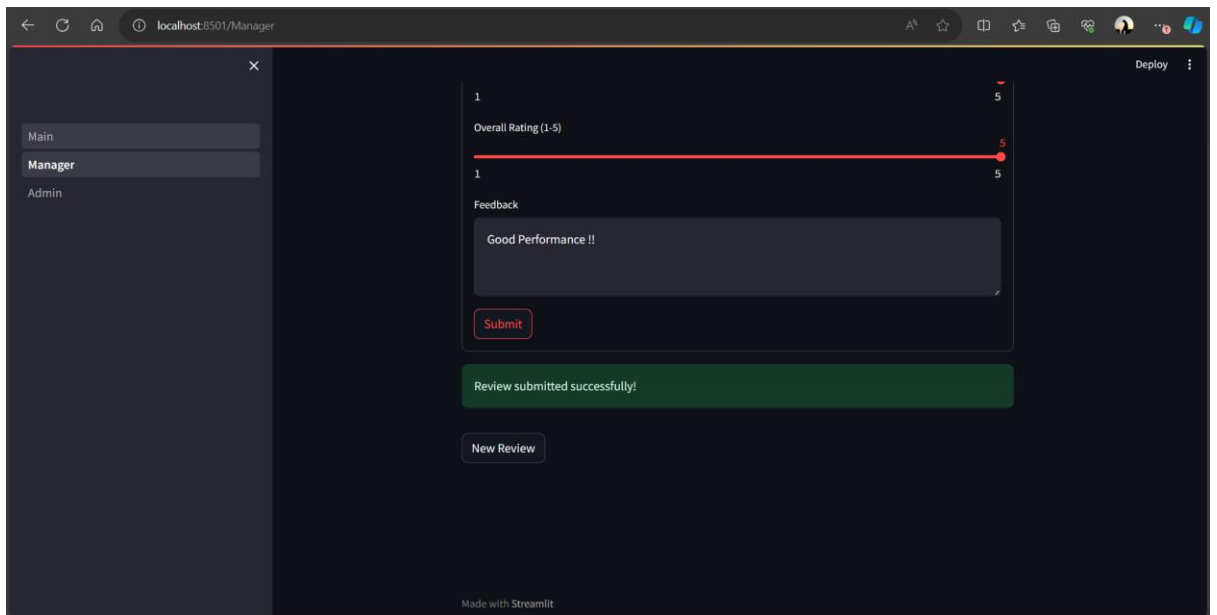
Overall Rating (1-5)

155

Feedback

Good Performance !!

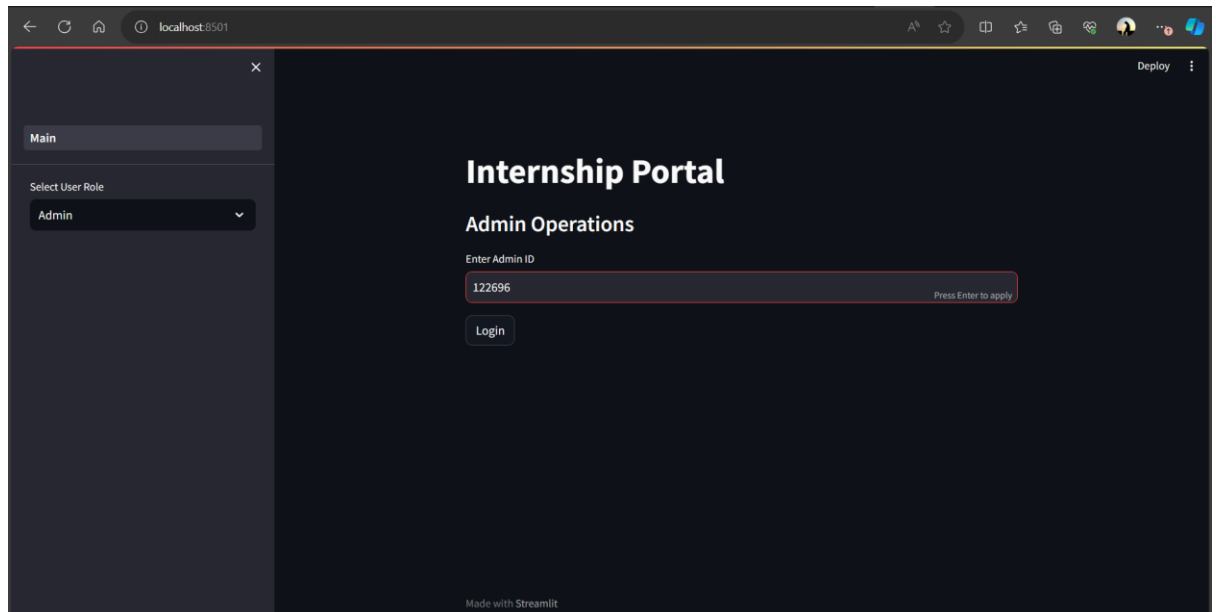
Submit



The screenshot shows a SQL query editor window with the query `SELECT * FROM mini_project.manager_review;` and a 'Limit to 1000 rows' dropdown. Below the query is a 'Result Grid' displaying the results of the query. The grid has columns for `Review_ID`, `Rating`, `Feedback`, `manager_ID`, and `SRN`. The results are as follows:

	Review_ID	Rating	Feedback	manager_ID	SRN
▶	6	4	just looking like a wow	907194	PES123
	7	3	nice	907194	pes123
	10	5	Good Performance !!	967449	pes1ug490
*	NULL	NULL	NULL	NULL	NULL

Admin:



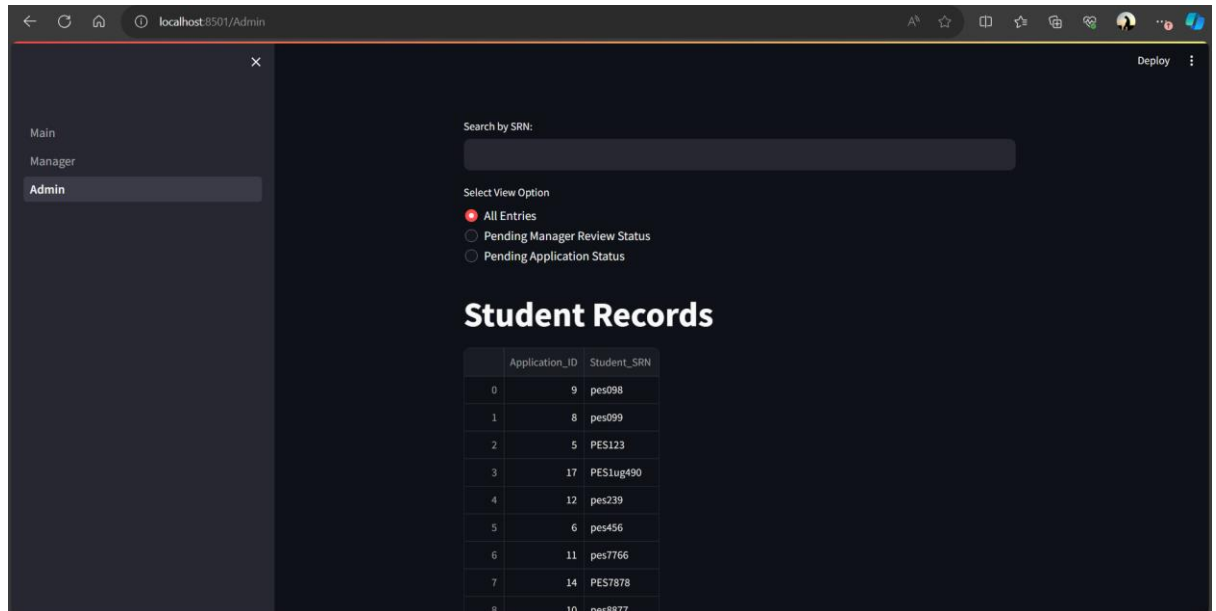
Query for All Entries :

```
query_details = f"""  
  
    SELECT  
        S.SRN AS Student_SRN,  
        S.Name AS Student_Name,  
        S.Email AS Student_Email,  
        M.manager_ID,  
        M.manager_name,  
        M.manager_email,  
        MR.Rating AS Manager_Rating,  
        MR.Feedback AS Manager_Feedback,  
        I.start_date AS Internship_Start_Date,  
        I.end_date AS Internship_End_Date,  
        I.Title AS Internship_Title,  
        I.Type AS Internship_Type,  
        C.company_name,  
        C.website_link  
    FROM  
        Student S  
    JOIN  
        manager_srn_map MMap ON S.SRN = MMap.SRN  
    JOIN  
        Manager M ON MMap.manager_ID = M.manager_ID  
    JOIN  
        Internship I ON S.SRN = I.SRN  
    JOIN  
        Company C ON I.company_name = C.company_name  
    """
```

```

LEFT JOIN
    Manager_Review MR ON M.manager_ID = MR.manager_ID
WHERE
    S.SRN = '{search_srn}';
"""

```



These are the queries for the “pending_manager_review” and “pending_application”

```

# View for all entries with pending manager review status
query_pending_manager_review = """
SELECT
Application_ID,
SRN AS Student_SRN
FROM
Application
WHERE
manager_review_status = 'pending'
"""

# View for all entries with pending application status

```



```

query_pending_application = """
SELECT
Application_ID,
SRN AS Student_SRN
FROM
Application
WHERE
application_status = 'pending'
"""

```

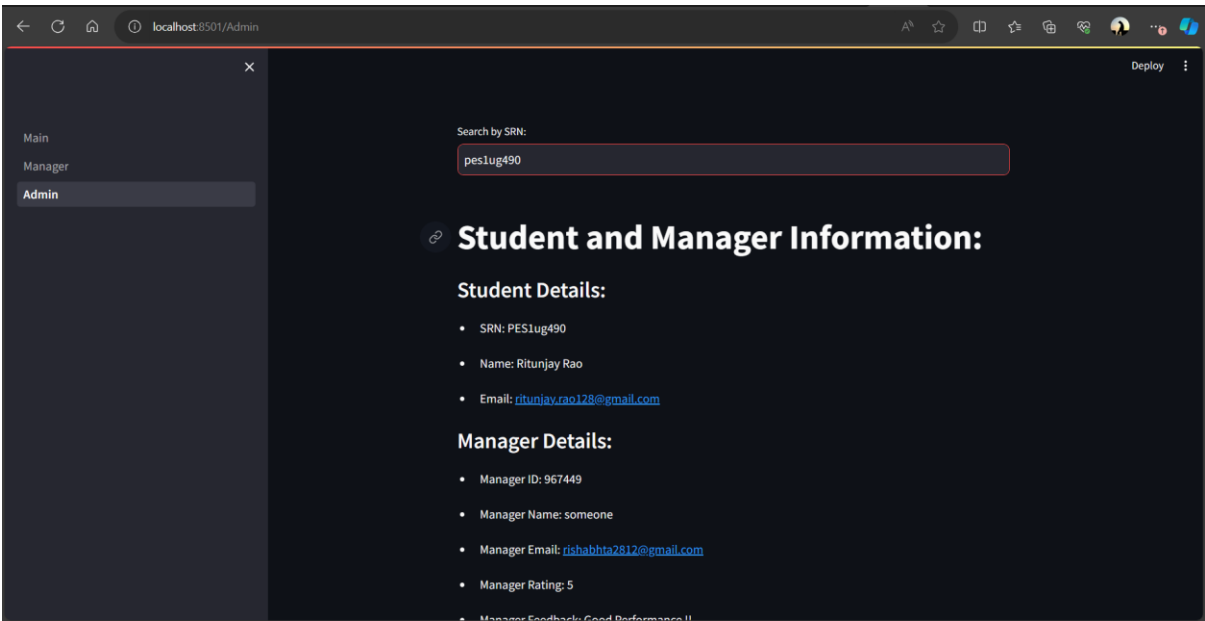
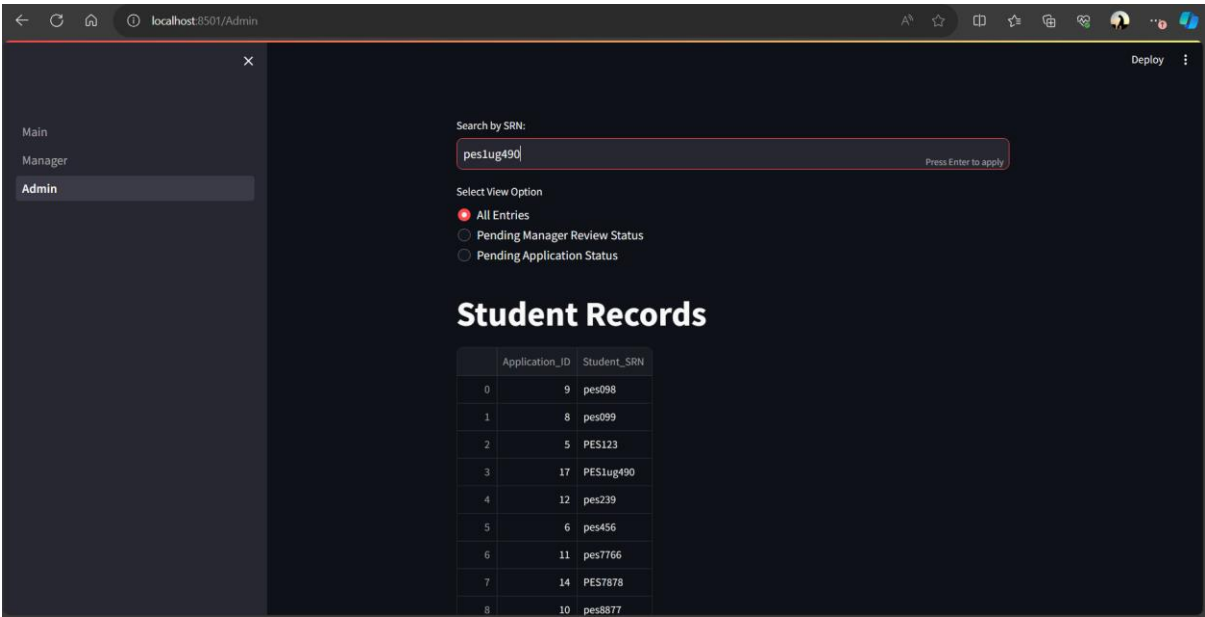
The screenshot shows a web application interface with a sidebar on the left containing 'Main', 'Manager', and 'Admin' (selected). The main content area has a 'Search by SRN:' input field and a 'Select View Option' section with three radio buttons: 'All Entries', 'Pending Manager Review Status' (selected), and 'Pending Application Status'. Below this, the heading 'Pending Manager Review Status:' is followed by a table with 8 rows of data.

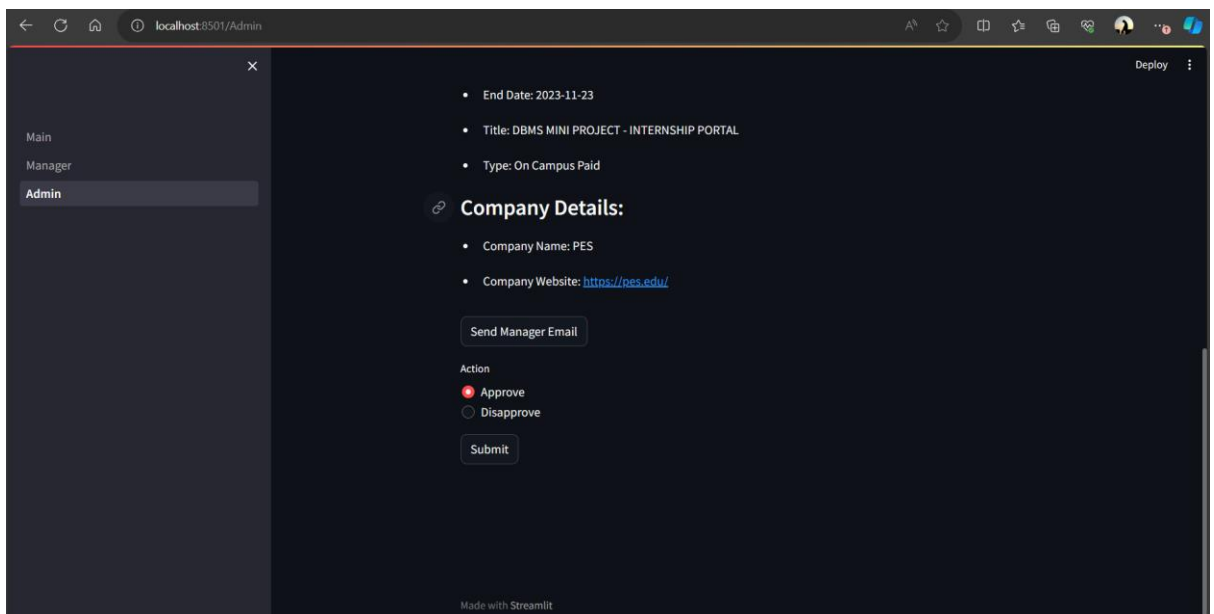
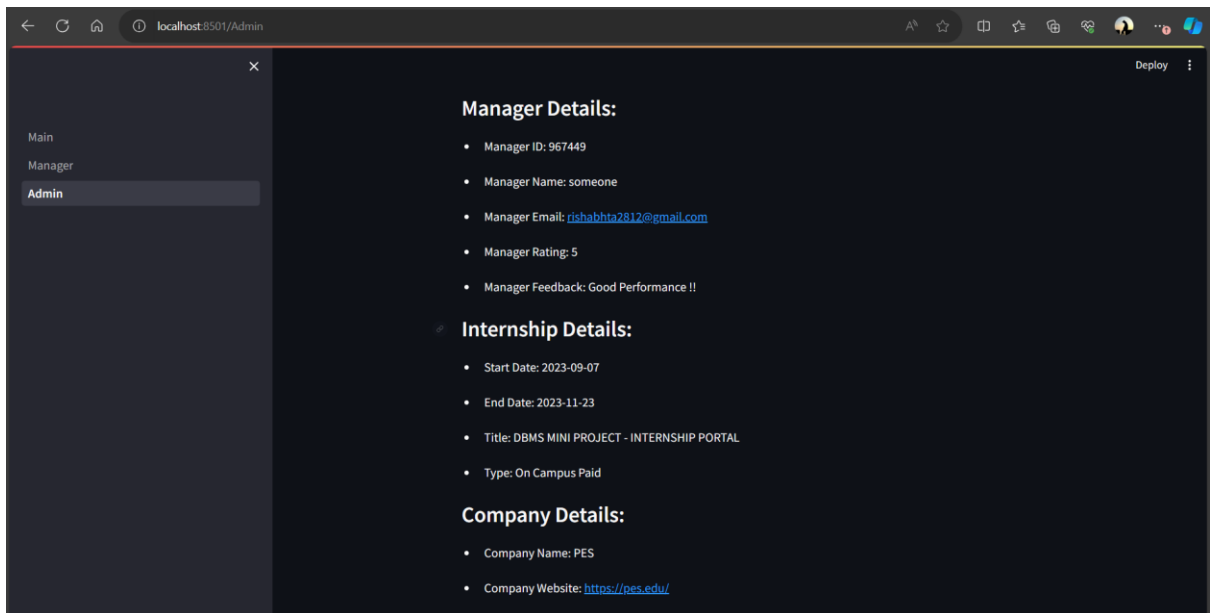
	Application_ID	Student_SRN
0	6	pes456
1	7	pes996
2	8	pes099
3	9	pes098
4	10	pes8877
5	11	pes7766
6	12	pes239
7	14	PES7878

The screenshot shows the same web application interface as above, but with the 'Pending Application Status' radio button selected. The heading 'Pending Application Status:' is followed by a table with 9 rows of data.

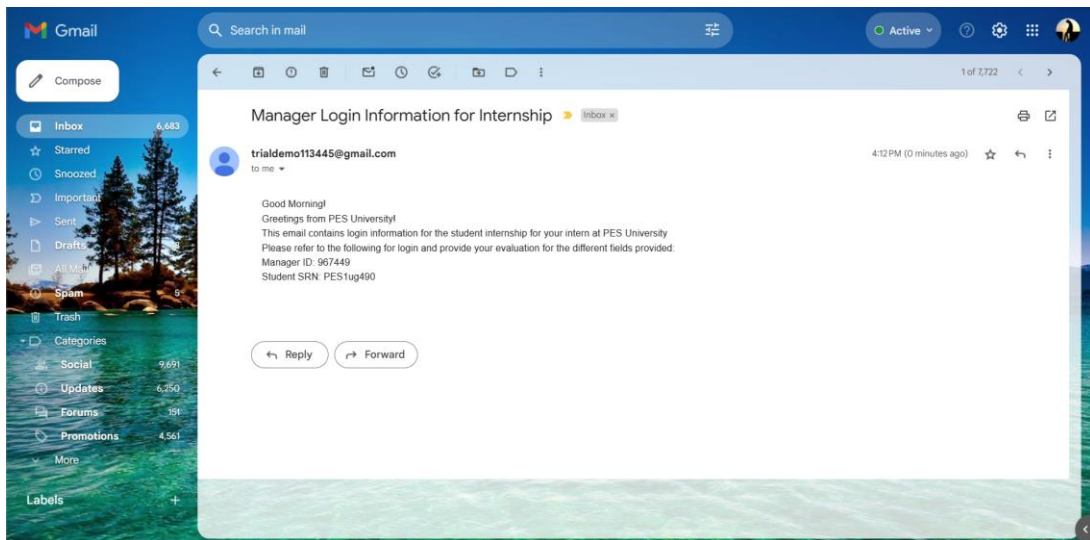
	Application_ID	Student_SRN
0	6	pes456
1	7	pes996
2	8	pes099
3	9	pes098
4	10	pes8877
5	11	pes7766
6	12	pes239
7	14	PES7878
8	17	PES1ug490

The admin can input the Student Registration Number (SRN) to access and view information about both the student and manager associated with the provided SRN.



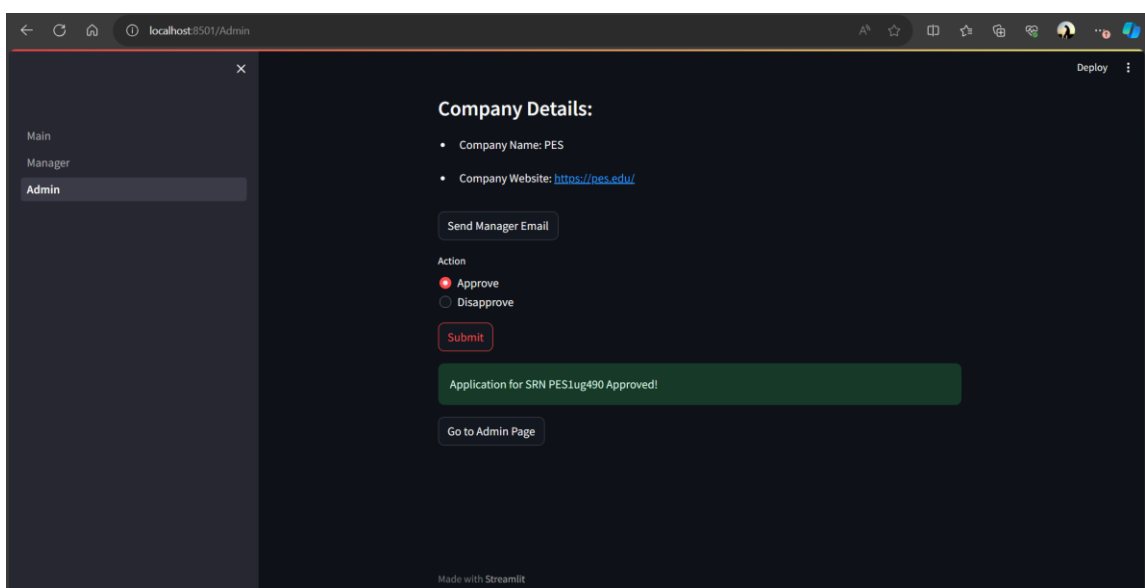


Upon clicking the "Send Manager Email" button, an email containing the manager's ID and the Student Registration Number (SRN) is dispatched to the respective manager.



```
if st.button("Submit"):
    SRN = str(result[0][0]) # Convert to standard Python integer
    if action == "Approve":
        # Update application status to 'completed'
        mycursor.execute("UPDATE Application SET application_status =
'completed' WHERE SRN = %s", (SRN,))
        db.commit()
        st.success(f"Application for SRN {SRN} Approved!")

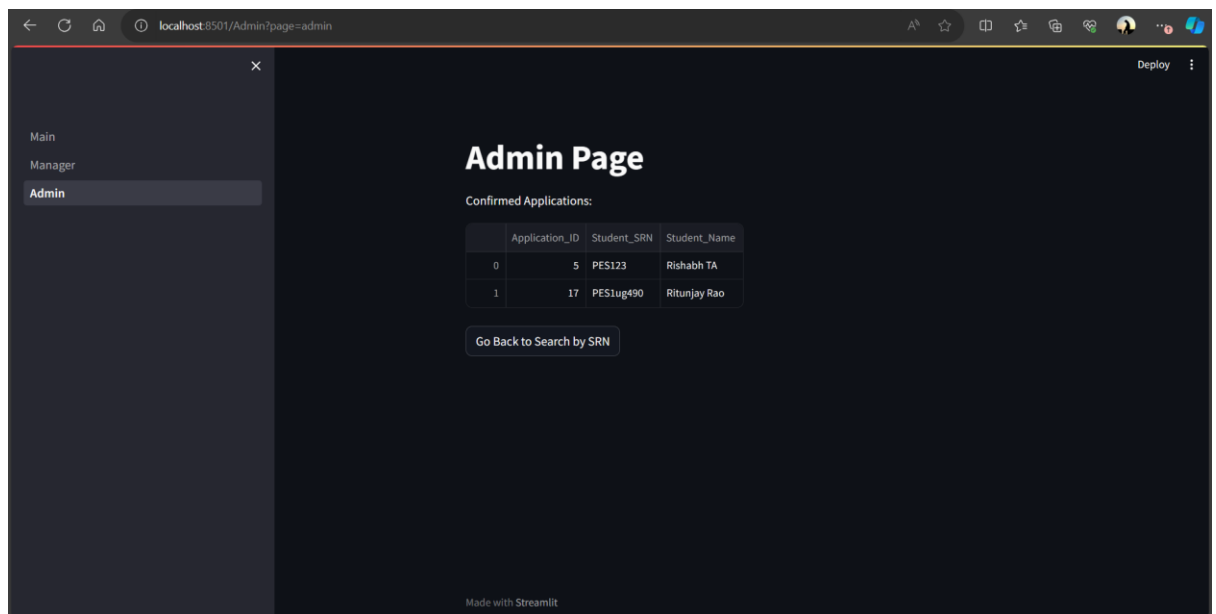
    elif action == "Disapprove":
        # Update application status to 'not completed'
        mycursor.execute("UPDATE Application SET application_status =
'not completed' WHERE SRN = %s", (SRN,))
        db.commit()
        st.warning(f"Application for SRN {SRN} Disapproved!")
```



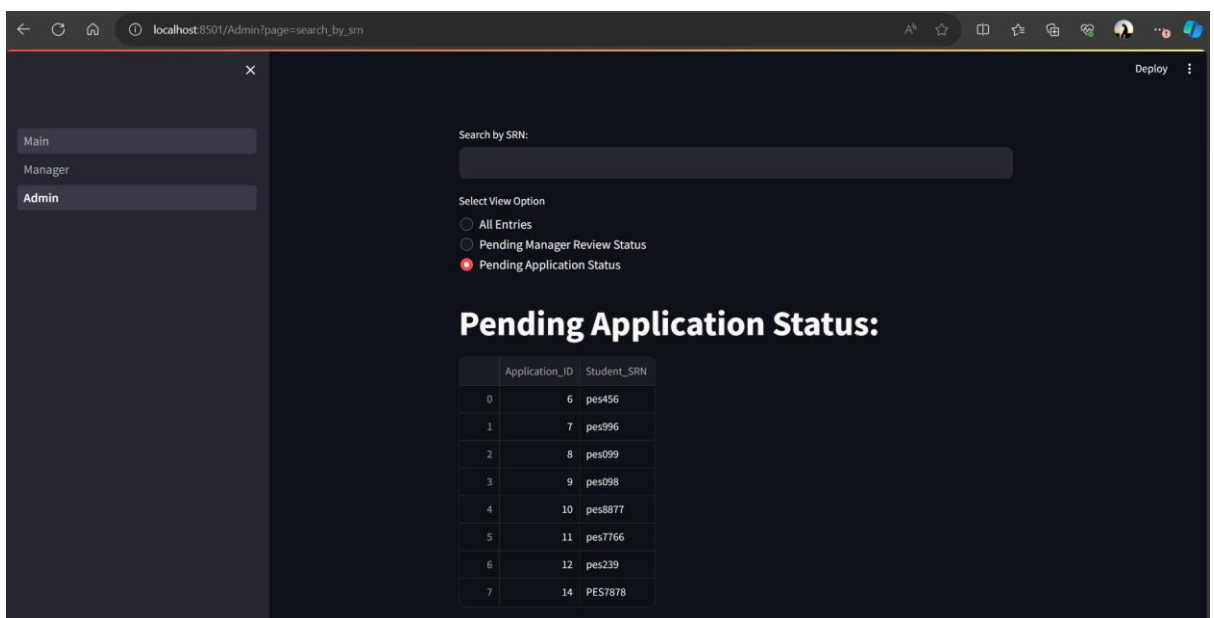
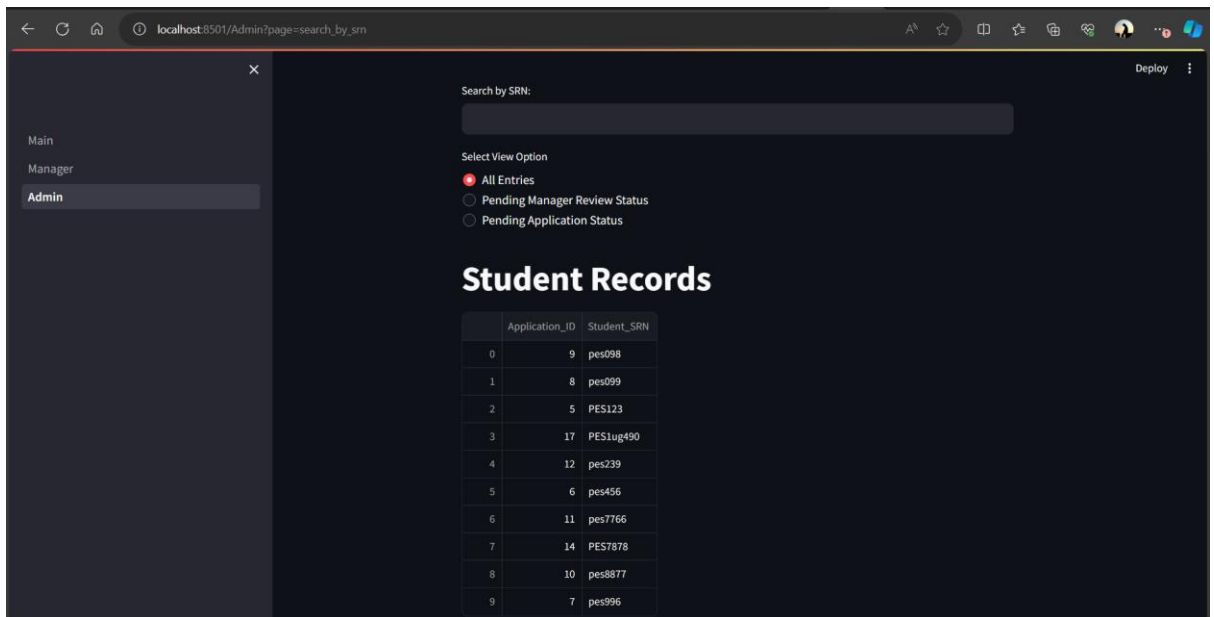
After clicking "Go to admin page," it navigates to the confirmed application page

Query for Confirmed Application

```
query_default = ""  
SELECT  
    Application_ID,  
    SRN AS Student_SRN  
FROM  
    Application  
""
```



After clicking "Go back to search by SRN," the system returns to the admin page, allowing for the approval of other students' applications.



Previously, the SRN "pes1ug490" was visible in the "Pending Application Status." However, after the admin approval, it is no longer displayed in this section.

