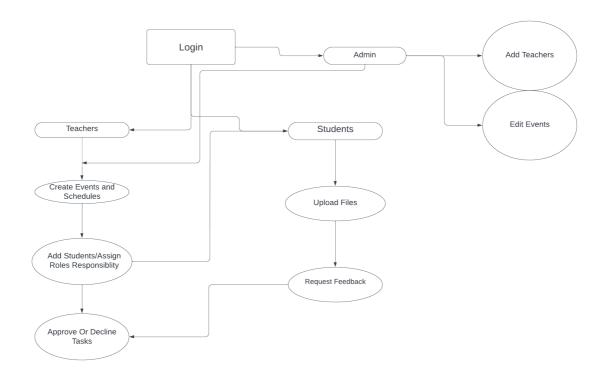
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#### Flow Charts And System Design:

# Structural Diagram (overall view)



#### Functionalities Under Each Role:

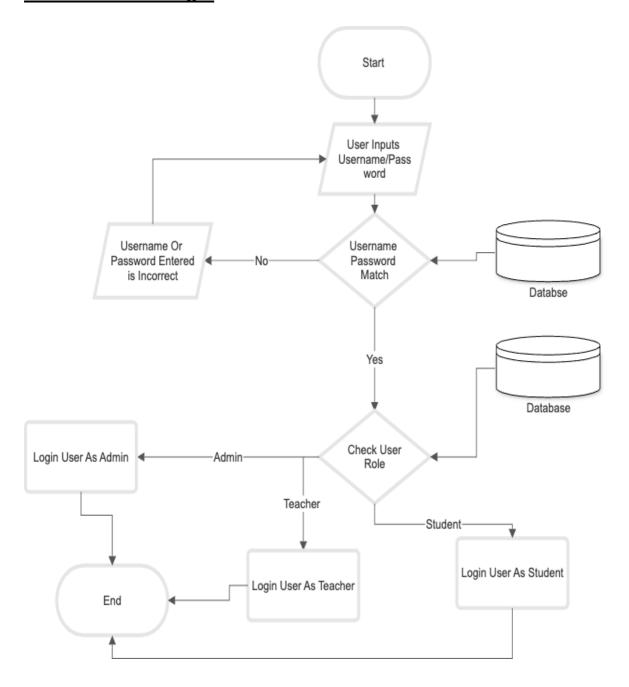
Admin: Admin will have all rights including teacher and student rights. Admin will be able to add teachers to the system and edit events.

- 1. Admins can add teachers (all users) to the database allowing them control over access permissions
- 2. Editing events as a function essentially allows admins to delete events from the software at any point in time or after the event has been finished.

Teachers: Teachers will be able to create events and create schedules for events. Teachers will assign students to particular events and give students particular roles and responsibilities. Teachers will also monitor student work

Students: Student will be able to view schedules and complete tasks for which they will upload files. Students will be able to request feedback on uploaded files.

# **Flowcharts For Login**



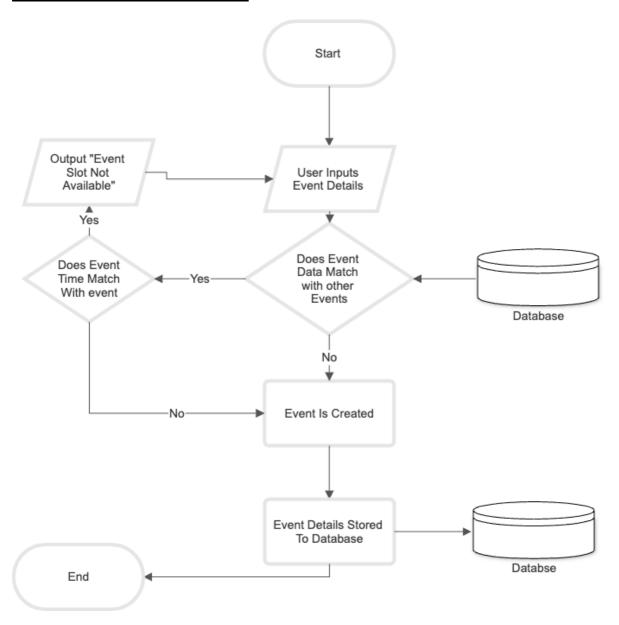
The program will access the database which stored user details including username, password and role.

The program will only login users based on their roles, this will prevent

- Unauthorised usage of system
- Accidental changes to events, schedules, etc.
- Malpractice

# Flowchart For Role Functionalities

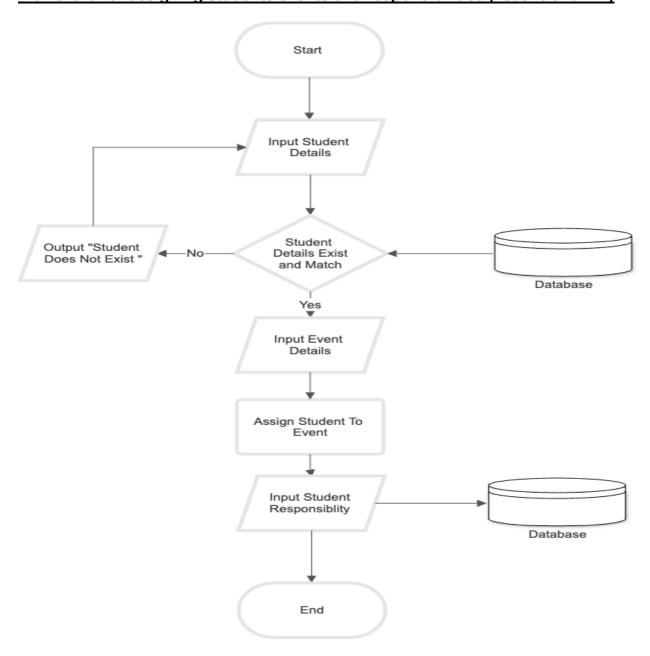
#### **Create Events (Teacher/Admin)**



The program has to receive input from the user and apply validation constraints in order to ensure the input can be used to create a valid output. The flowchart describes how the input regarding event details will first be validated and referenced from the database in order to ensure two events are not created for the same date and time.

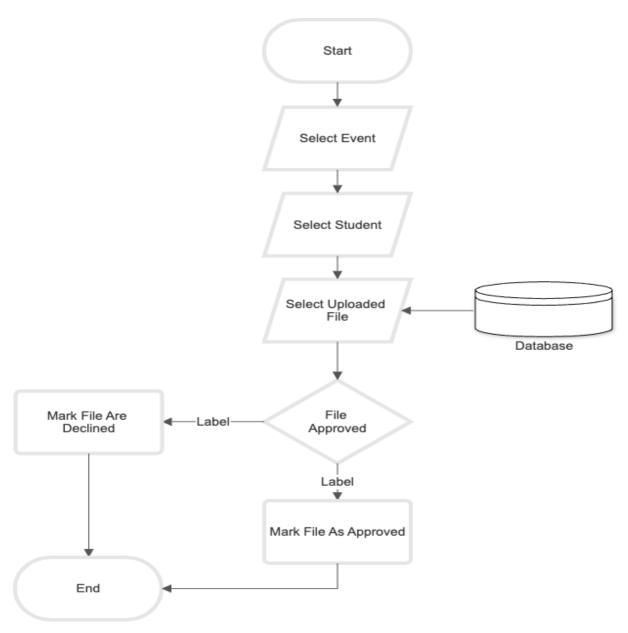
- 1. Data Is inputted
- 2. Data is double checked using the database
- 3. Successful request is completed and event details are added to the database

#### Flowchart For assigning students events and responsibilities (Teacher/Admin)



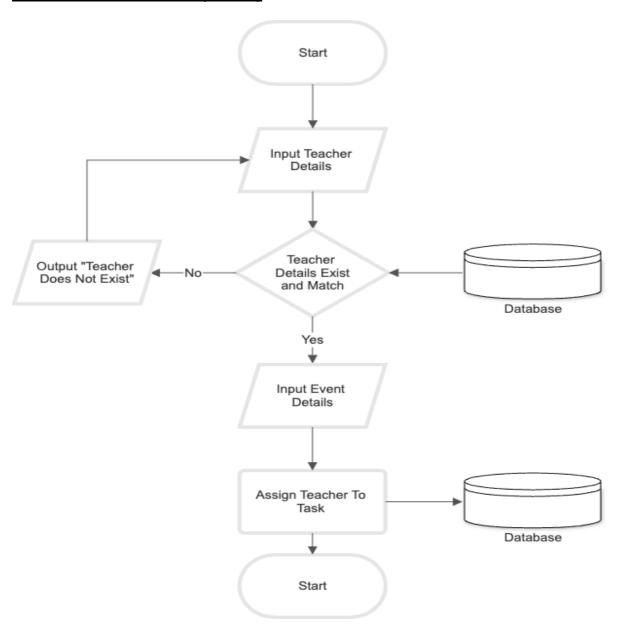
Teachers can input student details after fetching them from the database allowing them to accurately add student to already created events. All details would be stored in the database for reference in the future.

# Approval or Declining Of Task Flowchart (Teacher/Admin)

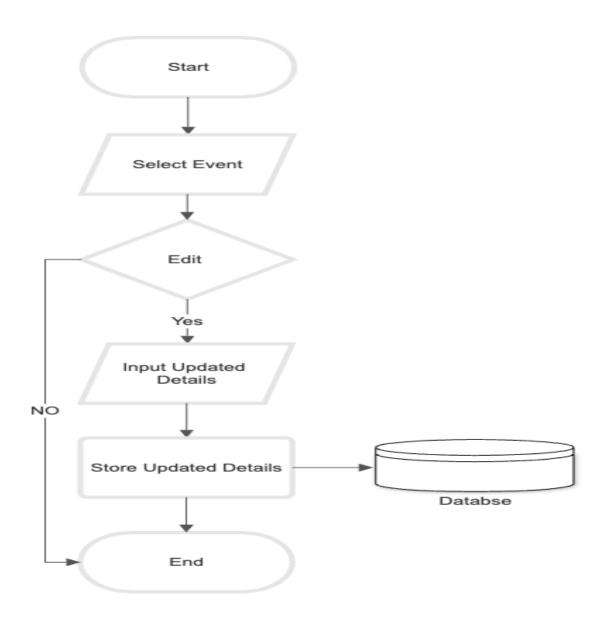


The Program will display events then assigned students and then uploaded files, this will provide the teachers and admins a structured view of the stored data to create abstraction. Each required input will have a sub procedure.

# **Add Teachers Flowchart (Admin)**

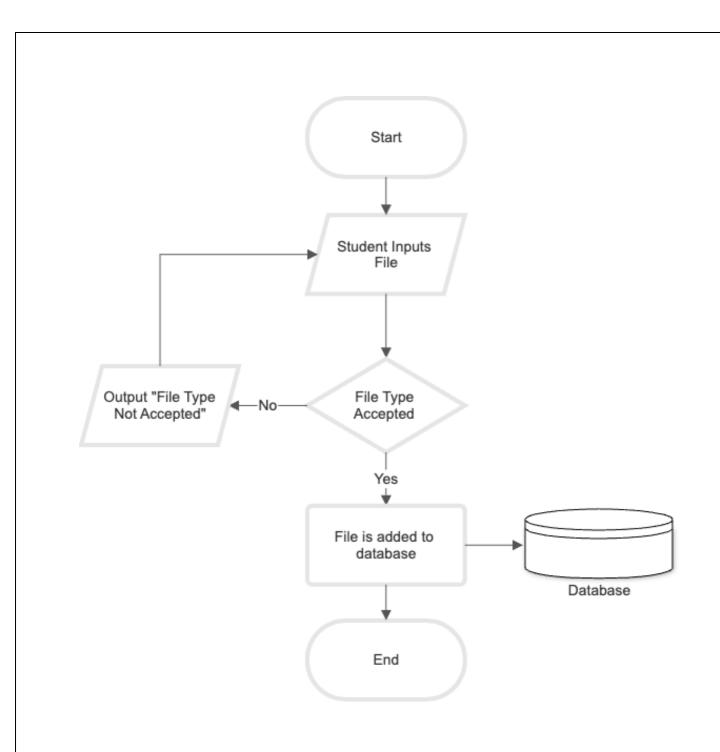


#### **Edit Events Flowchart (Admin)**

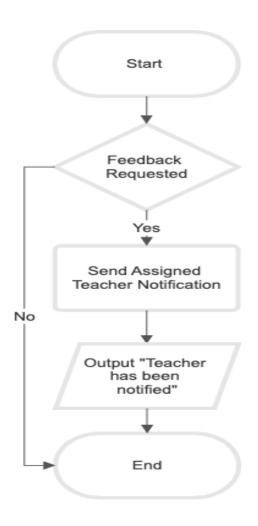


- Event Details will be first created by the Teachers
- Event Details would include Event Name, Event Date, Event Venue, Event Time
- Admin will be able to view event details and edit
- Event details entered by the teachers will be overwritten by Admin
- New event details will be stored into the database to ensure data stays consistent

#### **Upload Files (Students)**



# **Request Feedback (Students)**



# **Database Overviews And Layout**

## **Database Fields Structure Overview**

## Fields Related To Students

Field Name	Field Type	Field Size	Description
Student Name	VarChar	45	Name Of The
			Student
Student Class	VarChar	10	Student class

## **Fields Related To Teachers**

Field Name	Field Type	Field Size	Description
Teacher First	VarChar	45	Teachers first
Name			Name
Teachers Last	VarChar	45	Teachers Last
Name			Name

#### **Fields Related To Events**

Field Name	Field Type	Field Size	Description
Event Name	VarChar	45	Name of Event
Event ID	VarChar	10	Unique ID
			assigned to Events
Event Date	Date		Date the event will
			take place
Event Start Time	Time		Start Time of event
Event End Time	Time		End Time Of Event
Event Venue	VarChar	30	Where the event
			will take place

## **Fields Related To Users**

Field Name	Field Type	Field Size	Description
User ID	Char	10	Each user of the
			system including
			teachers, student
			and admin will be
			provided a unique
			ID
User Role	VarChar	7	Each user will be
			assigned a role
User Pass	VarChar	12	User's password
			used to login
UserName	VarChar	45	Name of User

# **Database Table Structures**

# **User's Table**

Field Name	Field Type	Field Size	Description
User ID	Char	10	Unique ld for each user. Primary Key in This Table
UserName	VarChar	45	Name of the user
User Role	VarChar	7	User is Admin, Teacher or Student
User Pass	VarChar	12	User Password for Login

The Users table include information regarding all three roles, the users table stored data of each user. This ensures they system has information for login for each user.

# **Students Table**

Field Name	Field Type	Field Size	Description
User ID	Char	10	Foreign key in students
			referring to User ID in users table
Student Class	VarChar	10	Class Of Student

#### **Teachers Table**

Field Name	Field Type	Field Size	Description
User ID	Char	10	Foreign Key in
			teacher referring
			to user ID in
			users Table
Teacher FName	VarChar	45	Teacher First
			Name
Teacher LName	VarChar	45	Teacher Last
			Name

## **Events Table**

Field Name	Field Type	Field Size	Description
Event ID	VarChar	10	Unique ID for
			each event.
			Primary Key
<b>Event Name</b>	VarChar	45	Name Of Event
<b>Event Date</b>	Date		Date Of Event

<b>Event Start Time</b>	Time		Start Time Of
			Event
<b>Event End Time</b>	Time		End Time Of
			Event
Event Venue	VarChar	30	Venue Of Event
User ID	Char	10	Foreign Key
			referring to User
			ID in Users table.

# **Event Participation Table**

Field Name	Field Type	Field Size	Description
Event ID	VarChar	10	Foreign Key referring to Event ID in Events Table
User ID	VarChar	10	Foreign Key referring to User ID in Users Table
Responsibility	VarChar	30	Students Responsibility in event

# **Event Files Table**

Field Name	Field Type	Field Size	Description
File ID	Char	10	Unique ID For Each file. Primary Key
Event ID	VarChar	10	Foreign Key referring to Event ID in Events Table
User ID	Char	10	Foreign Key referring to User ID in Users table
File Name	VarChar	45	Name Of File
Upload Date	Date		Date of upload

# Feedback Table

Field Name	Field Type	Field Size	Description
Feedback ID	Char	10	Unique ID for each feedback. Primary Key
File ID	Char	10	Foreign key referring to File ID in Event Files Table

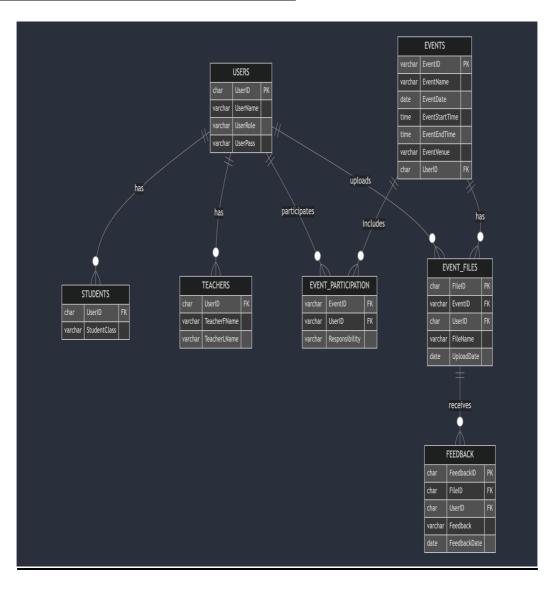
User ID	Char	10	Foreign key referring to User ID in Users Table
Feedback	VarChar	200	Feedback by teachers
Feedback Date	Date		Date of feedback

The database tables were originally not atomized, initially there were a lot of dependencies within the tables which led to redundant data.

After atomizing the table I was able to normalise the tables till 2NF form which helped reduced data redundancy which helped me by :-

- 1. Reducing storage required
- 2. Making data consistent to ensure all algorithms dependant on stored data run as intended
- 3. Create easily editable and searchable database

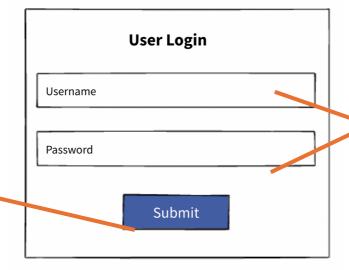
#### **ER Diagram (Entity Relationship Diagram)**



# **GUI Design Briefs**

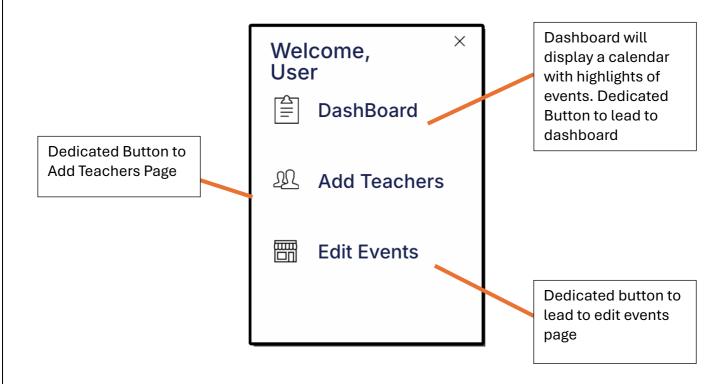
#### **Login Page**

Submit Button highlighted by blue background to ensure user knows where to click after input.

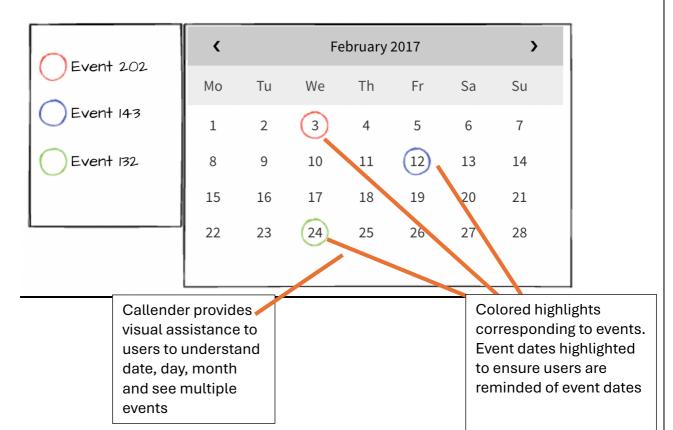


Individual Spaces in designated box to indicate where username and password are to be entered

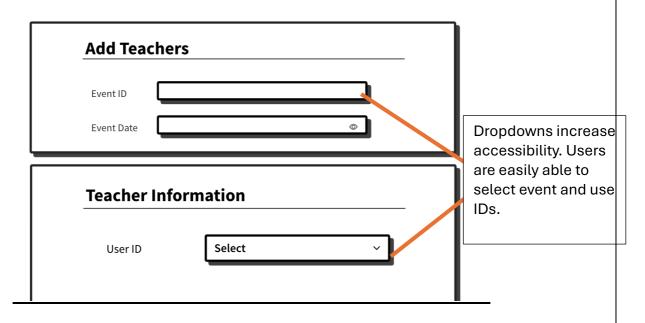
#### **Admin Page**



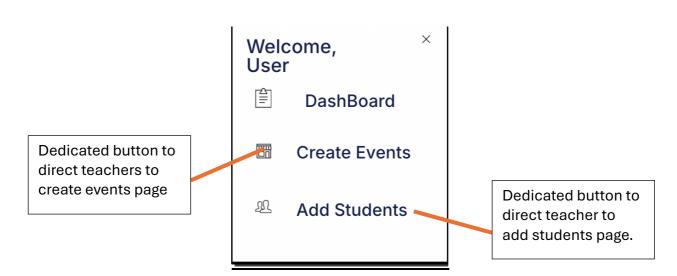
#### **Dashboard**



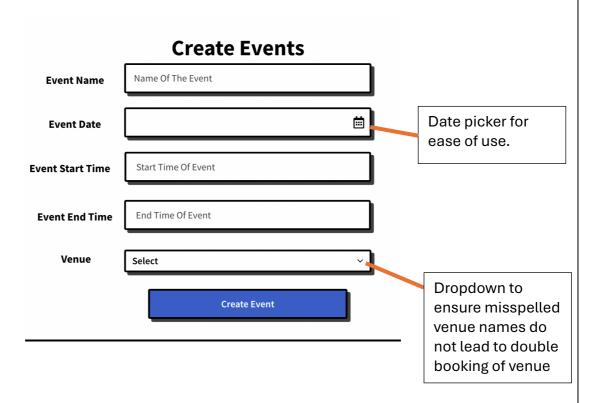
#### **Add Teachers**



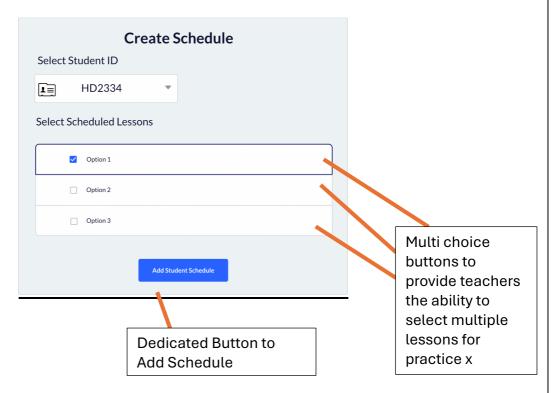
#### **Teachers Page**



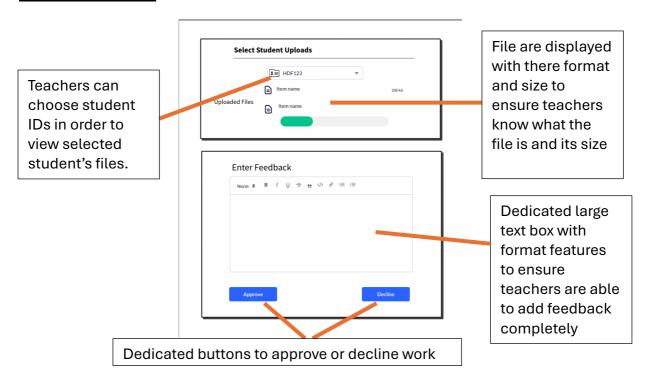
#### **Create Events**



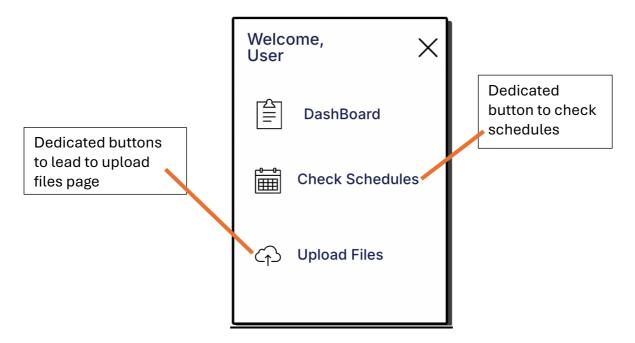
#### **Create Schedule**



#### **Provide Feedback**



#### **Students Page**



# **Upload Files**

