

Owner Identification:

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Designation: Full-Stack Developer

Country: Bangladesh

Requirement Analysis:

1. This is a multi user system to perform interactions between student, teacher and admin
2. A user can do signup using manual information (name, email, password) or signup with Google (OAuth)
3. User can do sign in
4. A user is able to do logout from the system
5. User is able to perform all operation after sign in
6. After fill up profile information a unique automated student and teacher ID will generate
7. After sign in successful, a user has to fill up profile information with profile picture to move further
8. After fill up profile information, a user status is inactive
9. A user has to wait until activated his account from admin section
10. Until account activation a user can't use this system

Admin section:

1. Admin can update his profile
2. Admin can view his profile
3. Admin can change his password
4. Admin can see all teacher's information like active or not active, ban or not ban, is profile file up or not with pagination. Admin can search for teacher with name, email, phone, user custom teacher ID
5. Admin can perform some operation on teacher like, he can do activated teacher's account, he can ban teacher's account, finally he can delete a teacher's account
11. Admin can see student's all information and perform all operation like teacher
12. Admin has informative dashboard like recently created account for teacher, recently created account for student, Teacher profile list that has not filled up profile information with pagination, student profile list that has not filled up profile information with pagination, List of ban teacher with pagination, list of ban student with pagination

Teacher section:

1. Teacher can update his profile
2. Teacher can view his profile
3. Teacher can change his password
4. Teacher can create, update delete and search course
5. Teacher can see list of created course
6. A teacher has a dashboard where he can see which student has taken his course with course description

Student section:

1. Student can update his profile
2. Student can view his profile
3. Student can change his password
4. Student can select a course and make registration
5. A student has a dashboard where he can see list of course that he has taken

Technologies are used:

1. Javascript (programming language)
2. NodeJs, ExpressJs (backend)
3. JWT & Google OAuth (authentication)
4. ReactJs (frontend)
5. Redux, Redux Toolkit (state management library)
6. MongoDB (NoSql Database)
7. Mongoose (ORM)
8. Styled-components (Styling)
9. Multer, axios, Bcryptjs, express-validator, http-errors, jsonwebtoken, momentjs, uuid, js-file-download, jwt-decode, react-router-dom(v6) [others third-party library]

All Backend API End Points:

User API end point:

1. Post("/users") → Create user manually
2. Post("/users/signup-with-google") → Signup with google
3. Get("/auth") → Signin user
4. Patch("/:id") → Upload profile, update profile
5. Patch("/change-password/:id") → Change password

Teacher API end point:

6. Get("/teachers") → Get all teachers information
7. Get("/teachers/search") → Search for teacher
8. Get("/teachers/recent-teacher") → Get recently created teacher account
9. Get("/teachers/unprofiled-teacher") → Get list of teacher who has not fill up profile information
10. Get("/teachers/ban-teacher") → Get list of teacher banned teacher
11. Patch("/teachers/banned/:id") → Ban a particular teacher
12. Patch("/teachers/active/:id") → Activated a particular teacher
13. Delete("/teachers/:id") → Delete a particular teacher

Student API end point:

14. Get("/students/search") → Search for student
15. Get("/students/recent-teacher") → Get recently created student account
16. Get("/students /unprofiled-teacher") → Get list of student who has not fill up profile information
17. Get("/students /ban-teacher") → Get list of student banned teacher
18. Patch("/students/banned/:id") → Ban a particular student
19. Patch("/students/active/:id") → Activated a particular student
20. Delete("/students/:id") → Delete a particular student

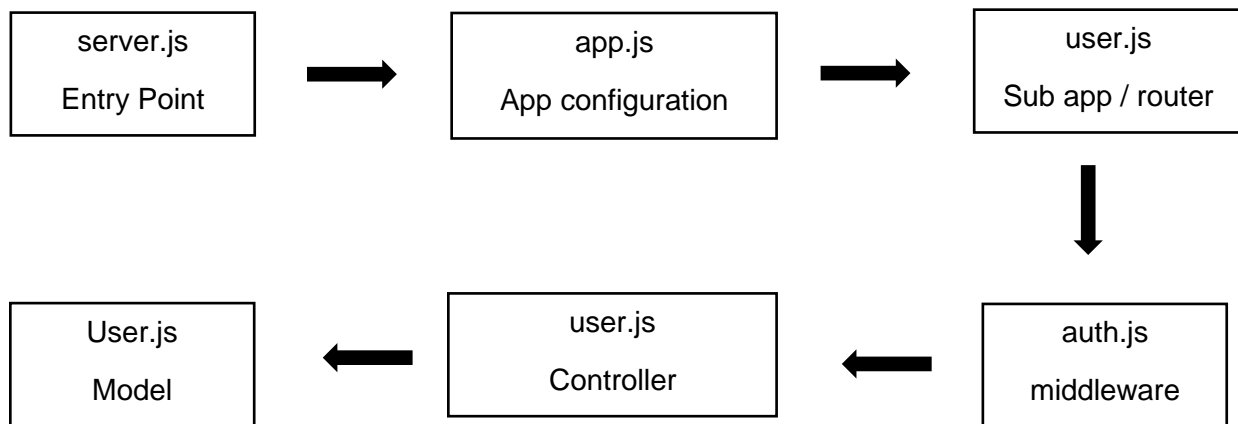
Course API end point:

1. Post("/courses") → Create a new course
2. Patch("/courses/:id") → Update an existing course
3. Delete("/courses/:id") → Delete an existing course
4. Get("/courses") → Get multiple course
5. Get("/courses/:id") → Get a single course
6. Get("/courses/search") → Search for course

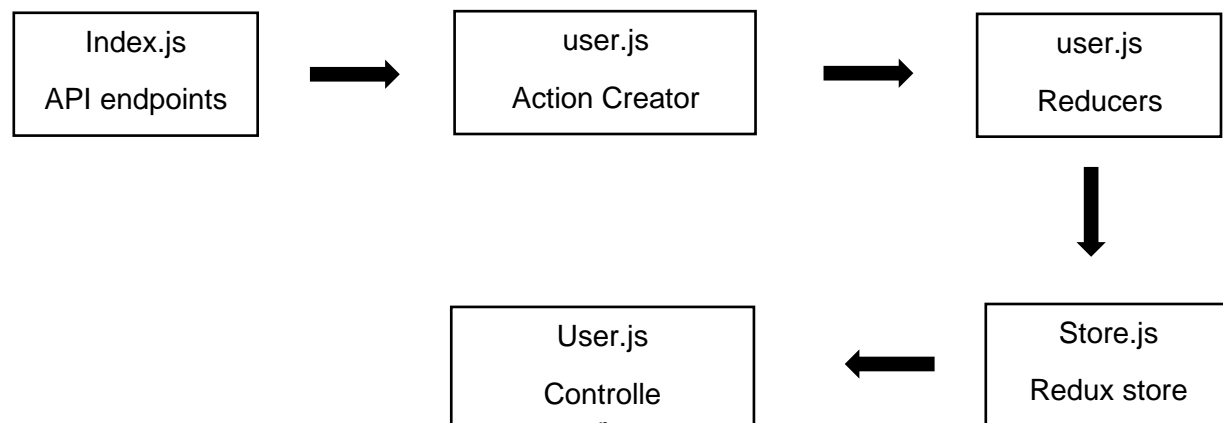
Registration API end point:

1. Post("/registrations") → Create a course registration
2. Patch("/registrations/:id") → Update an existing registration
3. Get("/registrations") → Get multiple registration
4. Get("/registrations/:id") → Get a single registration

Backend Coding Structure:

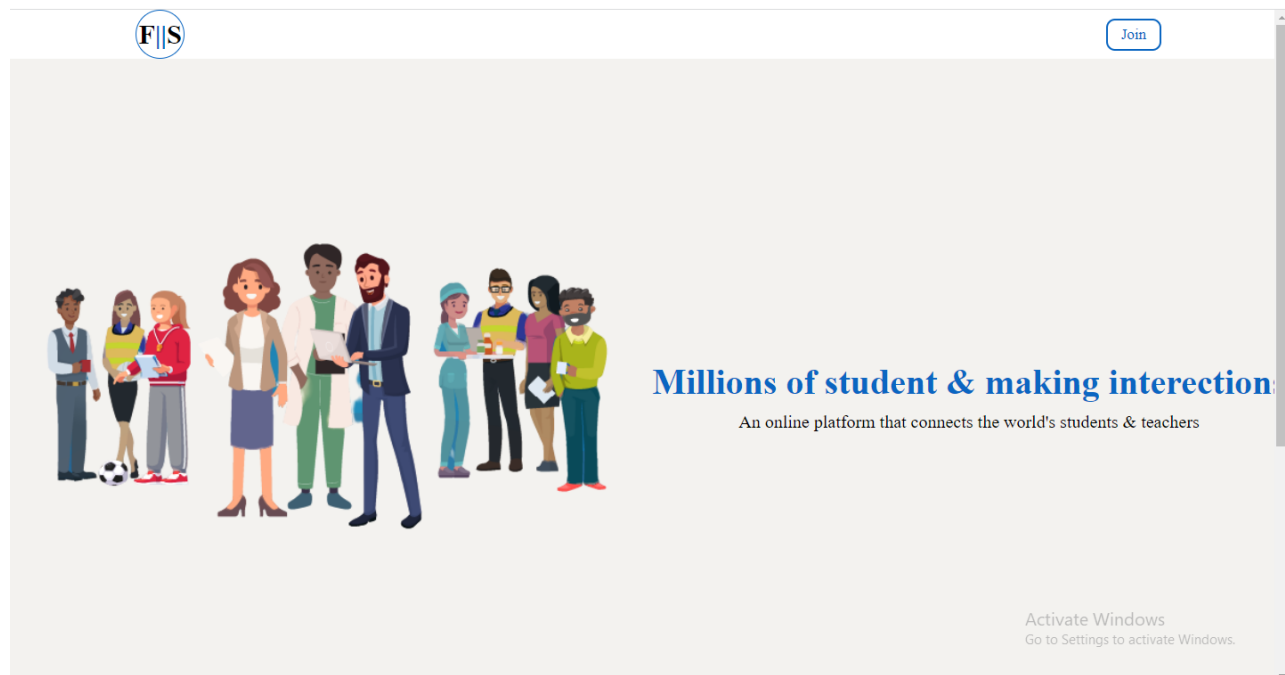


Frontend Coding Structure:



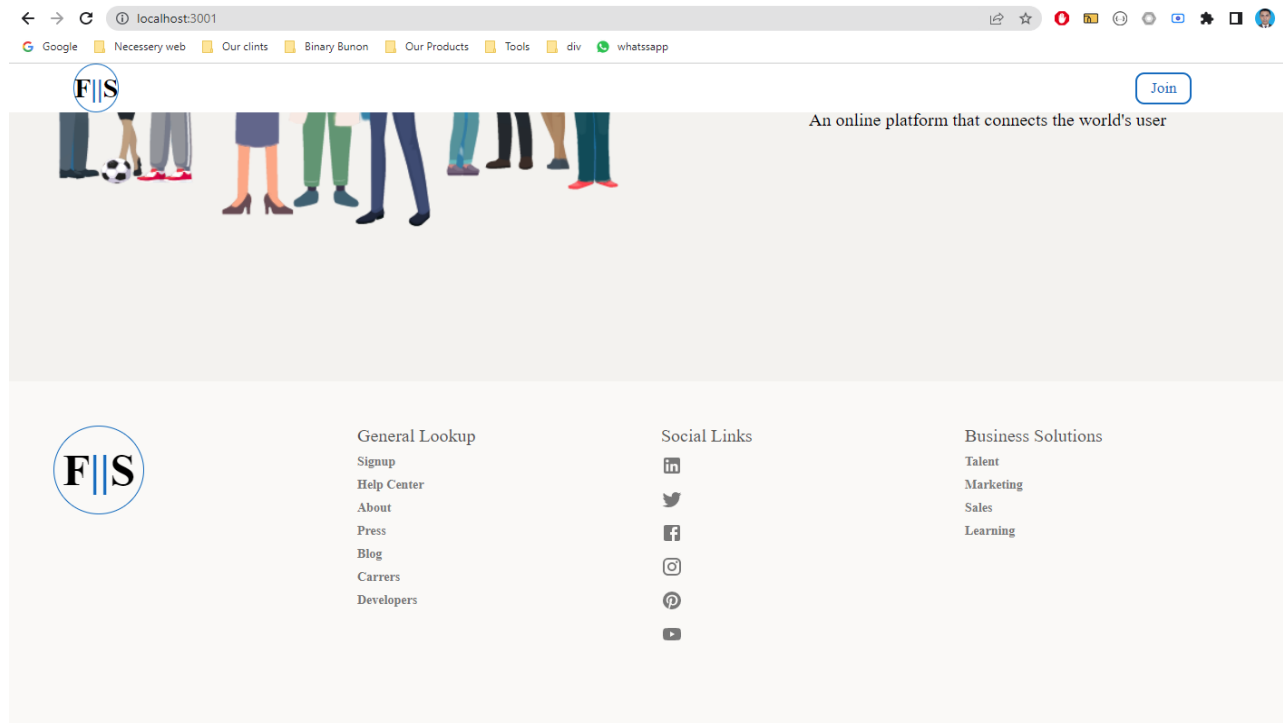
Note: All codes are implemented by following Javascript modularity, clean coding, well documented and commented.

User Manual:



1.1 Home Page

Whenever you visit this website then you are able to see landing page



1.2 Home page footer section

You can navigate home page to join page by clicking respectively logo(left) & join(right) button

localhost:3001/login

Google Necessary web Our clints Binary Bunon Our Products Tools div whatsapp

F||S Join

Create an Account

Name

Email

Password (8 or more characters)

Confirm Password

Signup & Join

Continue with Google

[Already signup ? Signin](#)

1.3 Signup page

F||S Join

Create an Account

Name

You should provide a valid name

Email

You should provide a valid email address

Password (8 or more characters)

You should provide a valid credential

Confirm Password

Select your account category

☒ Student ☐ Teacher ☐ Admin

Please select one

Signup & Join

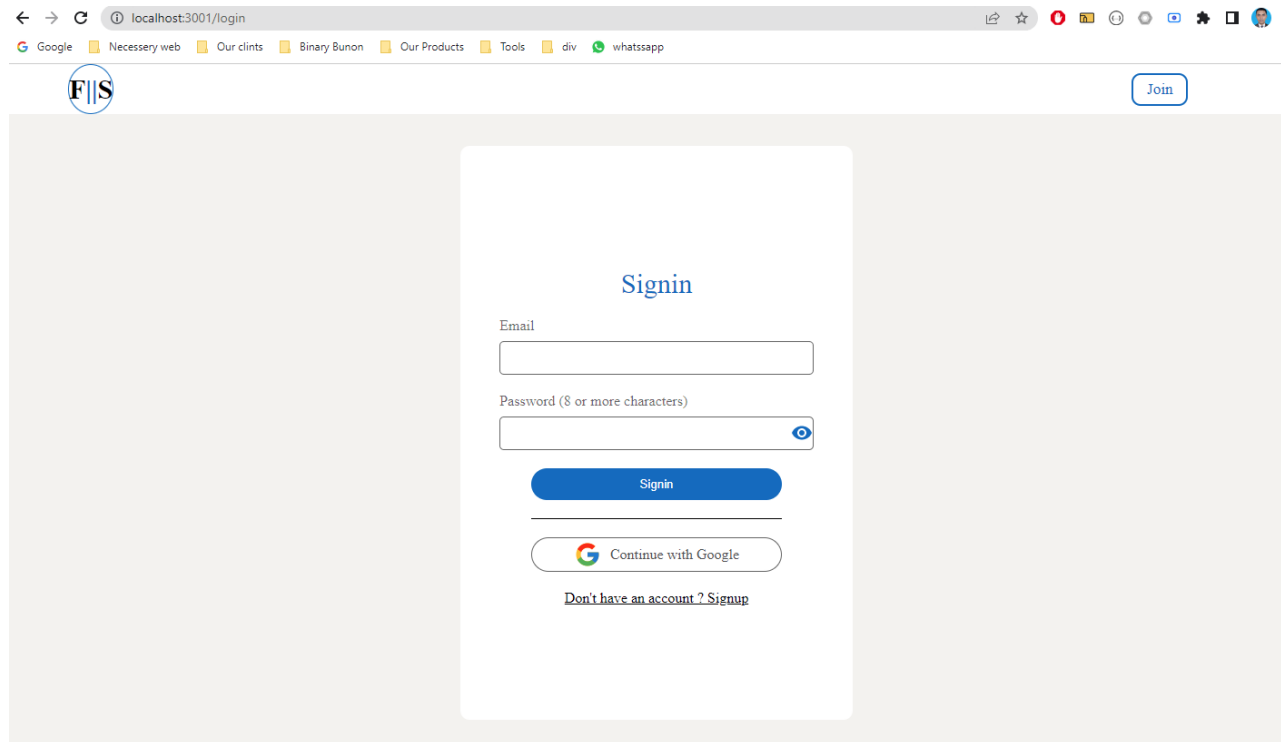
Continue with Google

[Already signup ? Signin](#)

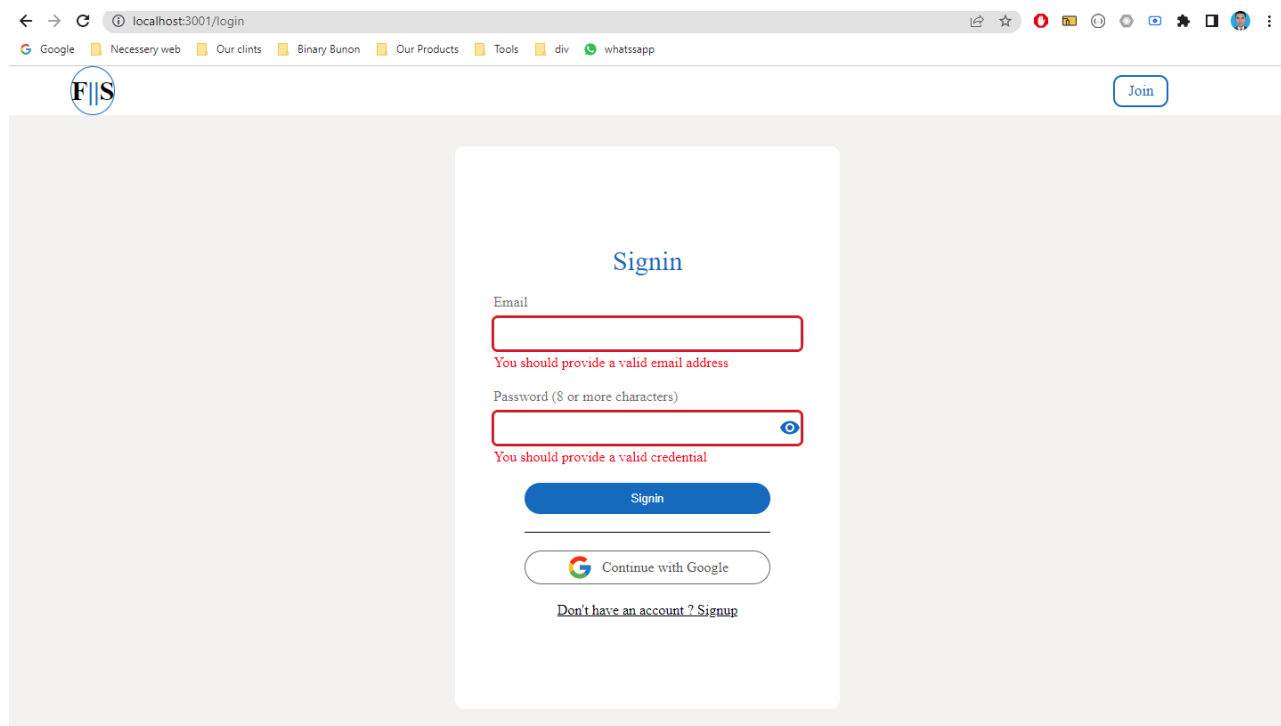
Activate Windows
Go to Settings to activate Windows.

1.4 Validation before signup

A user has to pass within some validation before signup. There are some frontend validation like **invalid name**, **password doesn't match** and there are some backend validation like **user already exist**, or **Please select one**, string password with char, numeric value and at least one special char.




1.5 Sign in page



1.6 Validation before sign in

A user has to pass within some validation before sign in. There are some frontend validation like you should provide valid email address or backend validation like “invalid credential”. Or Your account has been banned temporary, or your account has not been activated.



[Logout](#)

Profile Information

Phone

Present Address

Permanent Address

City

Country

Profile Picture


No file chosen

Activate Windows
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2.1 Profile page after login

After first time login, a user is able to see profile information to fill up. A user can not move further without fill up profile information, even every route is protected. After fill up profile information, a user will be redirected to login page until activated his account from administration. Here also front, backend and database validation

Admin Section



Logout



Jahid Hiron

Dashboard

Teacher

Student

Update Profile

View Profile

Change Password

Recently Add Teachers

Name	Email
Sahida Arofi	sahia@gmail.com
Sihan Dhar	sihan@gmail.com
Manik Datta	manik@gmail.com
Kibria Toufa	kibria@gmail.com
Mamun Shekh	mamun@gmail.com

Recently Add Students

Name	Email
Nafiz	nafiz@gmail.com
Mariam	mariam@gmail.com
Maysha Binte Hidar	maisaa@gmail.com
Mahabub	mahabub@gmail.com
Salman Muktadir	salman@gmail.com

Unprofile Teachers

Name	Email
Sahida Arofi	sahia@gmail.com
Sihan Dhar	sihan@gmail.com
Manik Datta	manik@gmail.com
Kibria Toufa	kibria@gmail.com


Prev 1 Next Limit 10

Unprofile Student

Name	Email
Nafiz	nafiz@gmail.com
Mariam	mariam@gmail.com
Maysha Binte Hidar	maisaa@gmail.com
Mahabub	mahabub@gmail.com

Prev 1 Next Limit 10

3.1 Admin dashboard 1



Logout

Student

Update Profile

View Profile

Change Password

Unprofile Teachers

Name	Email
Sahida Arofi	sahia@gmail.com
Sihan Dhar	sihan@gmail.com
Manik Datta	manik@gmail.com
Kibria Toufa	kibria@gmail.com

Prev 1 Next Limit 10

Unprofile Student

Name	Email
Nafiz	nafiz@gmail.com
Mariam	mariam@gmail.com
Maysha Binte Hidar	maisaa@gmail.com
Mahabub	mahabub@gmail.com

Prev 1 Next Limit 10

Ban Teacher

ID	Name	Email
2022-32255-03	Mamun Shekh	mamun@gmail.com
2022-26757-03	Anis Sinha	anis@gmail.com

Prev 1 Next Limit 10


Ban Student

ID	Name	Email
	Maysha Binte Hidar	maisaa@gmail.com
	Mahabub	mahabub@gmail.com


Prev 1 Next Limit 10

3.2 Admin dashboard 2

Admin can see Recently add teacher, recently added student, list of teacher & student profile who has not filled up profile with pagination. List of ban teacher & student with pagination



[Logout](#)



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[Dashboard](#)
[Teacher](#)
[Student](#)
[Update Profile](#)
[View Profile](#)
[Change Password](#)

Name

Email

Phone

Present Address

Permanent Address

City

Country


Profile
 No file chosen

[Update Profile](#)


Activate Windows
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3.3 Admin Update profile

Admin can update his profile, update profile picture. If profile picture update, then previous one will be deleted. Front end, back end and database validation are made.



[Logout](#)



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[Dashboard](#)
[Teacher](#)
[Student](#)
[Update Profile](#)
[View Profile](#)
[Change Password](#)

Your Information

Name	Information
ID	2022-99665-03
Name	Jahid Hiron
Email	namehiron.96@gmail.com
Phone	+8801748028581
Present Address	Dharmakura Bazar, Islampur - 2020
Permanent Address	Jamalpur
City	Mymensingh
Country	Bangladesh

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3.4 Admin Update profile

Admin can view his profile information

localhost:3000/change-password

SQL Commands Index of /Ibrahim/ Gmail YouTube Maps Translate Circle Network | Djangogirls Python Tutorial Try Django 2.2 - We... event (24) 01 Start Project...

F||S Logout

Jahid Hiron

Dashboard Teacher Student Update Profile View Profile Change Password

Change Password

Old Password

New Password

New Password

Change Password

Activate Windows
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3.5 Admin Change Password

Admin can change his password. A admin can change password with matching old password. Here frontend, backend and database validations are made.

localhost:3000/teacher

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F||S Logout

Jahid Hiron

Dashboard Teacher Student Update Profile View Profile Change Password

All Teachers Information

Search teacher

ID	Name	Email	Phone	Present Address	Permanent Address	City	Country	Status	Is Ban	Profile	Action
	Sahida Arofi	sahia@gmail.com						active	No	Obsolete	✓ ⚡ 🗑
	Sihan Dhar	sihan@gmail.com						inactive	No	Obsolete	✓ ⚡ 🗑
	Manik Datta	manik@gmail.com						inactive	No	Obsolete	✓ ⚡ 🗑
	Kibria Toufa	kibria@gmail.com						inactive	No	Obsolete	✓ ⚡ 🗑
2022-32255-03	Mamun Shekt	mamun@gmail.com	+8801748028581	Dhamakura Bazar, Islampur,	Jamalpur	Mymensingh	Bangladesh	inactive	Yes	Updated	✓ ⚡ 🗑
2022-60117-03	Rozia Sheli	rozia@gmail.com	+8801748028581	Dhamakura Bazar, Islampur,	Jamalpur	Mymensingh	Bangladesh	inactive	No	Updated	✓ ⚡ 🗑
2022-26757-03	Anis Sinha	anis@gmail.com	+8801748028581	Dhamakura Bazar, Islampur,	Jamalpur	Mymensingh	Bangladesh	inactive	Yes	Updated	✓ ⚡ 🗑
2022-98510-03	Sakib Hasan	sakibhasan@gmail.com	+8801748028581	Dhamakura Bazar, Islampur,	Jamalpur	Mymensingh	Bangladesh	active	No	Updated	✓ ⚡ 🗑
2022-90557-03	Aysha Siddika Sithila	aysha@gmail.com	+8801748028581	Dhamakura Bazar, Islampur,	Jamalpur	Mymensingh	Bangladesh	active	No	Updated	✓ ⚡ 🗑

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Prev 1 Next Limit 10 Touch keyboard

3.6 Teacher all information

Admin can see teacher all information and make some operation like search with de-bouncing functionalities, activated teacher account, ban teacher account and delete teacher account. Before making all operations a pop up meage will be shown to confirm operation. Here frontend, backend and database validations are made.

City	Country	Status	Is Ban	Profile	Action
					<div> <div>Are you sure you want to active this teacher?</div> <div>Confirm</div> </div>
					✓ ⛔ 🗑
					✓ ⛔ 🗑
					✓ ⛔ 🗑
		inactive	No	Obsolete	✓ ⛔ 🗑
Mymensingh	Bangladesh	inactive	Yes	Updated	✓ ⛔ 🗑

3.7 Pop up before activated account

	Country	Status	Is Ban	Profile	Action
		active	No	Obsolete	✓ ⛔ 🗑
		inactiv			🗑
		inactiv			🗑
		inactiv			🗑
ensingh	Bangladesh	inactive	Yes	Updated	✓ ⛔ 🗑
ensingh	Bangladesh	inactive	No	Updated	✓ ⛔ 🗑

3.8 Pop up before delete account

A confirmation popup will be shown to perform operation like activated, ban and delete account.

Teacher has been deleted successfully!

All Teachers Information

ID	Name	Email	Phone	Present Address	Permanent Address	City	Country	Status	Is Ban	Profile	Action
----	------	-------	-------	-----------------	-------------------	------	---------	--------	--------	---------	--------


Prev

Next


Limit 10

3.9 Confirmation message after perform operation

A confirmation message will be shown after perform operation like account has been banned, account has been activated, account has been deleted. Message will be show with different color like red, yellow and green for respectively delete, ban and create.



Logout



Jahid Hiron

Dashboard

Teacher

Student

Update Profile

View Profile

Change Password

All Students Information

ID	Name	Email	Phone	Present Address	Permanent Address	City	Country	Status	Is Ban	Profile	Action
	Nafiz	nafiz@gmail.com						inactive	No	Obsolete	✓ ⚡ 🗑
	Mariam	mariam@gmail.com						inactive	No	Obsolete	✓ ⚡ 🗑
	Maysha Binte Hidar	maisa@gmail.com						inactive	Yes	Obsolete	✓ ⚡ 🗑
	Mahabub	mahabub@gmail.com						inactive	Yes	Obsolete	✓ ⚡ 🗑
2022-28784-03	Salman Muktadir	salman@gmail.com	+8801948027478	Kazipara, Dhaka	Kazipara, Dhaka	Dhaka	Bangladesh	inactive	No	Updated	✓ ⚡ 🗑
2022-62895-03	Rafiq	rafqa@gmail.com	+8801748024571	Dharmakura Bazar, Islampur,	Jamalur	Mymensingh	Bangladesh	active	No	Updated	✓ ⚡ 🗑
2022-31430-03	Tavfika Rahaman	tavfika@gmail.com	+8801748028501	Beldi, Ruggong	Ruggong	Dhaka	Bangladesh	active	No	Updated	✓ ⚡ 🗑
2022-79133-03	Maria Akter	maria@gmail.com	+8801747685067	Beldi, Ruggong, Dhaka	Beldi, Ruggong, Dhaka	Dhaka	Bangladesh	active	No	Updated	✓ ⚡ 🗑

Prev

1

Next

Limit 10

Activate Windows

Go to Settings to activate Windows.

3.10 List of student

Same functionalities goes for student like teacher.

Teacher Section

A teacher can do same thing like

1. Update profile
2. View Profile
3. Change Password

The screenshot displays the 'Teacher Section' of a web application. The browser address bar shows 'localhost:3000/teacher-course'. The page layout includes a sidebar on the left with a user profile for 'Aysha Siddika Sithula' and navigation links: Dashboard, Course, Quiz, Update Profile, View Profile, and Change Password. The main content area is divided into two columns. The left column contains a form for creating a new course with fields for 'Name' (filled with 'Mechine Learning') and 'Description' (filled with 'Machine learning is the study of computer algorithms that can improve automatically through experience and by the use of data'), and a 'Create Course' button. The right column contains a dropdown menu for selecting a course (currently showing 'Mechine Learning') and 'Update' and 'Delete' buttons. Below these forms is a section titled 'All Course information' with a search bar. At the bottom, there is a table listing existing courses.

Name	Description	Status
Mechine Learning	Machine learning is the study of computer algorithms that can improve automatically through experience and by the use of data.	Available

Activate Windows
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4.1 Teacher create course

A teacher can create course, update course, delete course and view course. Before update and delete course a confirmation popup message will be shown. After create, update, delete a operation message will be shown. Here front end , back end and database validation are made like, **course already created, course name too short, description too short**

localhost:3000/dashboard

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F||S Logout



Aysha Siddika Sithula

Dashboard

Course

Quiz

Update Profile

View Profile

Change Password

All registered course information

Name	Description	Teacher Name	Teacher Email	Teacher Phone	Status
Machine Learning	Machine learning is the study of computer algorithms that can improve automatically through experience and by the use of data.	Maria Akter	maria@gmail.com	Maria Akter	Inactive

Activate Windows
Go to Settings to activate Windows.

4.2 Teacher dashboard

This is teacher dashboard where a teacher can see list of student and course description that are taken from students

Student Section

A student can do same thing like

1. Update profile
2. View Profile
3. Change Password

The screenshot shows a web browser at the URL `localhost:3000/student-course`. The page features a sidebar on the left with a user profile for 'Tawfiqa Rahaman' and a list of navigation links: Dashboard, Course, Quiz, Update Profile, View Profile, and Change Password. The main content area contains a 'Select Course' dropdown menu with 'C Programming Language' selected, and a blue 'Registration' button below it. A 'Logout' button is located in the top right corner. At the bottom right, there is a Windows activation watermark that reads 'Activate Windows Go to Settings to activate Windows.'


5.1 Student course registration

A student can make a registration. Here also some validation like **course already taken**

localhost:3000/dashboard

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F||S Logout



Tawfiqa Rahaman

Dashboard

Course

Quiz

Update Profile

View Profile

Change Password

All registered course information

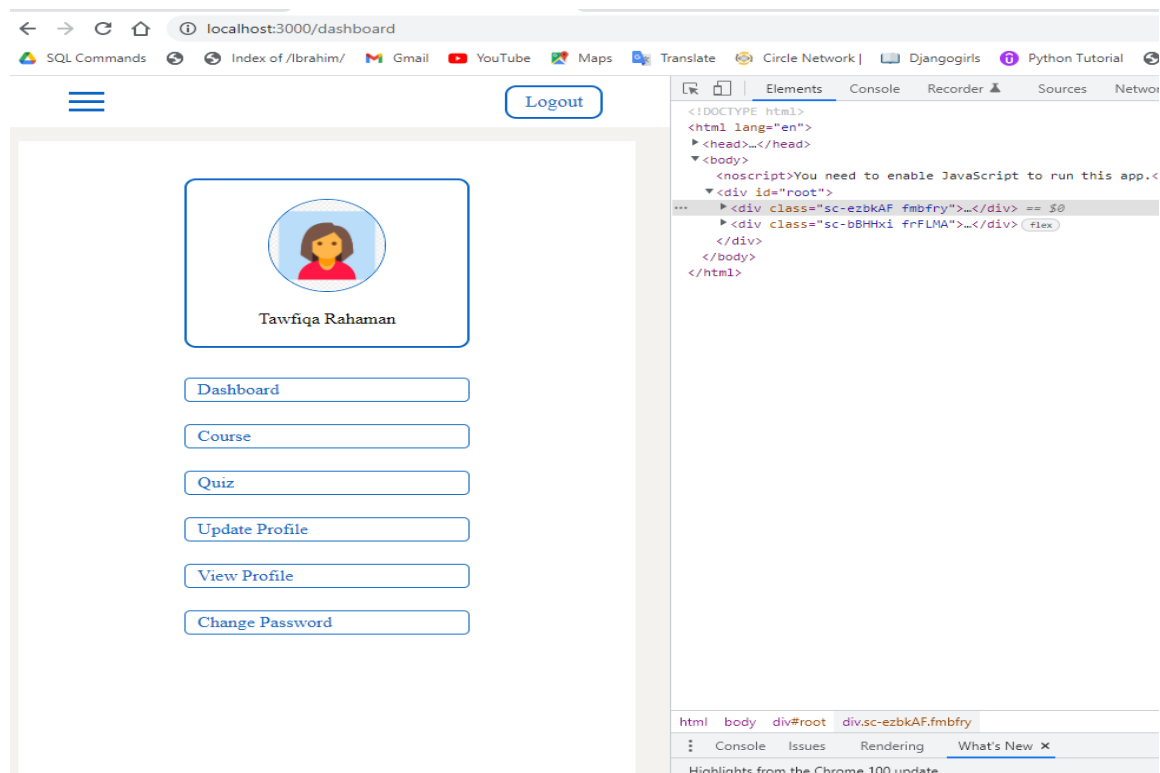
Name	Description	Teacher Name	Teacher Email	Teacher Phone	Status
C Programming Language	This is a core programming language for every programmer	Sakib Hasan	sakibhasan@gmail.com	Sakib Hasan	Inactive

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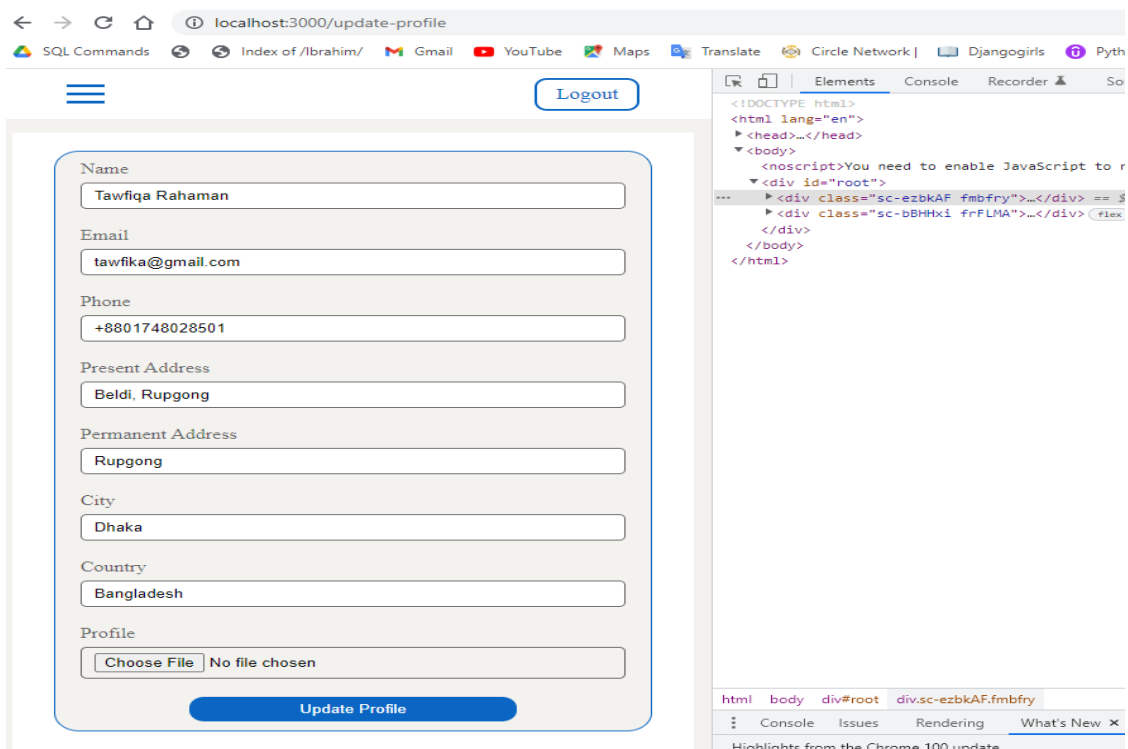
5.2 Student dashboard

This is student dashboard where he can see list of course, teacher name, course description that he/she has taken.

Responsiveness



6.1 Responsive 1



6.2 Responsive 2

I also try to make the system responsive as much as possible.

Project Setup:

Backend setup [Run bellow commond]

```
git clone git@github.com:jahidhiron/dynamicMegasoftLimitedTechnicalTest.git .  
cd server  
yarn  
yarn dev
```

Frontend setup [Open another terminal to project folder]

```
cd client  
yarn  
yarn dev
```