

Internship Assignment

Answers

1. Explaining what is design pattern and how we can use design patterns in projects.

- Design pattern is a coding standard that is used by developers to solve problems.
- Design patterns make some complex problems to solve easier by developers. Design patterns can be used according to the project needs.
- For example, if there only one instance need to be created we can use Singleton design pattern. So according to the complexity of the problem design pattern can be used to solve the problem in understandable manner.

2. What is DTO and explain the use of it.

- Data transfer object (Dto) is an object that used to carry data between different layers, for example client send request as request body, and by using the Dto data can be carried up to the data access layer and store the data and return a Dto as a response.

3. How are you going to store secrets in an application without exposing it to the internet?

- By creating .env file and store the secrets, and when making the commits add the .env file to the .gitignore file, so the secrets that are stored in .env file will not be store in repository.

4. What is JWT and how does it work?

- Jason Web Token (JWT) is use to authorize user by providing a token. Once the user login or register to the system a token will be given to the user. So by storing the token in local storage while user logged out from the system user can use the token and get the relevant needed data.
- Token will carried with user from logged in to the system to until user logged out from the system,
- Jwt token used in various validations (Email verification , login , register , roll base authentication).

5. What is the difference between SQL and NoSQL databases?

- Sql uses Relational data base and NoSQL uses Non-relational database
- SQL uses tables and NoSQL uses documents.
- In SQL data are stored in tables, and in No-SQL data are stored in Key-value pair
- In No-SQL data are in JSON format.

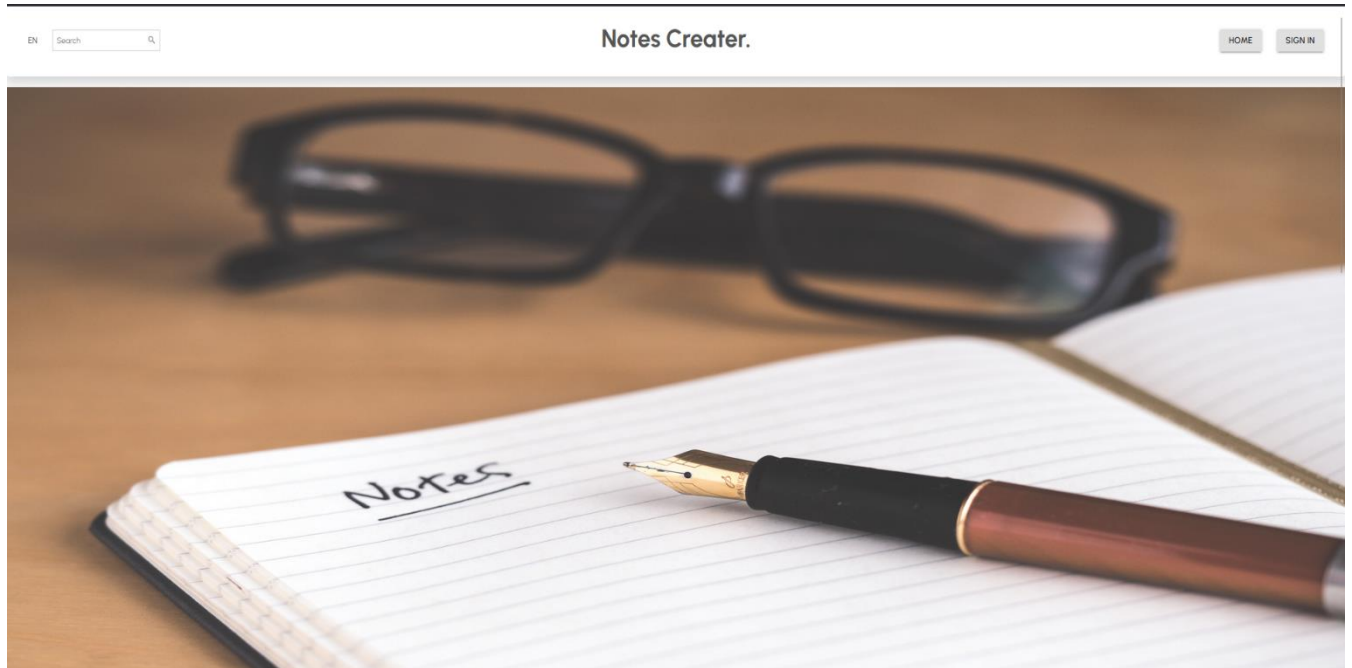
6. Suggest a good state management for frontend application and explain why you recommend it

- REDUX
- By using the state management, whatever component the data can be used by dispatching the relevant actions.
- Redux is one of the most popular state management tool.
- Redux uses actions, reducers so, all the action calls that need to be dispatch according to the need and by creating the relevant reducers, and it can be made easy for developers(developer friendly).

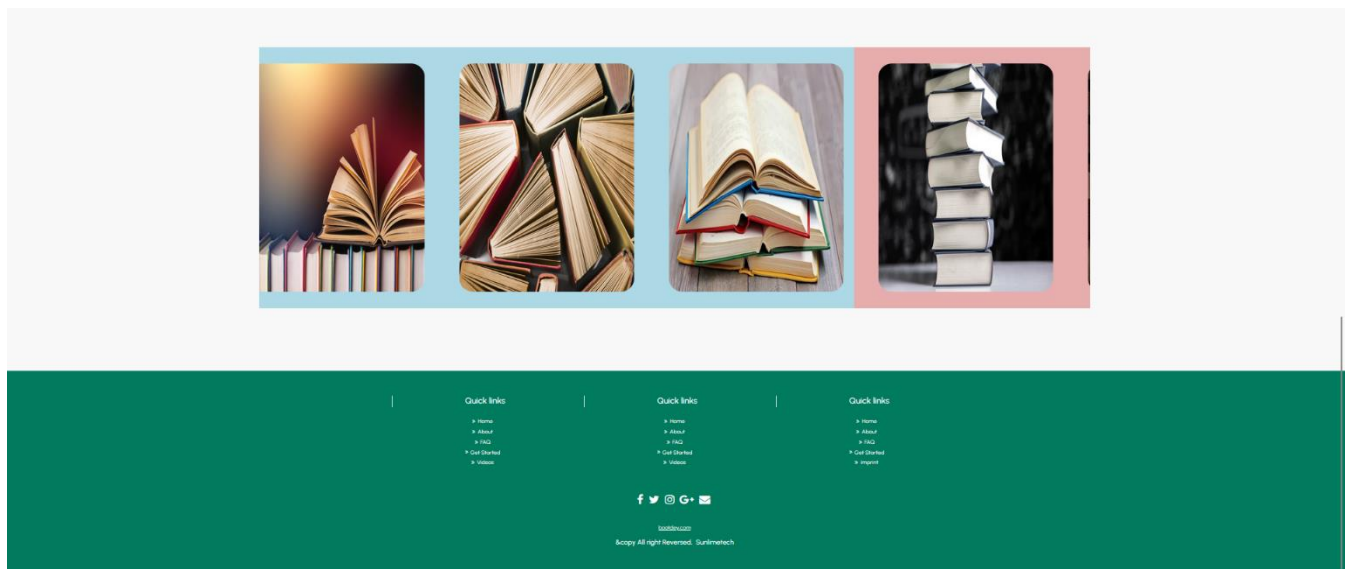
Interfaces

Home Page

1.



2.(slider , footer)



Login Page

EN

Search

Q

Notes Creator.

HOME

SIGN IN

Login

Email

with a placeholder

Password

password placeholder

SUBMIT >

DON'T HAVE AN ACCOUNT? SIGN UP

Registration Page

EN

Search

Q

Notes Creator.

HOME

SIGN IN

Register

First Name

with a placeholder

Last Name

with a placeholder

Email

with a placeholder

Date Of Birth

mm / dd / yyyy

Phone Number

0

Password

password placeholder

Confirm Password

password placeholder

Account

Select Account

SUBMIT >

ALREADY HAVE AN ACCOUNT? SIGN IN

User Management (Admin)

EN

Search

Notes Creator.

HOMEADMINLOGOUTPROFILE

Search Here

Search

ID	fullName	Email	DateOfBirth	mobile	accountType	Status	Actions
62e9f0883d7dbc9005e5f	younus ahmed	fadhiahamed04@gmail.com	2022-07-30T00:00:00.000Z	77848644	Student Account	true	
62e9f079883d7dbc9005e55	marjitha wejathna	lateef99@gmail.com	2022-08-06T00:00:00.000Z	77848699	Personal Account	true	
62e9f050883d7dbc9005e52	viraj hapuwita	new99@gmail.com	2022-07-09T00:00:00.000Z	770234567	Student Account	true	
62e9f0883d7dbc9005e4c	ahamed afzal	new9@gmail.com	2022-07-16T00:00:00.000Z	77848683	Personal Account	true	
62e9f07883d7dbc9005e49	ahamed husni	fadhiahamed04@gmail.com	2022-07-23T00:00:00.000Z	77024200	Student Account	true	
62e9f09883d7dbc9005e43	ahamed younus	ahamedafzal9@gmail.com	2022-07-16T00:00:00.000Z	77848683	Personal Account	true	

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Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

> Home

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> FAQ

> Get Started

> Videos

Quick links

> Home

> About

> FAQ

> Get Started

> Imprint

Add Pagination

EN

Search

Notes Creator.

HOMEADMINLOGOUTPROFILE

Search Here

Search

ID	fullName	Email	DateOfBirth	mobile	accountType	Status	Actions
62e9f07883d7dbc9005e38	ahamed fadhil	fadhiahamed07@gmail.com	2022-07-23T00:00:00.000Z	77848683	Personal Account	true	
62d55d08f02992c4b84b	new0234 new0234455	lateef56@gmail.com	2022-07-23T00:00:00.000Z	770567366	Student Account	true	

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Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

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> Get Started

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Quick links

> Home

> About

> FAQ

> Get Started

> Imprint

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Add Search Filter

EN

Search

Notes Creator.

HOMEADMINLOGOUTPROFILE

aha

Search

ID	fullName	Email	DateOfBirth	mobile	accountType	Status	Actions
62e88fc0883d7dbc9005e4c	ahamed alahai	new9@gmail.com	2022-07-16T00:00:00.000Z	778486833	Personal Account	true	
62e88fc7883d7dbc9005e4f9	ahamed huani	fadhiahamed34@gmail.com	2022-07-23T00:00:00.000Z	77424211	Student Account	true	
62e88fc4f883d7dbc9005e43	ahamed yonus	ahamedalahai94@gmail.com	2022-07-16T00:00:00.000Z	778486833	Personal Account	true	

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Quick links

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> About

> FAQ

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Quick links

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> About

> FAQ

> Get Started

> Imprint

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bootstrap.com

Delete User

EN

Search

Notes Creator.

HOMEADMINLOGOUTPROFILE

Search Here

Search

ID	fullName	Email	DateOfBirth	mobile	accountType	Status	Actions
62e190a8883d7dbc9005e5f	yonus ahamed	fadhiahamed347@gmail.com	2022-07-30T00:00:00.000Z	778486844	Student Account	true	
62e19079883d7dbc9005e55	marytha wijeratna	later999@gmail.com	2022-08-06T00:00:00.000Z	778486899	Personal Account	true	
62e19050883d7dbc9005e52	viraj hapuwita	new99@gmail.com	2022-07-09T00:00:00.000Z	77024567	Student Account	true	
62e88fc0883d7dbc9005e4c	ahamed alahai			778486833	Personal Account	true	
62e88fc7883d7dbc9005e4f9	ahamed huani			77424211	Student Account	true	
62e88fc4f883d7dbc9005e43	ahamed yonus			778486833	Personal Account	true	

<

1

2

>

Delete User

Do You Need To Delete 62e190a8883d7dbc9005e5f?

OKCANCEL

Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

> Home

> About

> FAQ

> Get Started

> Imprint

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bootstrap.com

User Details (Pop Up)

When click each table row

EN

Search

Notes Creator.

HOMEADMINLOGOUTPROFILE

Search Here

Search

ID	fullName	Email	DateOfBirth	mobile	accountType	Status	Actions
62e90c883d7dbc9005e5f	younus ahamed			778486844	Student Account	true	
62e907983d7dbc9005e55	marjitha wejathra			778486899	Personal Account	true	
62e905083d7dbc9005e52	viraj hapiwita			778234567	Student Account	true	
62e8ff083d7dbc9005e4c	ahamed alahad			778486833	Personal Account	true	
62e8ff783d7dbc9005e49	ahamed humi	fadhiahamed347@gmail.com		778242111	Student Account	true	
62e8ff4983d7dbc9005e4d	ahamed younus			778486833	Personal Account	true	

User Details

First Name

younus

Last Name

ahamed

Email

fadhiahamed347@gmail.com

Contact Number

778486844

Date Of Birth

2022-07-30T00:00:00.000Z

Account Type

Student Account

Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

> Home

> About

> FAQ

> Get Started

> Videos

Quick links

> Home

> About

> FAQ

> Get Started

> Import

Notes Management (Student)

EN

Search

Notes Creator.

HOMENOTESLOGOUTPROFILE

Search Here

Search

+ ADD NOTES

Notes 1

testNotes

test04

Notes 2

test234

testth b

Notes 3

test234

test descriptiondd

Notes 4

test

test description

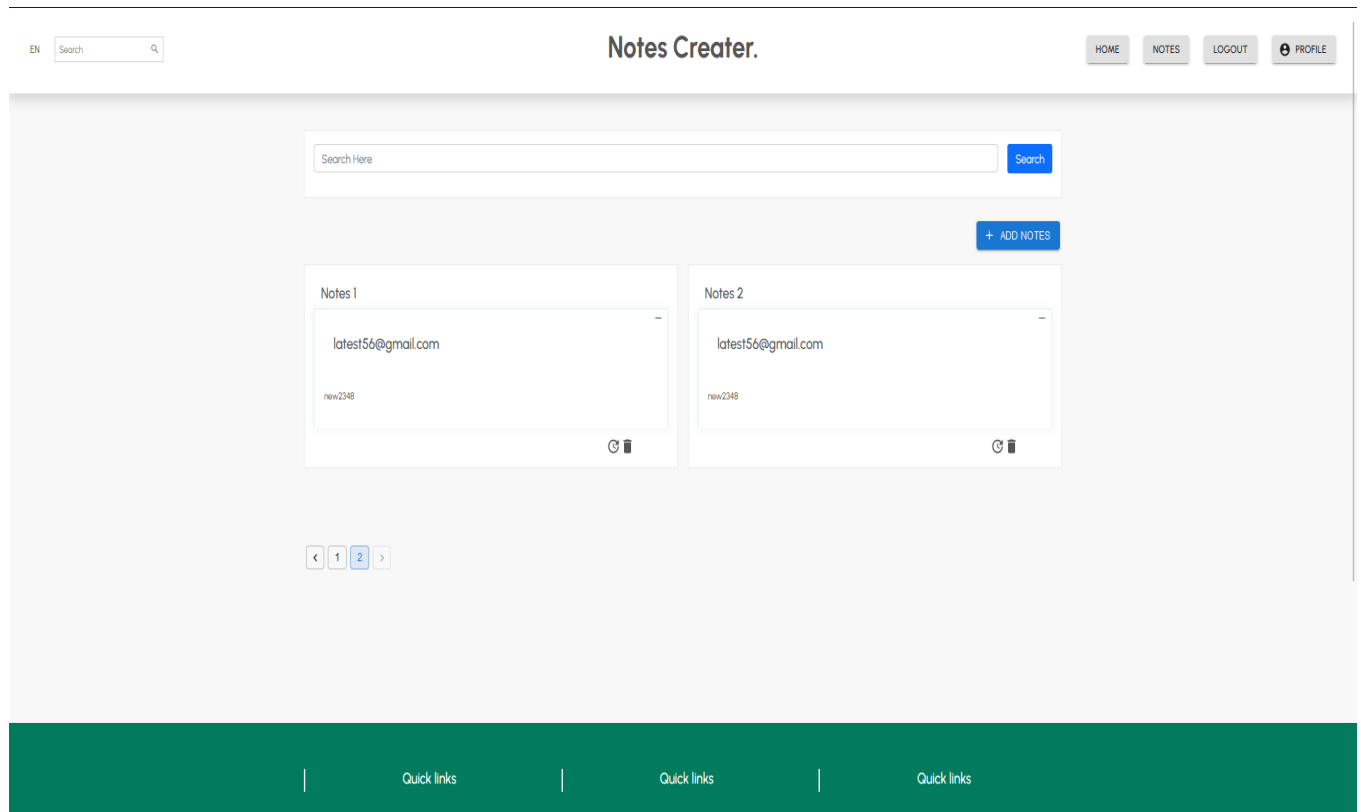
Notes 5

latest notes

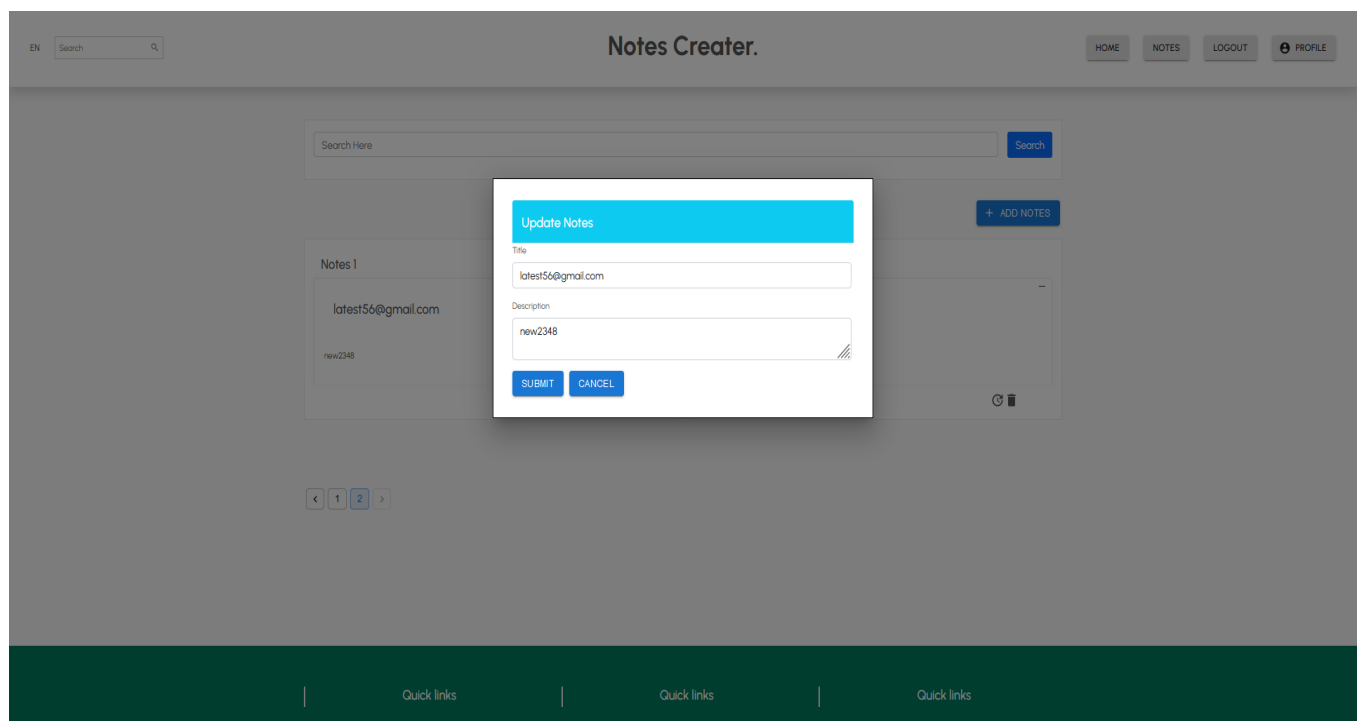
Notes 6

newnew

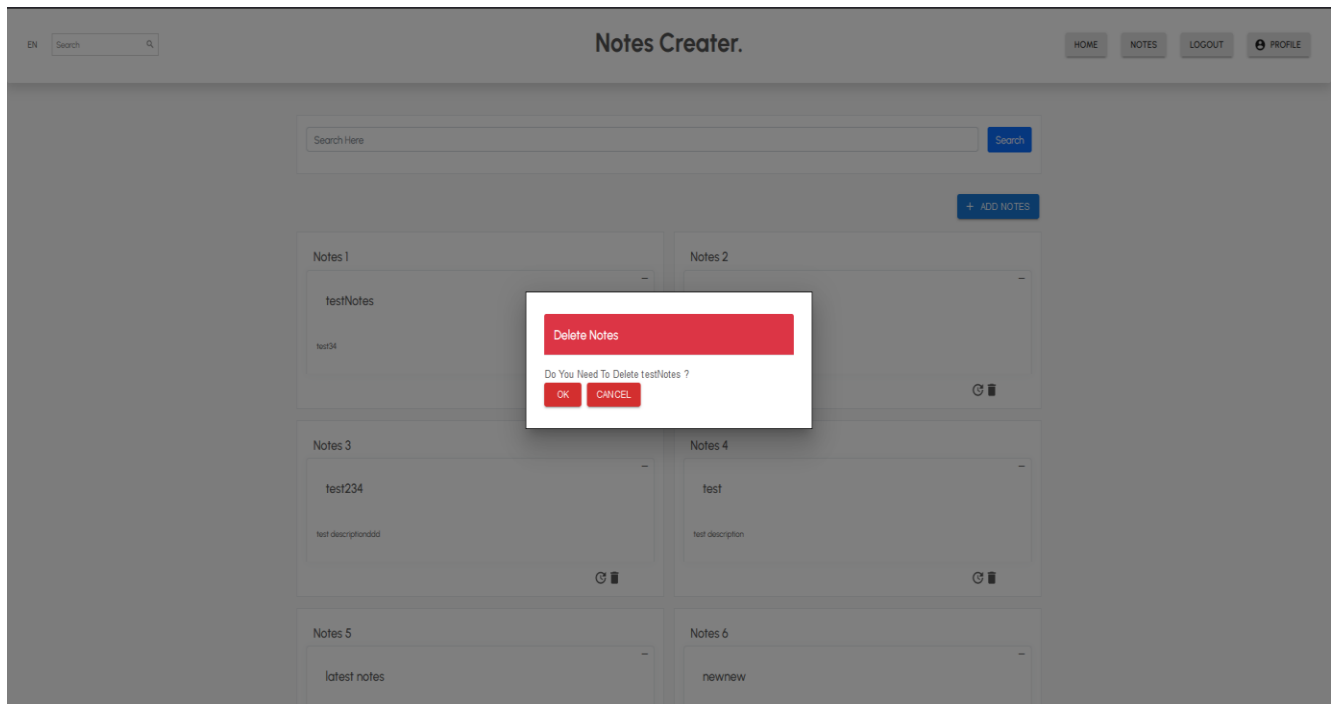
Notes Pagination



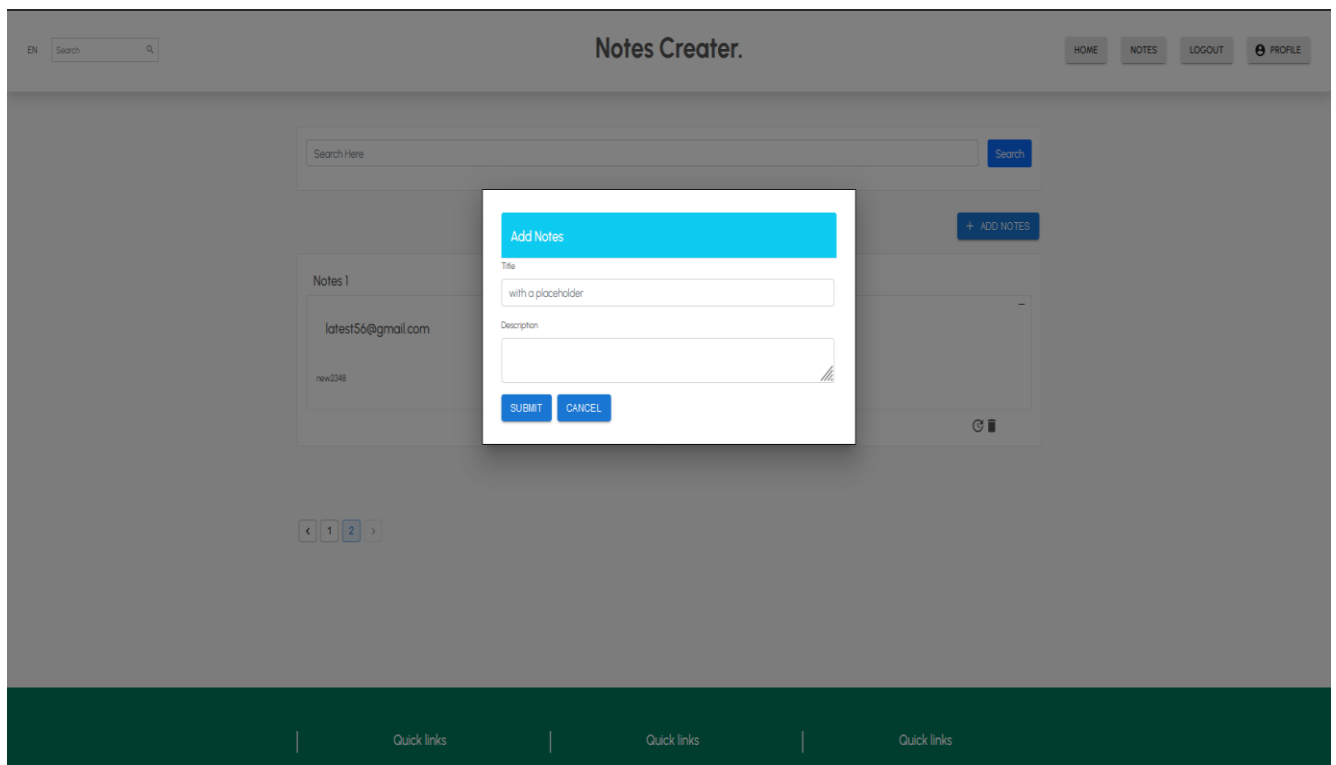
Update Notes



Delete Notes



Add Notes



Search Notes Filter

The screenshot displays the 'Notes Creator' application interface. At the top, there is a navigation bar with the text 'EN' on the left, a search input field with a magnifying glass icon, and four buttons on the right: 'HOME', 'NOTES', 'LOGOUT', and 'PROFILE'. The main content area features a search bar at the top with the text 'test23' and a 'Search' button. Below this is a '+ ADD NOTES' button. The central part of the interface shows two note cards. The first card, titled 'Notes 1', contains the text 'test234' and 'testthe b'. The second card, titled 'Notes 2', contains the text 'test234' and 'test descriptionddd'. Both cards have a trash icon and a lock icon at the bottom right. At the bottom of the interface, there is a pagination control with three buttons: '< 1 2 >'. The footer is a dark green bar with three vertical lines and the text 'Quick links' repeated three times.

User Profile

EN

Search

Q

Notes Creator.

HOME

NOTES

LOGOUT

PROFILE

new1234 new1234455

@new1234 new1234455.edu

Last seen 2 hours ago

Student

Details

First Name

new1234

Last Name

new1234455

Email

latest56@gmail.com

Contact Number

77056786

Date Of Birth

2022-07-23T00:00:00.000Z

Account Type

Student Account

Change Password

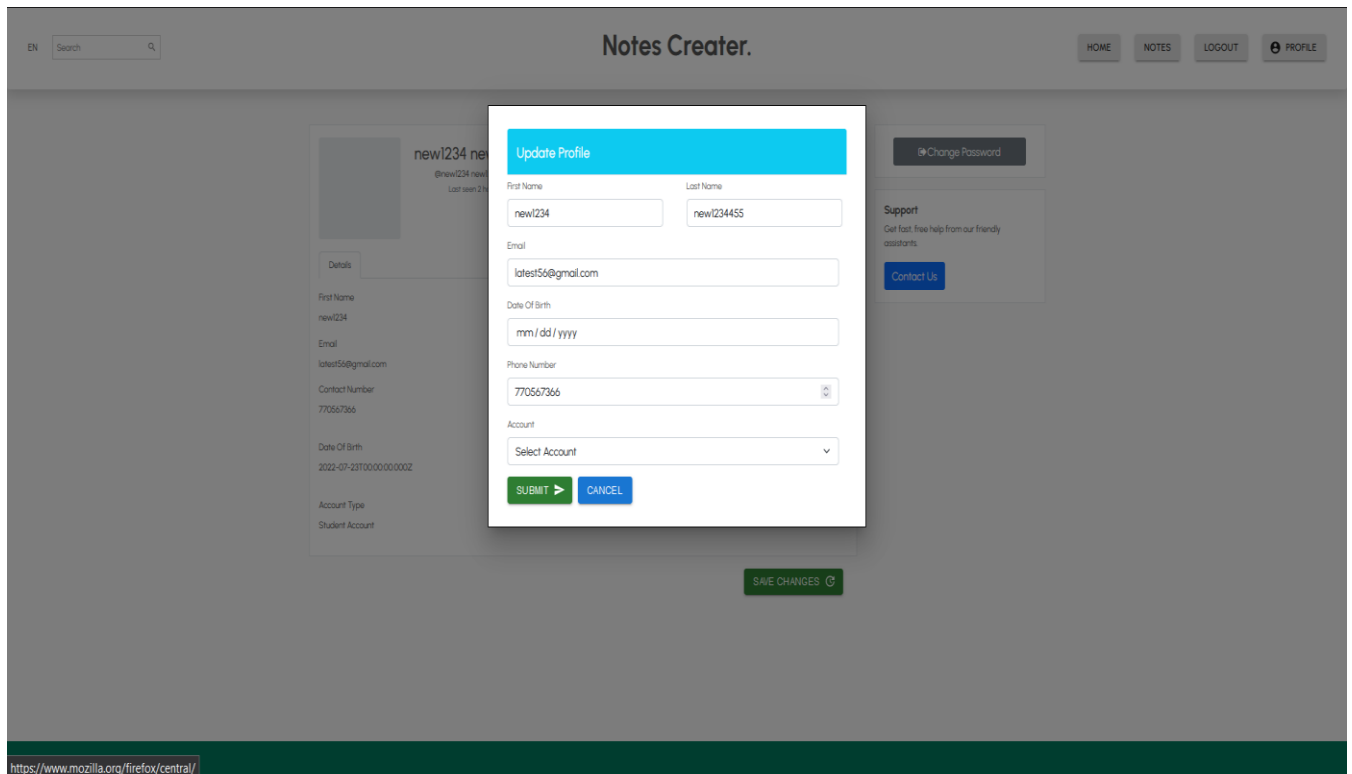
Support

Get fast, free help from our friendly assistants.

Contact Us

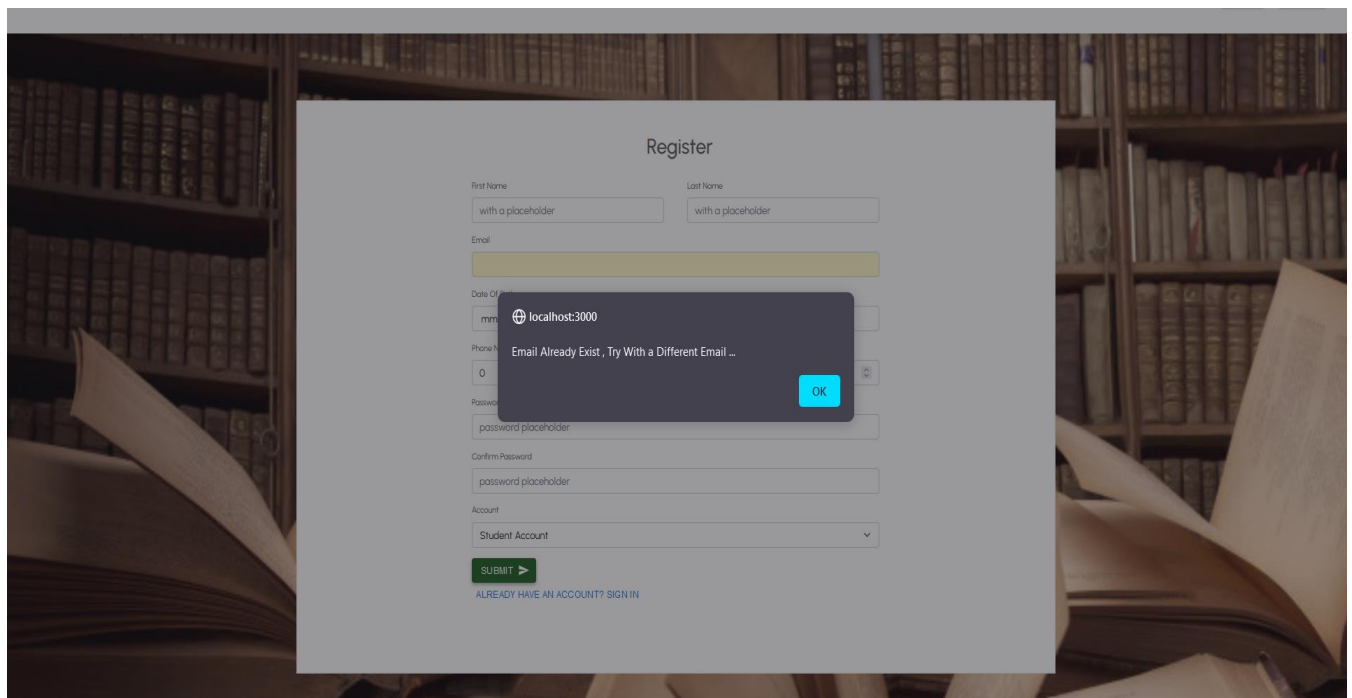
SAVE CHANGES

Update Profile



Auth Validations

1.



2.

EN

Search

Q

Notes Creator.

HOME

SIGN IN

Register

First Name

ahamed

Last Name

yoonus

Email

new

Date Of Birth

06/

Phone Number

044300

Password

Confirm Password

Account

Personel Account

SUBMIT

>

ALREADY HAVE AN ACCOUNT? SIGN IN

localhost:3000

Invalid Phone Number.....(Phone Number Must Contains 10 numbers)

OK

3.

EN

Search

Q

Notes Creator.

HOME

SIGN IN

Register

First Name

ahamed

Last Name

yoonus

Email

new

Date Of Birth

06/

Phone Number

0778

Password

Confirm Password

Account

Personel Account

SUBMIT

>

ALREADY HAVE AN ACCOUNT? SIGN IN

localhost:3000

Password Miss Match

OK

Docker

Frontend

```
=> [internal] load build context                                0.2s
=> => transferring context: 7.13kB                             0.1s
=> CACHED [2/5] WORKDIR /app                                   0.0s
=> CACHED [3/5] COPY package.json .                           0.0s
=> CACHED [4/5] RUN npm install                                0.0s
=> [5/5] COPY . .                                             3.7s
=> exporting to image                                         0.5s
=> => exporting layers                                         0.3s
=> => writing image sha256:a9ae1e515cfb0e45d77e2777d776a10dd2c15defccd69f3ff04f2979114a090c 0.0s
=> => naming to docker.io/library/frontend_react-app         0.0s
```

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
Recreating frontend_react-app_1 ... done

Backend

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
```

```
PS E:\Surge_Global\Assignment_Surge1> cd backend
PS E:\Surge_Global\Assignment_Surge1\backend> yarn start
yarn run v1.22.18
=> [3/5] COPY package.json .                                  1.1s
=> [4/5] RUN npm install                                     265.1s
=> [5/5] COPY . ./                                           0.6s
=> exporting to image                                         7.1s
=> => exporting layers                                         6.4s
=> => writing image sha256:7d9cf11ff9f9c6cfc7bb99d61e4783392cd0a389 0.1s
=> => naming to docker.io/library/backend_node-app           0.1s
```

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
Creating backend_mongo-express_1 ... done
Creating backend_node-app_1 ... done
Creating backend_mongo_1 ... done
PS E:\Surge_Global\Assignment_Surge1\backend> []