

Lecture Monitor by Group Aratech

This document is to provide a brief overview of the project and it's usage

OVERVIEW

A lecture monitor project which helps in attendance checking, monitoring students activities and lecturers.

Lecture Monitor allows students set easily set up accounts and setup personal time tables to easily track their activities and events. Students too are part of a class or department which has it's timetables as well

TECHNOLOGIES USED

Lecture monitor is based on a wide range of technologies from front to back and even mobile. These technologies include:

- JavaScript Programming Language
- MongoDB Database
- Express.js on the backend
- ReactJS on the frontend
- Native android development with the Java Programming Language

Other services that were used in the application includes

- [SendGrid](#) - For easy sending of transactional emails within the application.
- [MongoDB Atlas](#) - A free cloud mongodb server, useful when deploying the application.
- [Cloudinary](#) - A free file hosting service for storing images, as well as all other types of file documents.
- [Heroku](#) - A free hosting platform where the production version of the application is hosted.
- [Netlify](#) - A free hosting platform for frontend javascript applications.

SYSTEM OVERVIEW

The backend, frontend and mobile are completely decoupled from each other. The backend service, interacts with the mongoDB database.

Authentication is achieved using JSON web tokens, which is used to securely authenticate users on the platform. Using passportJS, the system is able to properly authorize users. This token is securely saved in localstorage on the browser and inside a shared preferences file on the mobile device.

Backend

The backend uses NodeJS/ExpressJS as the main framework. it follows the Model Route Controller architectural pattern. It uses the popular mongoose library to connect to the database. The backend is responsible for

1. Authenticating and authorizing users
2. Interacting with the database and serving data via the mongoose library and bringing back the data in the form of JSON
3. The backend is also responsible for sending the files over to clouddinary for them to be stored there.

Frontend

The frontend uses ReactJS as the library of choice. It provides a web view that interacts with the backend through rest api, using the axios library. Complete list of libraries used within the frontend include

- axios - For connecting to the backend rest api
- redux - A production ready state management solution for javascript applications
- react-redux - A react wrapper for redux
- redux-thunk - A redux middleware that allows writing actions that return a function instead of an action
- UIKIT - a CSS framework that allows easy creation of beautiful web pages
- Cogo Toast - For displaying nice toast messages inside react
- Node-Sass - Easy compilation of sass code into css
- moment - An easy to use date and time utility library for javascript
- Formik and yup - For easy form validation
- React router dom - For routing inside react application, etc

Mobile

The mobile application uses Java as the programming language of choice, which is used to build a native android application. Some libraries used by the mobile application includes

- Google material design library - For beautiful designs following the material design specification
- Glide - For easy loading of images
- Retrofit and okhttp - For connecting to the backend rest api, etc

The web app can be accessed at <https://lecture-monitor.netlify.app>

Screenshots

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lecture-monitor.netlify.app

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The World's Smartest Lecture Monitoring system

Take Charge With Your Phone
Important Notifications Only

Highly Encrypted Attendance

This screenshot shows the homepage of the Lecture Monitor application. It features a large banner with the text "The World's Smartest Lecture Monitoring system". Below the banner, there are two main sections: "Take Charge With Your Phone" and "Important Notifications Only". The "Take Charge With Your Phone" section includes a sub-section "Highly Encrypted Attendance". On the right side of the page, there are social media links for Facebook, Twitter, and Instagram. The top navigation bar includes links for "Home", "contact", "Student' Home", and "Log out".

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lecture-monitor.netlify.app/student/profile

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Francis Gyimah

Index No - 9343117
Email - fgyimah883@gmail.com
Department - Bsc. Computer Engineering 3
Phone No - 0240571651

Edit Profile Delete Account

NUMBER OF EVENTS

EVENT	NO:
Personal	1
Class	0

Lecture Monitor Developers Our Initiatives Terms of use
Contact Who we are Privacy policy

This screenshot shows the student profile page for Francis Gyimah. It displays his profile picture, index number, email, department, and phone number. There are buttons for "Edit Profile" and "Delete Account". To the right, there is a section titled "NUMBER OF EVENTS" with a table showing one personal event. At the bottom, there is a footer with links for "Lecture Monitor", "Developers", "Our Initiatives", "Terms of use", "Contact", "Who we are", and "Privacy policy".

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Today Back Next Monday Jun 22 Day Week Agenda

12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM 7:00 AM – 8:00 AM Go to gym
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM

Upcoming events
No Upcoming Events now...

Ongoing events
No Ongoing Events now...

ADD A NEW PERSONAL EVENT

Event Name

Start Time: 22/6/2020 18:47

End Time:

Repeat Daily Weekly Off

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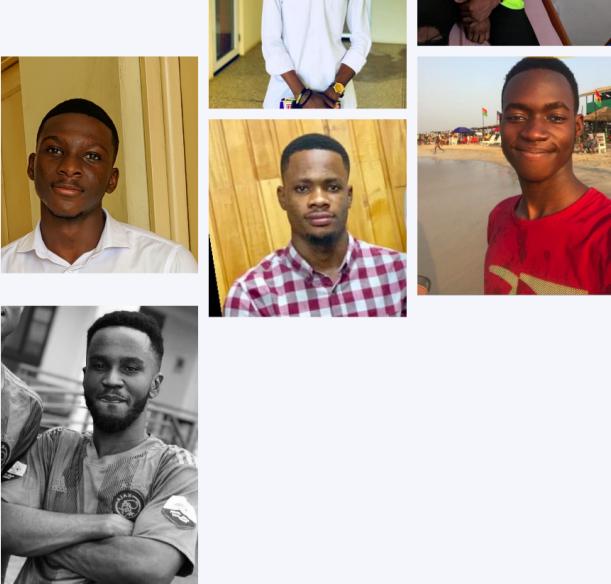
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every step of the way

- ✓ 24/7 response system
- ✓ Well dedicated team to guide you every step of the way
- ✓ FAQs to help you answers to most frequently asked questions
- ✓ A support page where you can channel all your questions



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Adjei Donald(Member, Frontend Team)


Rafiq Yakubu Chentiwuni(Member, Backend Team)

Get In Touch

Name

Email

Message

Submit

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Meet The Developers

Meet the People behind Aratech and Lecture Monitor, who made this project a huge success


Godfred Doe(Project Manager)


Gyimah Francis(Deputy Project Manager)


Appiah Augustine(Backend Team Leader)

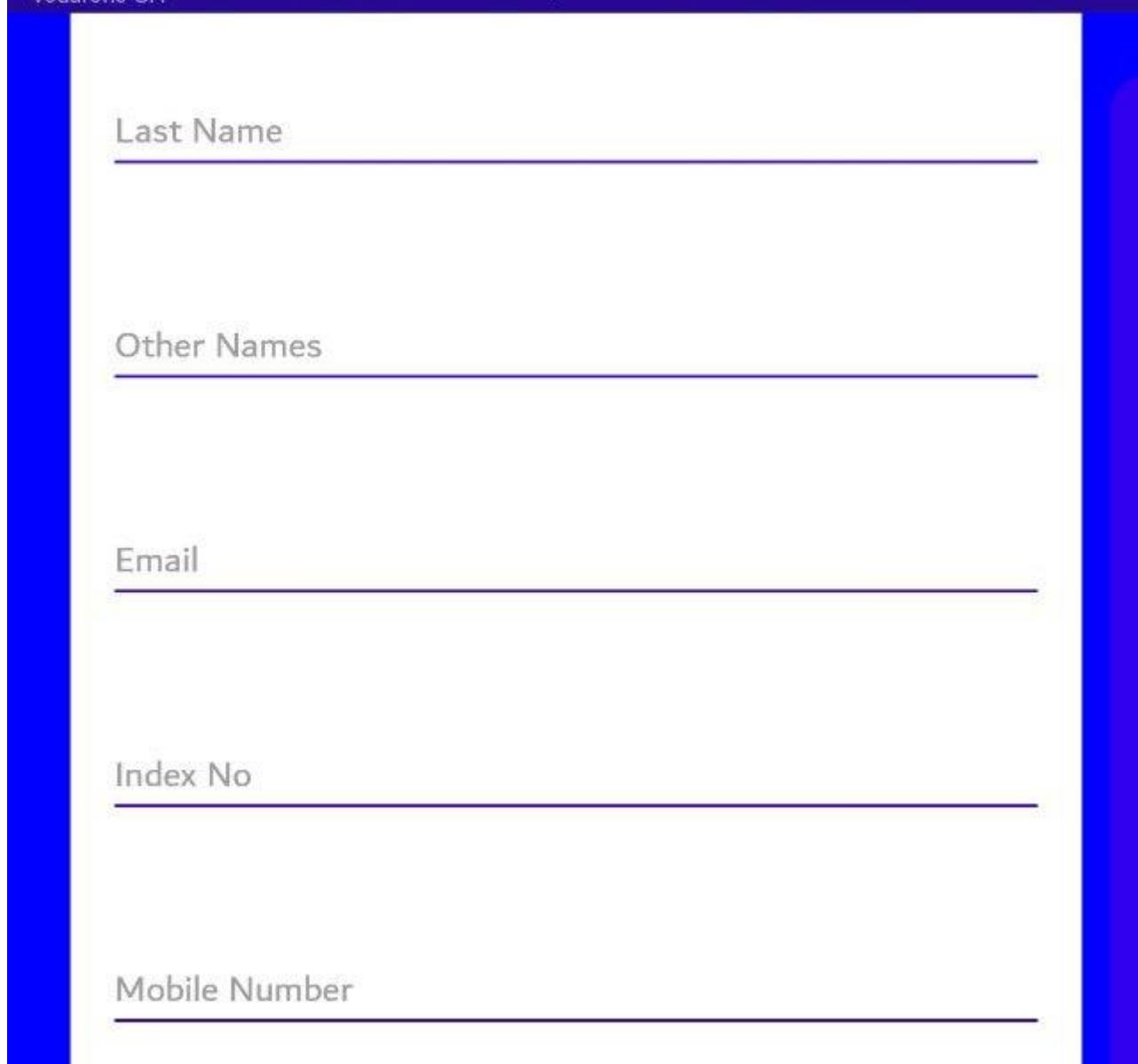
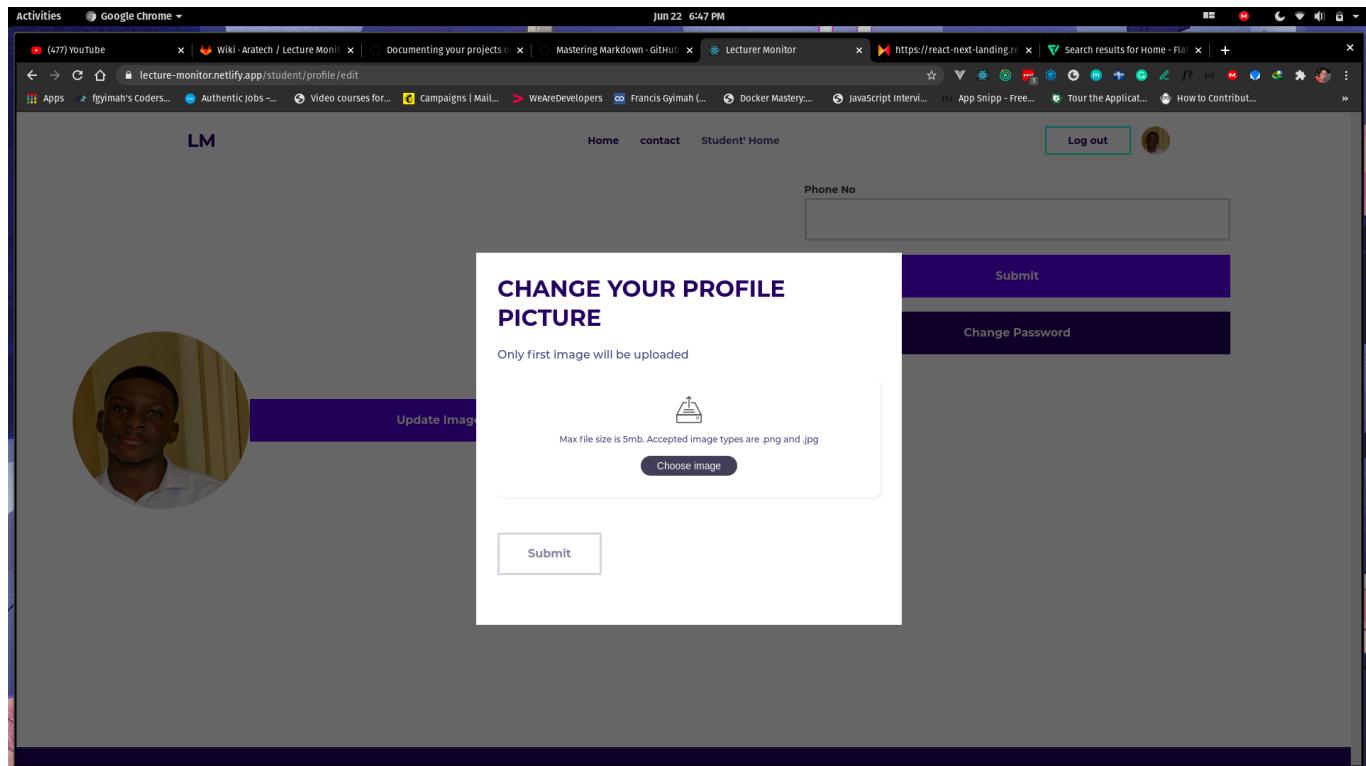

Owusu Amponsah Clifford(Frontend Team Leader)

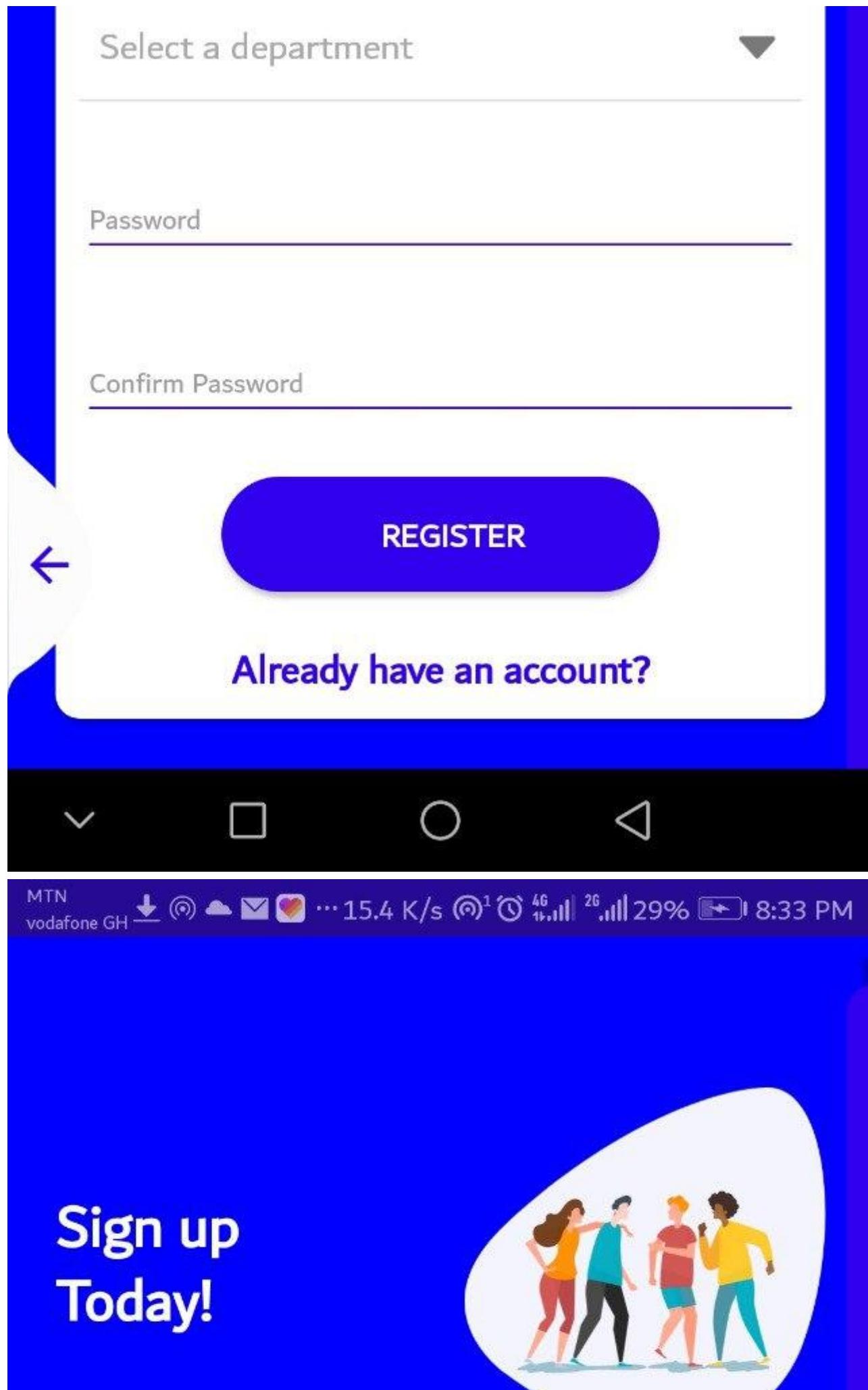

[Placeholder]


[Placeholder]


[Placeholder]


[Placeholder]





First Name

Last Name

Other Names

Email



Index No

Mobile Number



Already have an Account?



Index No

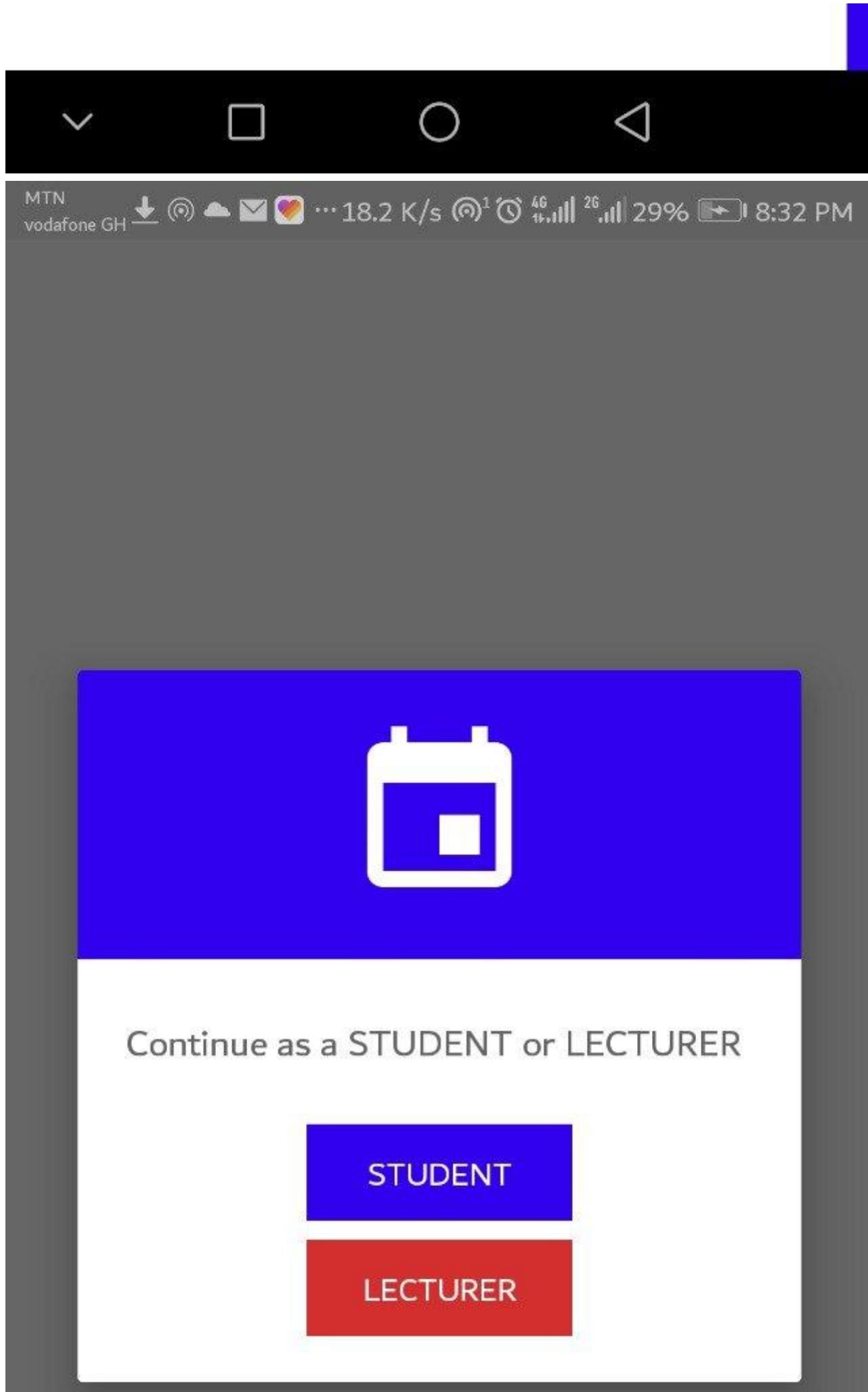
Password

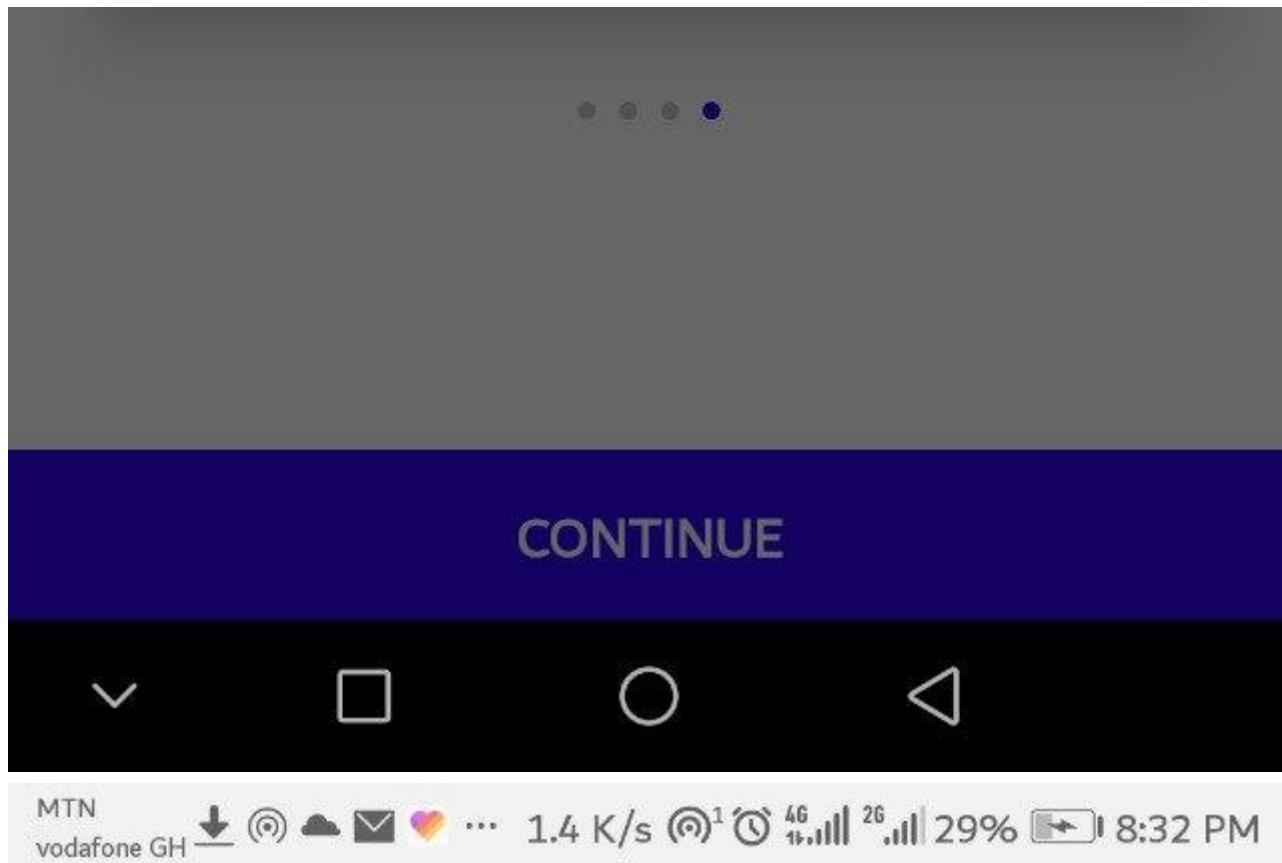
[Forgot Password?](#)

LOGIN

New user? Register Now

+

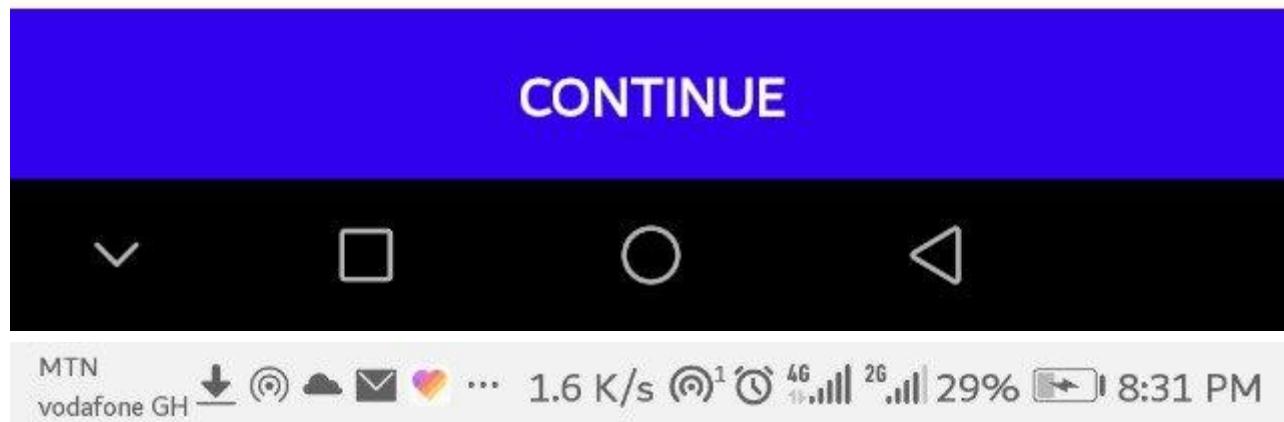




Plan for the exam

All to equip you as you journey to the
final day!!!

• • • •





Important notifications only

Curated notifications to make sure
you don't miss anything related to
lectures, assignments, etc

• • • •

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