REPORT

Mobile Application Development

ACADEMIC YEAR - 2020

Semester 1

[Group Assignment]

Introduction

Project title: Boarding Hubs

The goal and objectives

With the corona pandemic, carefulness is highly motivated. The main goal of this project is to help employees of the Courtaulds, to manage their boarding needs in the pandemic situation. And this can also be used to manage boarding advertisements and renting houses for employees easily, effectively and reliably. So, our main objective is to build a mobile application for employees to select their boarding needs online in a reliable and user-friendly environment. The employees will be able to select their boarding houses or rooms and boarding houses owners have the benefit of doing their business to a large group of customers.

Nowadays, because of the corona pandemic, holders of the Courtaulds company need to know about the places where the employees live. They need to get the truthful details. There is no unique platform for employees in Courtaulds to fulfill their needs. In modern-day society, companies tend to use an automated system rather than a manual system. This system satisfies the need.

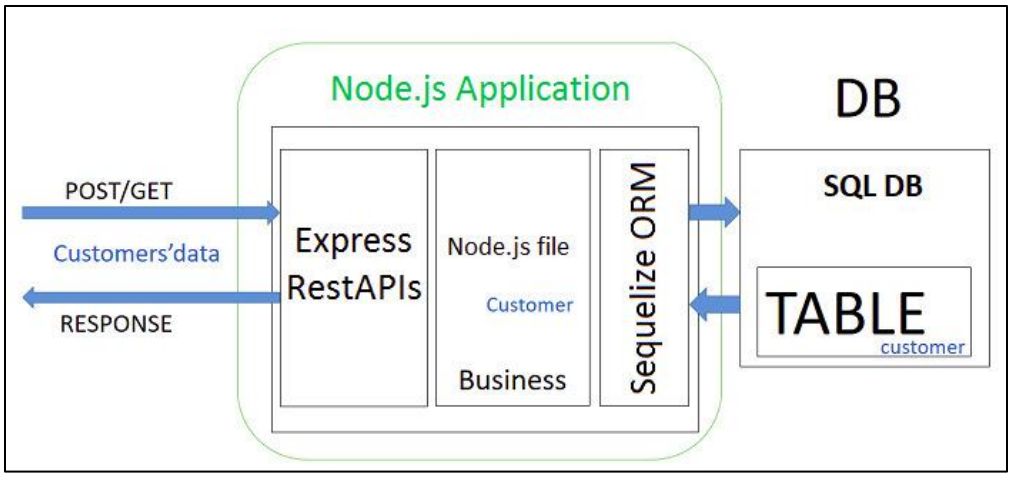
As a team, our solution is to introduce a new platform for Courtaulds company which provides the above-mentioned services. The main deliverables are a web-based system for the boarding owners and admins, and mobile app, for employees and owners. Here, this product is a web and mobile application which connects employees and service providers.

Boarding house owners around the company, can share their advertisement in this section targeting the employees of the Courtaulds company. This process is a sustainable eco-friendly process as the need for printed paper advertisements will not be necessary.

Users (possible actors) of the system:

- Boarding houses owners
- Owners of renting houses
- Admins
- Employees of Courtaulds company

Main functionalities of the system:



- Sharing advertisements of boarding houses
- Selecting boarding houses
- Using sequelize ORM for nodejs backend
- Using filters
- Using encryption methods for password
- Using middleware functions to the backend
- Support for multiple languages
- Admin panel for admins

Innovativeness and Uniqueness

Finding boarding places is a hard task for employees these days because of the corona situation. Our goal is to provide correct information and user reviews through our mobile app. With these, employees can get an idea without visiting and wasting money. And also, boarding owners can save their time and money on advertising and showing boarding conditions for only visitors.

Compared to other online services for boarding house renting, our objective here is to build standards in boarding house renting focusing on employees with sanitized.

Functional and Nonfunctional requirements

Nonfunctional

In our boarding hub application does not take more than three seconds to load initial screen and also, it made sure that app will not hindrance to the user Input. we made this

for when the user data increases app has capable of handling them without delay by optimizing the way storage is done and accessed.

The most interesting thing is When boarding hub app gets interrupted by call, then app able to save state and return to same state or page which was there before it got interrupted. User able to understand the flow of App easily without any guideline or help from experts or manuals.

if our user is in any age, no problem. Because we built UI/UX as simple and with much attraction. For the attraction we use a theme colour and more colourful.

The most important thing is Security is high in boarding hub application. All authentication token can be saved on local device for comparison and need user permission to gain access. System will be storing critical data such as passwords, transaction details. Encryption methods should be used to build the privacy of the system

Functional

The intended our mobile application 4 major functional requirements that will cause the most

impact of the system to the users. The functional requirements are listed below:

- sign in page
- sing up page
- Filter Screen
- Manage files
- Real time update

This section lists the functional requirements in ranked order. The functional requirements

will define how the Student mobile app will function

1. sign

2. Home page

3. profile page

4. profile edit

5. privacy content

6. Hotline content

7. Guideline content

8. contact us

9. about us

11. Terms and condition

Overview of technologies

The system proposed is going to be developed using several technologies. We are going to use flutter for the front end and node js for backend, ms sql for database and react for the admin panel. React allows developers to create large web applications that can change data, without reloading the page.

We will be using mssql as the database because the project is a relational structure which can easily be mapped by an ER diagram and also, we are not expecting extremely large amounts of requests per second and also, so it is secured. Here we used node js for backend. Node js is amazing with ms sql. We can run queries on our database with ease. There's a package called mssql that's available on npm and widely used to execute sql queries to a database.

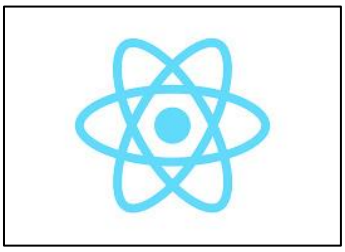
Flutter

Here we are using flutter for developing of front end. We used flutter because it is Google's mobile app sdk, complete with a widgets, framework, and tools, that gives developers an easy way to build and deploy visually attractive, fast mobile apps on both Android and iOS platforms. Flutter apps work in a smooth and fast way, without hanging and cutting while scrolling. In here, we used flutter localization to change language also. Use of the flutter GetX helps us to build app easier. These are the main reasons that why we had selected flutter for creating user interfaces. Flutter can handle same android and ios app using one code base. We built our app for both.

React

In this project, react will be used for developing the admin panel. Admin panel for providers management. Using the admin panel, we can update delete and approve user details. React allows developers to create large web applications that can change data, without reloading the page. The main purpose of React is to be fast, scalable, and

simple. The core objective of ReactJS is providing the best possible rendering performance.



Node js

We used node js for back end.Node.js is an open-source technology that does not require costly licensing. One of the benefits of open-source technology is that free libraries and customization features can be uploaded to the Internet by anyone. In node we used sequelize. It features solid transaction support, relations, eager and lazy loading, read replication and more. Sequelize provides various methods to assist querying in the database for data. Sequelize.js has good support for database synchronization, eager loading, associations, transactions, and migrations. And also, we used middleware functions. Middleware functions to have access to the request object, the response object, and the next function in the application's request response cycle. As an example, we used multer to upload images in node js.

Microsoft Sql

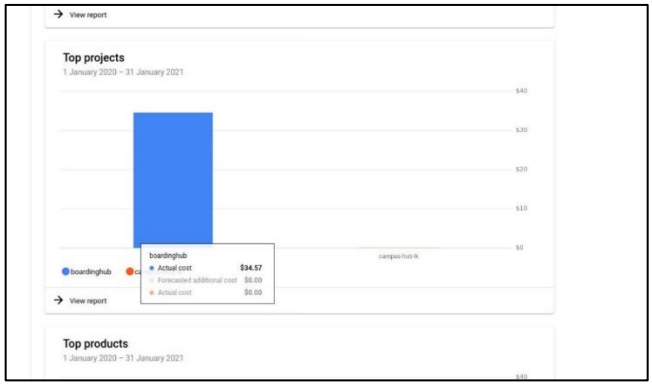
Here we were use MS SQL Server as the Data base. The system is designed and built is to manage and store information. The system supports various business intelligence operations, analytics operations, and transaction processing.

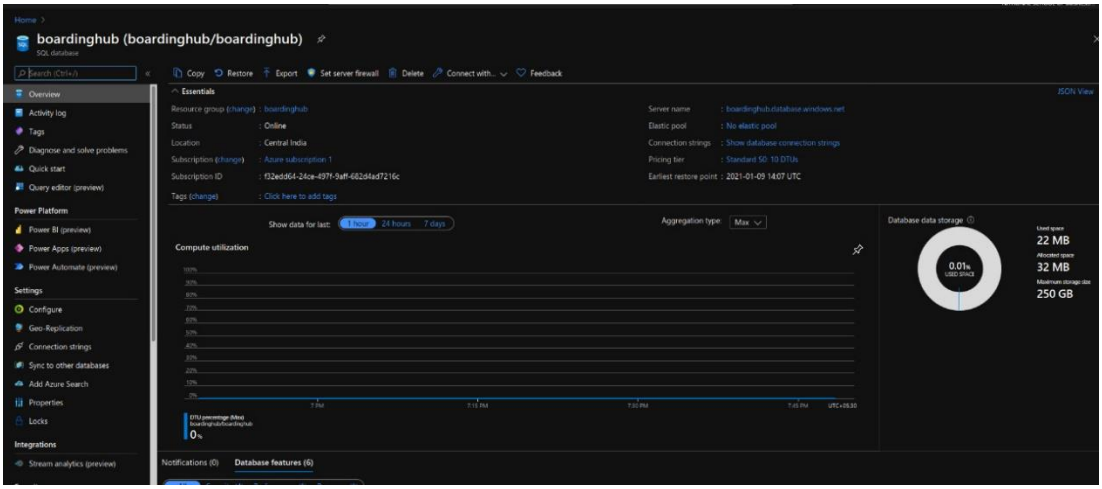
SQL Server provides high scalability as it can be used for small projects as well as large applications. In this database we had encrypted password also. We used procedures,

triggers, and views also to develop the database. Mssql gives better performance and high speed while retrieving the data for the application.

Deployment to clouds

In the google cloud we had hosted our backend. Through the node js backend code we connected google cloud with sdk. App Engine offers us a choice between two Node.js language environments. With using Microsoft Azure we hosted our database also.



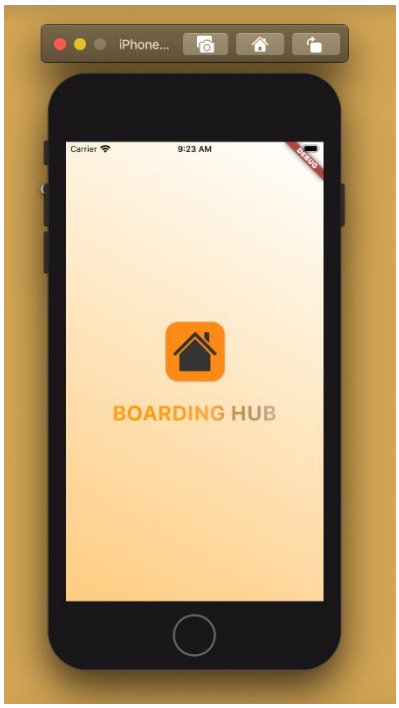


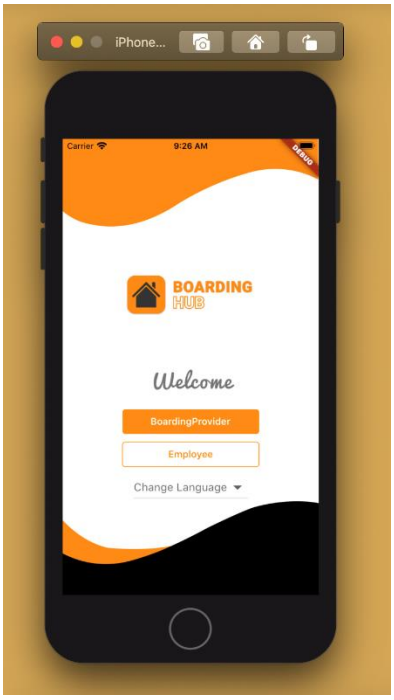
Test Plan

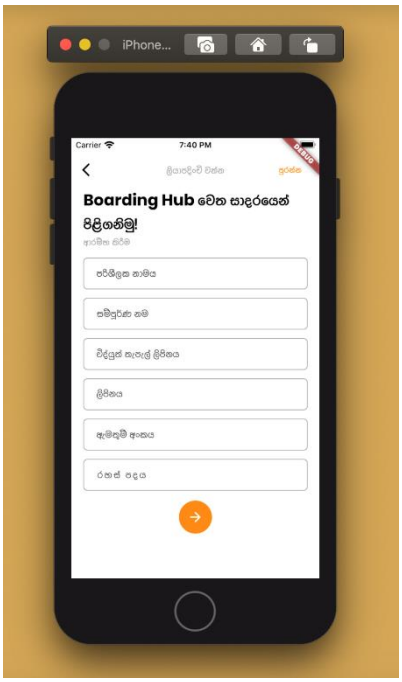
Test Case ID	Test Description/Test case name	Prerequisite	Test Steps	Input Data	Expected Result	Actual Result	Status	Severity	Priority	Executed by	Comments
TC_001	Verify if the user able	there should be	1.enter the user name	kasuni	user should able to loging	there should be get a	pass	high	high	S.Perera	user must insert
	to sign up to the	valid details of the	2.enter the full name	kasuni hansamali	the system	successful messege					valid information
	system	users	3.enter the email	kasuni@gmail.com	sign up page will display						
			4.enter the password	123@4	a successful notification						
			5.click the confirmation	click the sign up	messege						
			button	button							
TC_002	Verify if the user able to sign in	there should be	1.enter the email	kasuni@gmail.com	user should able to	there should be get a	applicable	high	high	S.Perera	user must insert
	to the app	valid details	2.enter the password	123@4	login the app	successful messege					valid information
		of the user			sign in page will display						
					a successful notification						
					messege						
TC_003	check the language translation	it should be	1.open the app	click on the button	the page should be	it will display the	pass	medium	medium	S.Perera	user can use
	of the app	change all the	2.click the button change	change language	change into sinhala	sinhala letters on the					English or Sinhala
		app into sinhala	language	and select sinhala	language	app					as the language
		language	3.select sinhala								
			5.check the changability								
TC_004	check the colours of the app	there should be	1.open the app	check the whole	it should be displaying	there should be	applicable	medium	medium	S.Perera	app has to get
		the theme colour	2.check the all pages	app	colours on the app and	displaying colours					the attraction
		and it should be			there should be a	on the app					of the users
		colourful			theme colour						

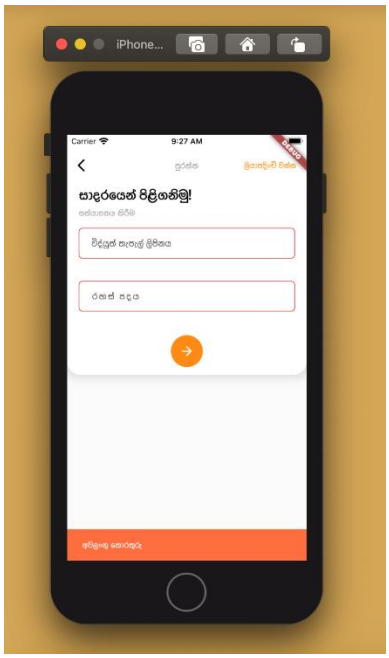
36												
37												
38	TC_005	verify the time that how much	test the response	1.open the app		check the all the progress	it should be get time	fail	medium	medium	S.Perera	it is better to
39		system takes to	time that until to	2.start the proceed	check the time	withing 5 minitues	of 6 minutes to end					make the app
40		finish the proceed	end	3.calculate the time								faster
41				4.finish the proceed								
42												
43												
44	TC_006	verify the boarding provider	it should be adding	1.open the app	sign up to app	it should be display	there will be	pass	high	high	S.Perera	provider must
45		able to sign up to	valid details	2.do the progress	1.Gamini Hewage	the profile page	display the profile					enter valid details
46		the app	of the boarding	3.go to the profile page	2.gam@gmail.com	with the details of	page of boarding					
47			providers	4.enter name	3. 0335614145	boarding provider	providers					
48				5.enter email								
49				6.enter mobile								
50												
51	TC_007	verify the messege when enter	test the messege	1.enter the email	kasuni@gmail.com	it will be displayed a	it should get an error	fail	high	high	S.Perera	there is invalid
52		wrong details to sign in	when entering the	2.enter the password	1@123	messege of unsuccessful	messege					information
53			incorrect details									
54												
55	TC_008	verify if the boarding houses	check the	1.open the app	sign up to app	there will be displayed	there will be displayed	pass	high	high	S.Perera	entering ads on
56		can enter the app by	display of the	2.add the deatails of the	create add with	the add on Ads page	the add on Ads page					app
57		boarding providers	ads page	boarding house	correct details							
58				3.check the Ads page	check Ads page							
59												
60	TC_009	verify when the time is out,	check the messege	1.open the app	calculate the	it should be get a	it should be getting an	fail	high	high	S.Perera	calculating
61		the messege what isdisplaying	when the time	2.do the progress slowly	time	messege that telling	error messege					time
62			is out	3.calculate the time		sorry, time is out'						
63												

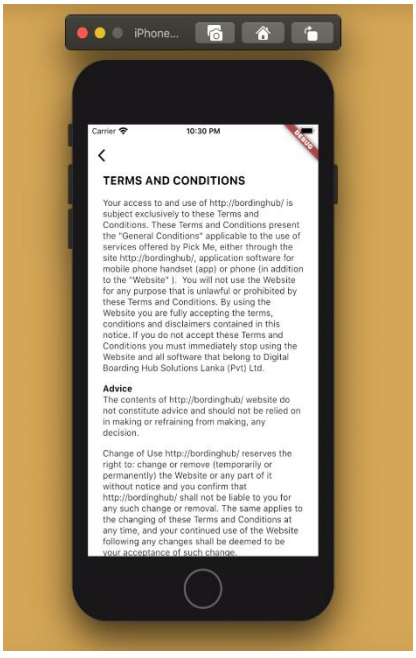
User Interfaces

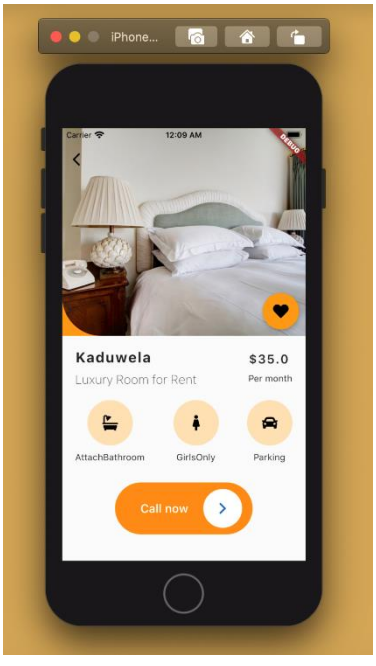


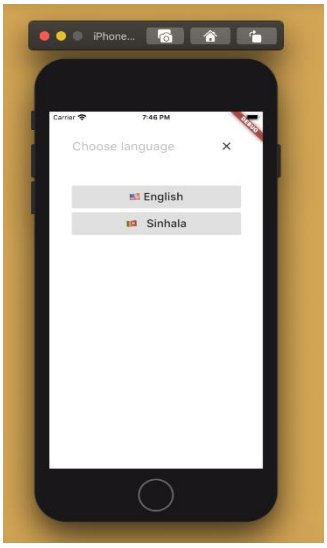








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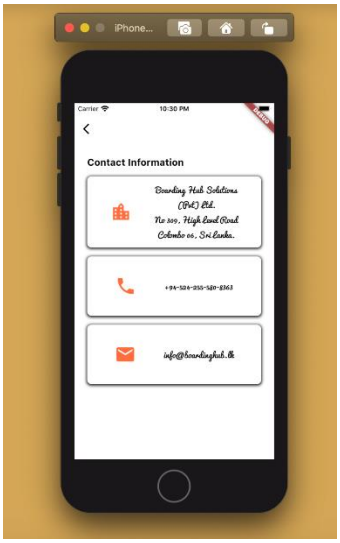
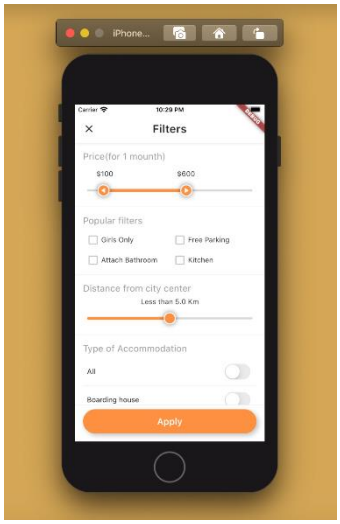
Choose language
English
Sinhala


iPhone...
Contact Information

iPhone...
Most Viewed
20 Items
Newly Added
15 Items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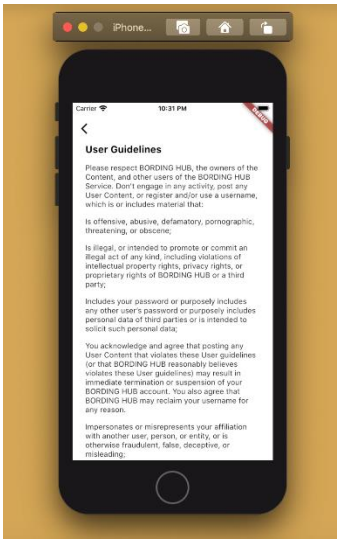
Filters
Price(for 1 mounth)
$100
$600
Popular filters
Girls Only
Free Parking
Attach Bathroom
Kitchen
Distance from city center
Less than 5.0 Km
Type of Accommodation
All
Boarding house
Apply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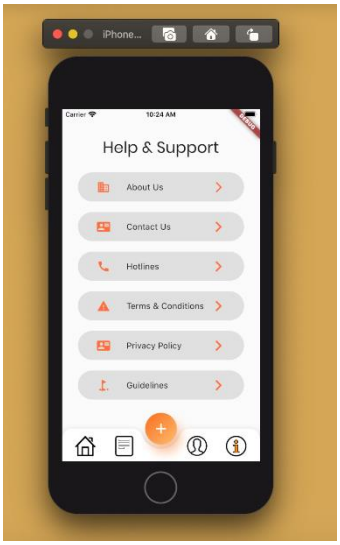
User Guidelines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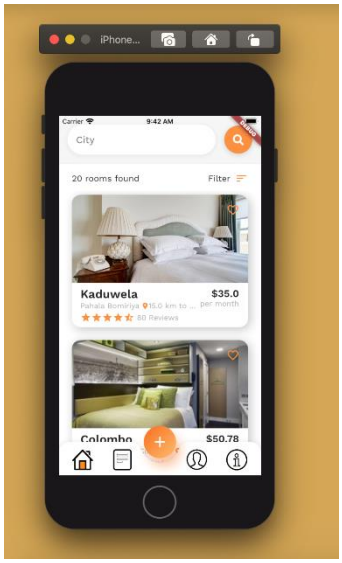
Help & Support
About Us
Contact Us
Hotlines
Terms & Conditions
Privacy Policy
Guidelines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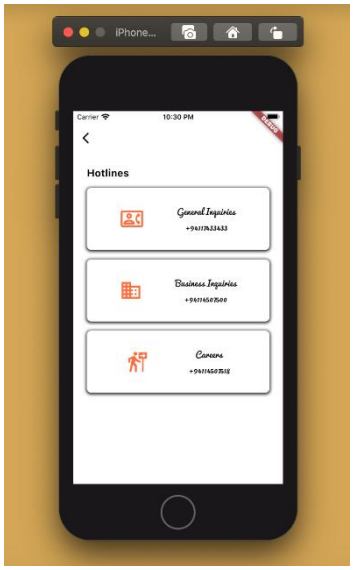
20 rooms found
Filter
Kaduwela
$35.0
Colombo
$50.78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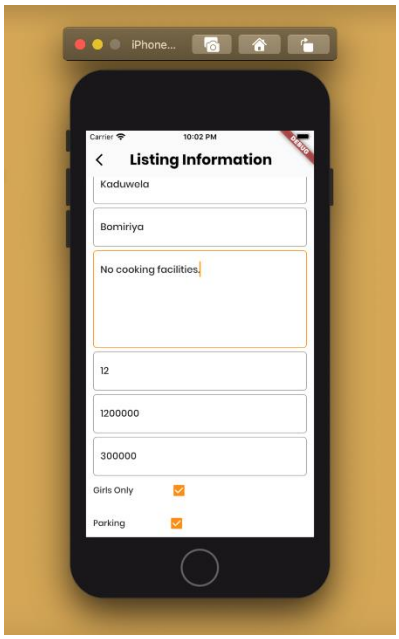
Hotlines
General Inquiries
Business Inquiries
Careers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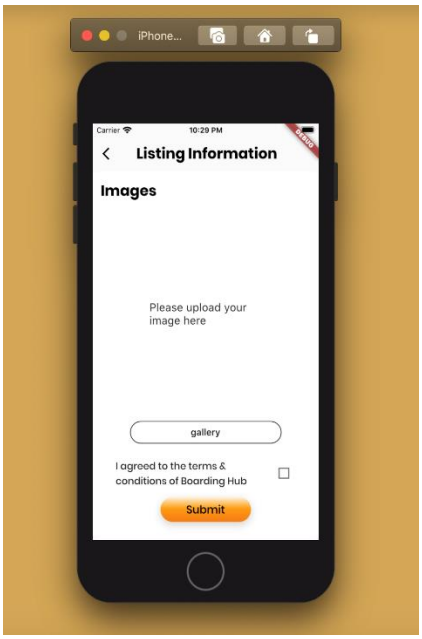
Listing Information
Kaduwela
Bomiriya
No cooking facilities.
12
1200000
300000
Girls Only
Parking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Carrier
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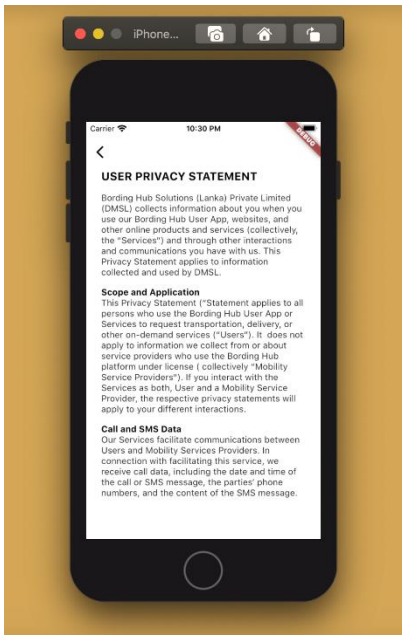
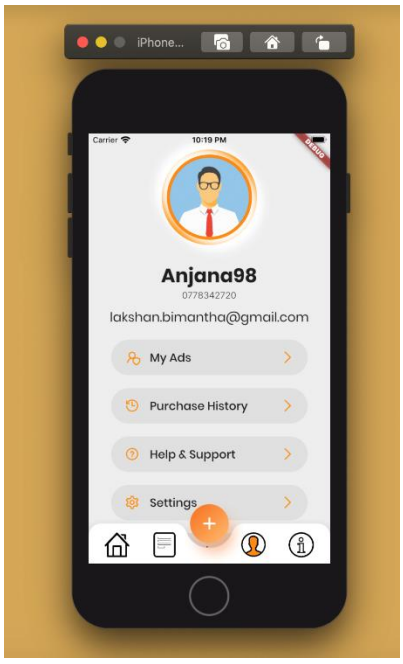
Listing Information
Images
Please upload your image here
gallery
I agreed to the terms & conditions of Boarding Hub
Submit


iPhone...
Carrier
10:30 PM
USER PRIVACY STATEMENT
Bording Hub Solutions (Lanka) Private Limited (DMSL) collects information about you when you use our Bording Hub User App, websites, and other online products and services (collectively, the "Services") and through other interactions and communications you have with us. This Privacy Statement applies to information collected and used by DMSL.
Scope and Application
This Privacy Statement ("Statement applies to all persons who use the Bording Hub User App or Services to request transportation, delivery, or other on-demand services ("Users"). It does not apply to information we collect from or about service providers who use the Bording Hub platform under license (collectively "Mobility Service Providers"). If you interact with the Services as both, User and a Mobility Service Provider, the respective privacy statements will apply to your different interactions.
Call and SMS Data
Our Services facilitate communications between Users and Mobility Services Providers. In connection with facilitating this service, we receive call data, including the date and time of the call or SMS message, the parties' phone numbers, and the content of the SMS message.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Carrier
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Anjana98
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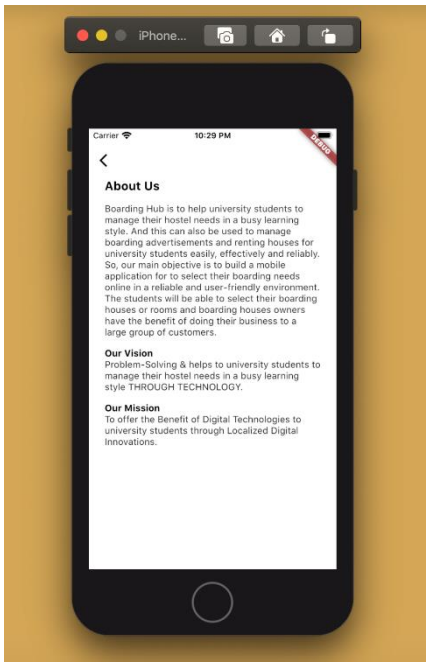
My Ads
Purchase History
Help & Support
Settings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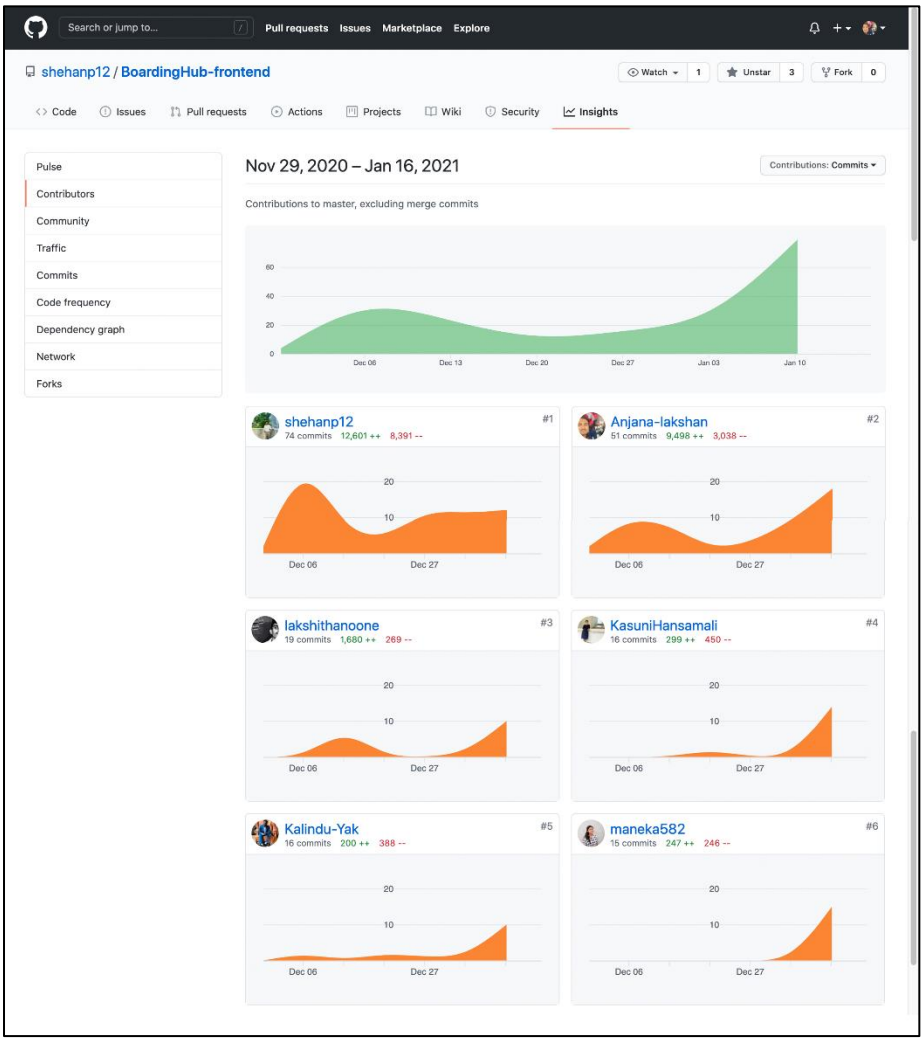
Carrier
10:29 PM
About Us
Boarding Hub is to help university students to manage their hostel needs in a busy learning style. And this can also be used to manage boarding advertisements and renting houses for university students easily, effectively and reliably. So, our main objective is to build a mobile application for to select their boarding needs online in a reliable and user-friendly environment. The students will be able to select their boarding houses or rooms and boarding houses owners have the benefit of doing their business to a large group of customers.
Our Vision
Problem-Solving & helps to university students to manage their hostel needs in a busy learning style THROUGH TECHNOLOGY.
Our Mission
To offer the Benefit of Digital Technologies to university students through Localized Digital Innovations.

Team Members Details

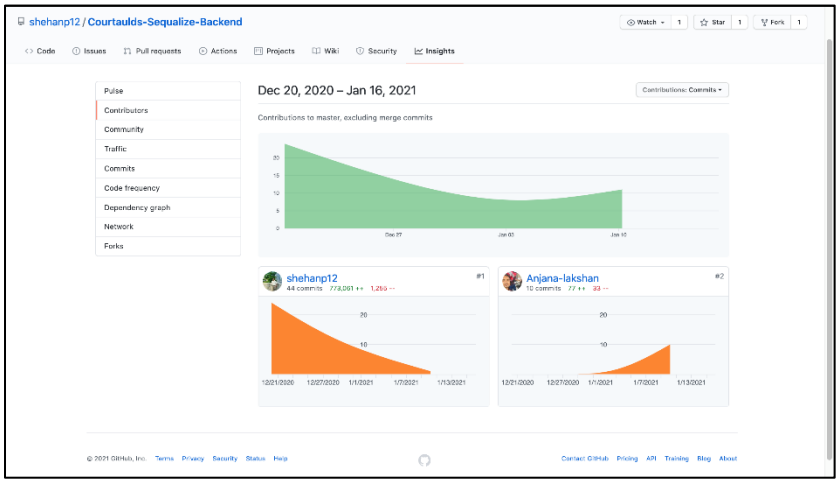
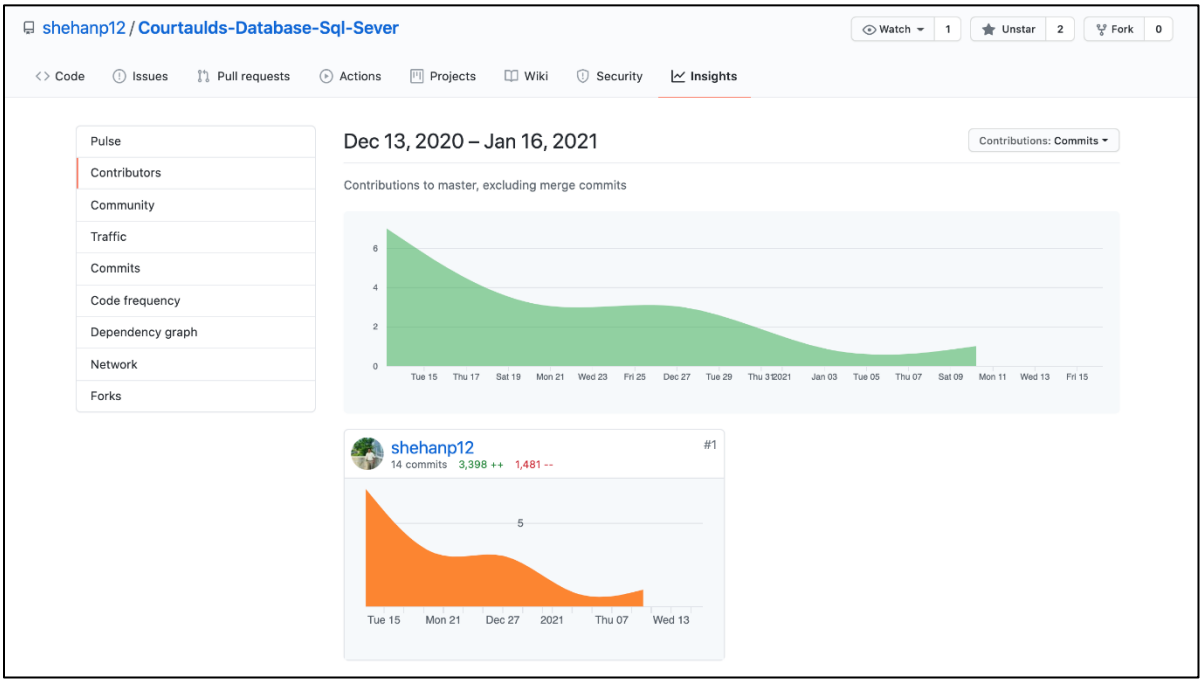
Name	Student ID
KASP Kasthuriarachchi	21017688
SAL Dimantha	21089195
PK Hansamali	21019368
LK Kothalawala	21089281
BMKT Balasuriya	21019535
HMMM Bandara	21018539

Project source-code GitHub link

https://github.com/shehanp12/BoardingHub-frontend - flutter -frontend



https://github.com/shehanp12/Courtaulds-Sequalize-Backend -node backend



https://github.com/shehanp12/Courtaulds-Database-Sql-Sever-sql server database