Department of Computer Application

University of Petroleum & Energy Studies, Dehradun

MINOR-I PROJECT

REPORT

ON

Submitted By

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Under the guidance of

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ACKNOWLEDMENT

I would like to express my special thanks of gratitude to my teacher (DR VINAY AWASTHI) as well as our course coordinator (SONALI MA'AM)who gave me the golden opportunity to do this wonderful project on the topic "HOSTEL MANAGEMENT SYSTEM", working on this project has helped us to put our ideas to more realistic and challenging . We actually pushed us to the point where we implemented the problems which we faced and actually come up with something that solved the issues.

Secondly we would also like to thank our parents and friends who helped us a lot in finalizing this project within the limited time frame. At last we want to thank our Project reviewer Dr.Kaushik Ghosh who gave us real time solutions and made our project much better.

Abstract

Necessity is the mother of invention, we at our website we tend to make the user experience for our users and students more interactive and lay down more information to them. Here we compare different hostels depending on the type of service they provide so that students can find home according to their choice. We can also make the payment done for the hostel and grab our seats for it at earliest. We also bring a featured website which raises ticket for students facing problem in their respective rooms with day out and night out pass facility. This website is something students were looking forward from a long time, it serves as one place all solution. It also helps the warden or the hostel management to have hassle free service and information about the students where about, it promotes paper free work which tends to promote the SDG and new India.

Introduction

As student face a lot of difficulty in finding a true place for themselves, so thought for it and tend to make it free for the students, respective we will charge the hostels for getting featured on our website, as students need a platform for finding place of their requirement. Looking at the student and hostel requirement we brought things that can pile up the entire work and comes as a solution for all. As the demand for this kind of work is high but there is no platform for the same, so we insisted on solving a problem that was there from before and that can really help the students of UPES. At first we try our beta project with the areas around Bidholi, Kandoli, Pondha, Nanda Ki Chowki and Dunga and then we go live with Dehradun and boundaries ahead.

Problem Statement:

Provide hassle free platform for the students and help them finding their homes and a well featured platform for hostel management.

Solutions to problem statement

- We made a platform where students can and compare the listed hostels in the area.
- the management system enables the student to login and report their problems as well as their movement in / out of the hostel campus
- the management system enables the warden to keep track of student movement as well as his / her whereabouts
- there is a portal for guard and all the people associated to the work that makes it hassle free
- by doing this we solve the paper free and provide student and hostel a user friendly experience which helps them in daily hostel life

Literature Review

We as students faced a lot of difficulties while finding a place for ourselves and when we come to the campus the first thing is the hostel and hence the campus hostel cannot provide accommodation for all so we have to get us a desired place to live , so looking out on that issue we came up with this idea of hostel management system which not only provide us to find the hostel of our choice but also helps us in providing a platform for the hostel so that they can have a hassle free work system . as day out and night out pass is required , so we focus on email and message generated work which saves paper but also keeps us in loop with the hostel on current basis. Students face problems in their rooms so they can raise a ticket on the website and get the hostel notified about their problem and get things done at real time basis, while this shortens the time and energy. So we actually focused on the requirement of a student and tried to work for their help.

Objective :

- Website to find hostel of their of own choice
- Well established hostel management system
- Paper free work

Methodology:

In this project we are using, **Feature Driven Development (FDD),** methodology as our project is full of features that will provide a unique taste for our customers.

It’s an iterative and incremental approach for development. It’s an older methodology but it still has lot to deliver. Features are a foundational piece of FDD and our whole project revolves around bunch of user friendly features for betterment of the hostels around our campus, UPES.

Our portal would have a different view along with different authority for its users.

Example:

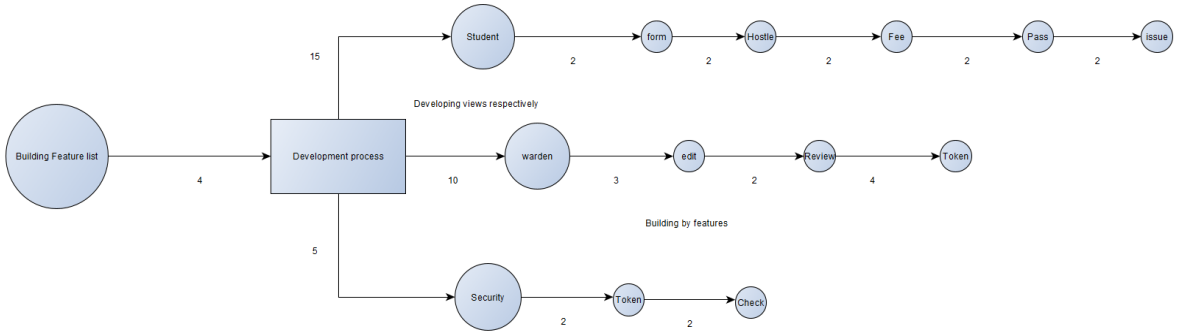
- Student
- Security officer
- Warden
- Developer and many more.

System Requirements: (Software/Hardware)

- Good internet connection.
- Web browser.
- Smartphone/ computer to access the internet.

Schedule: (PERT Chart)

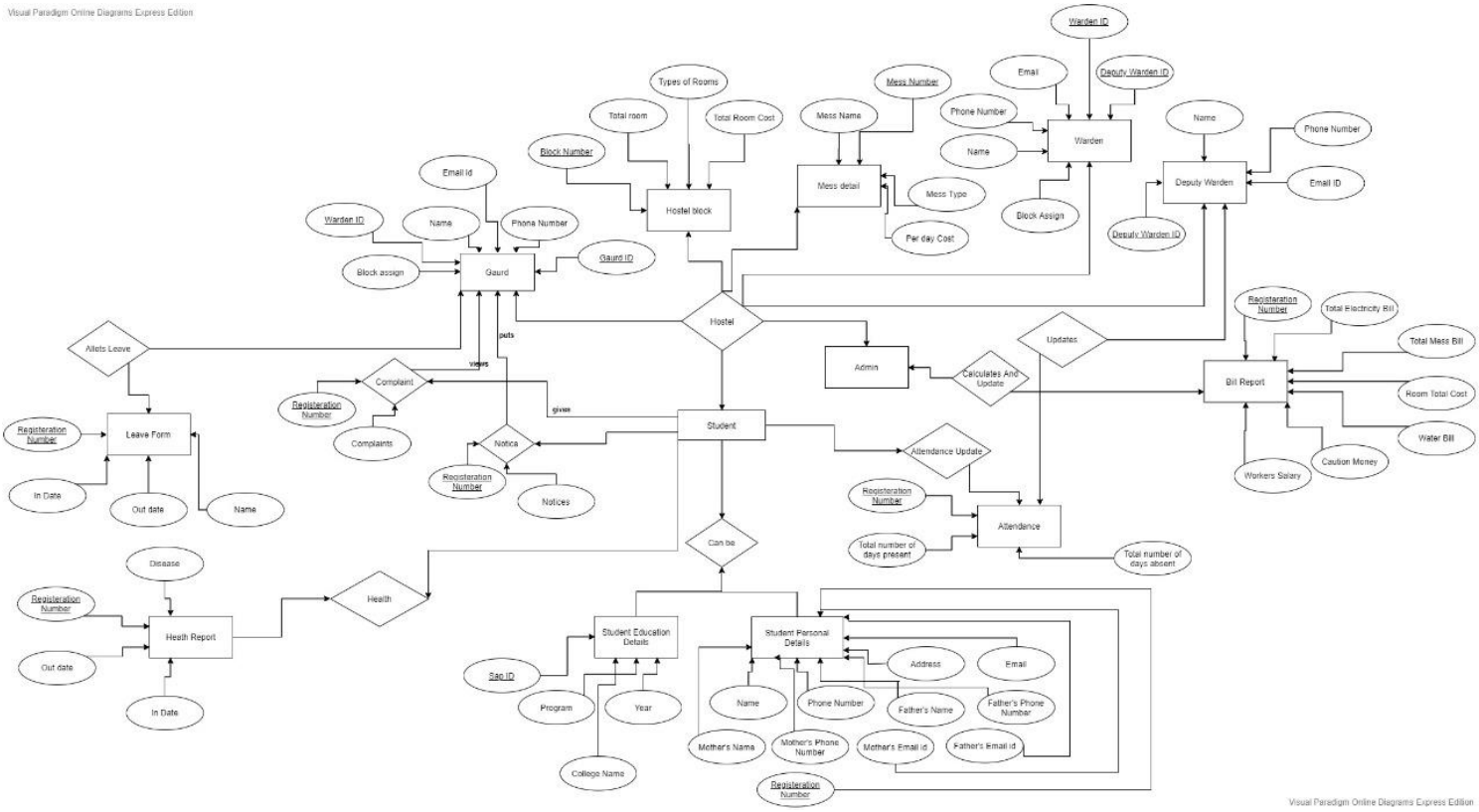
Program Evaluation Review Technique is a project management tool that provides a graphical representation of a project's timeline.
We have laid down the milestones necessary to complete this project timely.



The figure below provides the activity and the time required to complete this project.

* Based on the methodology this chart has been created. High priority has been given to our features.

ER DIAGRAM

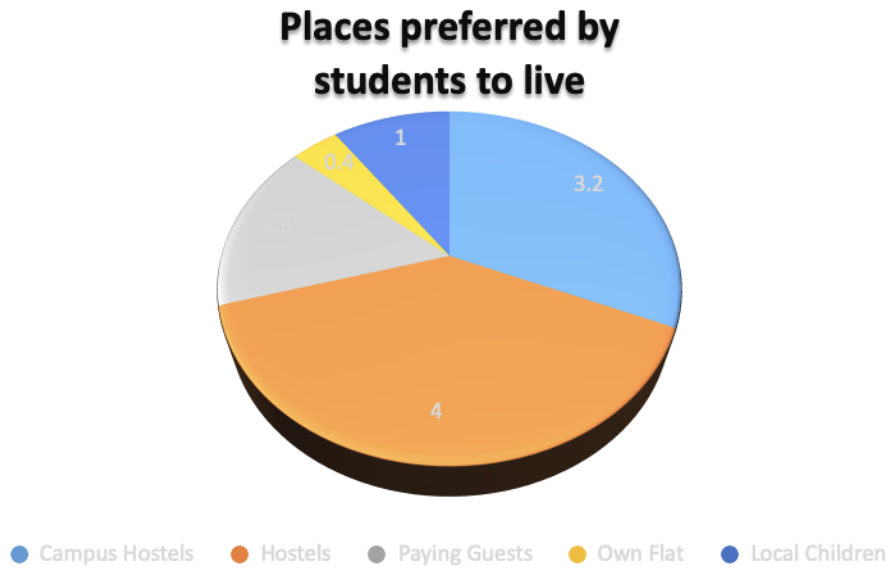

Visual Paradigm Online Diagrams Express Edition
Warden ID
Email
Deputy Warden ID
Types of Rooms
Mess Number
Total room
Total Room Cost
Mess Name
Phone Number
Name
Warden
Name
Phone Number
Block Number
Mess detail
Deputy Warden
Email ID
Email id
Mess Type
Hostel block
Block Assign
Warden ID
Name
Phone Number
Per day Cost
Deputy Warden ID
Block assign
Gaurd
Gaurd ID
Registeration Number
Total Electricity Bill
Hostel
Updates
Allets Leave
puts
Total Mess Bill
Admin
Calculates And Update
Complaint
views
Bill Report
Registeration Number
gives
Room Total Cost
Leave Form
Student
Complaints
Notice
Attendance Update
Water Bill
Registeration Number
Caution Money
In Date
Out date
Name
Registeration Number
Workers Salary
Registeration Number
Notices
Attendance
Can be
Total number of days present
Total number of days absent
Disease
Health
Registeration Number
Heath Report
Student Education Details
Student Personal Details
Address
Email
Out date
Sap ID
Name
Phone Number
Father's Name
Father's Phone Number
In Date
Program
Year
Mother's Nama
Mother's Phone Number
Mother's Email id
Father's Email id
College Name
Registeration Number
Visual Paradigm Online Diagrams Express Edition

DATA ANALYSIS

We have done quite a research on internet about the information of hostels and their procedures. 95% of the hostels depend on the paper work for small things like day out pass and night out pass. 40-50% of the students are just doing sign the passes themselves. Even their parents don't know about it. So that's why we figure out to make a platform where we can make an easy way for warden, guards and parents to know about the children where they are and when they go out and when they come in for whole year. Our platform also has the data of each child of that particular hostel of each day so that warden and parents have absolute information. It will reduce the paper work and will save paper also so, it will be environment friendly too. And now a days all country is progressing on "Digital India" hence our project is one step towards it. It will not create mess for any person, it will be easy to access and use.

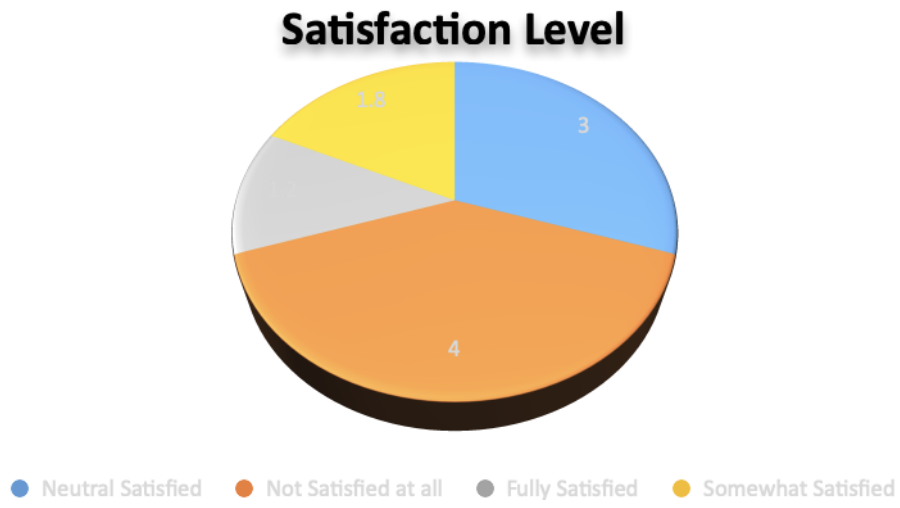
According to our research, we find out students are preferring which kind of place to stay. So there are five different places students are going. Firstly it is campus hostels, secondly it is hostels near their college, thirdly they are living as paying guests, fourthly own their flats and last but not least, there are local children.

We created a pie chart according to our research, we cannot say it's perfect but it is approximated idea of the students where they are preferring to live and it has all five different places preferred by the students.



Being students, we have faced many problems finding good hostel for that too we have created a platform that would have hostels around that particular area you have searched and what facility they are providing. If you search on Google, no one provides you the information hostels available in that area with their facilities and fee structures. There are some companies like oxfordcaps, stanzaliving which are providing different hostels but they are not providing best of all them. So our platform will provide that information, which will create easy platform to find a best hostel.

We have created another pie chart which will show the satisfaction of students with their stay in hostels. It will show that they are satisfy with the facilities provided by the hostels like food, games, rooms size, their small problems like problem of leakage and electricity many others. That's why we will have option of raising a query of problems faced by children.



DATABASE

We are using Firebase database service from Google. It’s a fully-managed no SQL document database for mobile and web app development. It's designed to easily store and sync app data at global scale, and it's now available in beta. Firstly we used mongodb database but then we shifted to firebase database because mongodb is not real time and it stores the data in tabular form whereas firebase is real time and no server less document database that effortlessly scales to meet any demand, with no maintenance.

Why we opt for Cloud Firestore as our database:

- Cloud Firestore is an economical database solution that charges fees only for the operations performed, network bandwidth, and storage. The usage tab helps you keep track of your expenses at any given period.
- Cloud Firestone follows the ACID (atomicity, consistency, isolation, and durability) properties for transactions. Another attractive property of Google Firestone is its ability to perform indexed queries by combining filtering and sorting in a single query.
- Since Cloud Firestore is a Google product, it combines the prowess of the scalable Google Cloud and Firebase Realtime Database.
- It offers live synchronization and support and is quite beneficial in prototyping, and iterating easily due to its serverless properties.
- It provides excellent security for both mobile and web-based platforms. It also offers multi-region replication that ensures that your data is secure even in the event of a disaster.

Some of the key features of Firebase database-

- Documents and collections with powerful querying
- iOS, Android, and Web SDKs with offline data access
- Real-time data synchronization
- Automatic, multi-region data replication with strong consistency
- Node, Python, Go, and Java server SDKs

Managing data is still hard, you have to scale servers, handle intermittent connectivity, and deliver data with low latency.

- **Synchronizes data between devices in real-time.** Android, iOS, and Javascript SDKs sync your app data almost instantly. This makes it incredibly easy to build reactive apps, automatically sync data across devices, and build powerful collaborative features -- and if you don't need real-time sync, one-time reads are a first-class feature.

- **Uses collections and documents to structure and query data**. This data model is familiar and intuitive for many developers. It also allows for expressive queries. Queries scale with the size of your result set, not the size of your data set, so you'll get the same performance fetching 1 result from a set of 100, or 100,000,000.

- **Enables offline data access via a powerful, on-device database.** This local database means your app will function smoothly, even when your users lose connectivity. This offline mode is available on Web, iOS and Android.

- **Enables server-less development**. Cloud Firestore's client-side SDKs take care of the complex authentication and networking code you'd normally need to write yourself. Then, on the backend, we provide a powerful set of security rules so you can control access to your data. Security rules let you control which users can access which documents, and let you apply complex validation logic to your data as well. Combined, these features allow your mobile app to connect directly to your database.

- **Integrates with the rest of the Firebase platform**. You can easily configure Cloud Functions to run custom code whenever data is written, and our SDKs automatically integrate with Firebase Authentication, to help you get started quickly.

The Firebase Real-time Database, with its client SDKs and real-time capabilities, is all about making app development faster and easier. Since its launch, it has been adopted by hundreds of thousands of developers, and as its adoption grew, so did usage patterns. Developers began using the Real-time Database for more complex data and to build bigger apps, pushing the limits of the JSON data model and the performance of the database at scale. Cloud Firestore is inspired by what developers love most about the Firebase Real-time Database while also addressing its key limitations like data structuring, querying, and scaling.

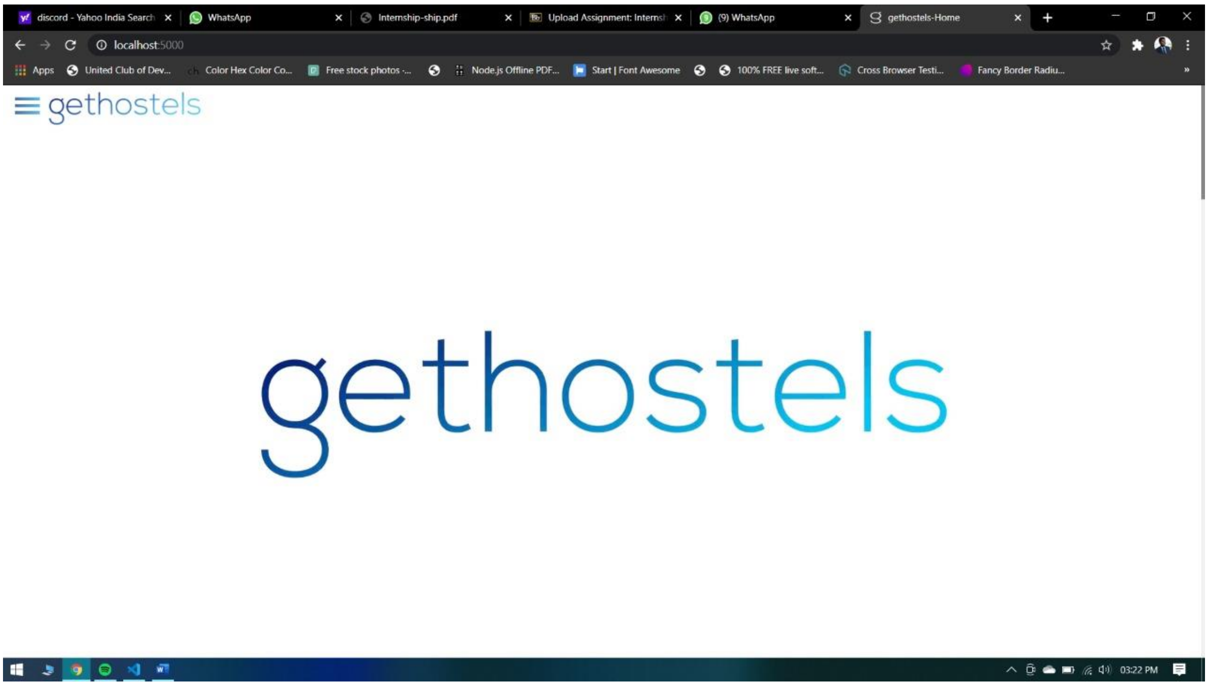
CONCLUSION

Our intension is to provide hassle free service to the students, as there has been no platform for the students to search hostels and now a days things are going online, we believe to provide management system to the hostels so that they can be benefitted with the project, we are starting from Bidholi, but in coming time we will try to implement it in Dehradun and further!

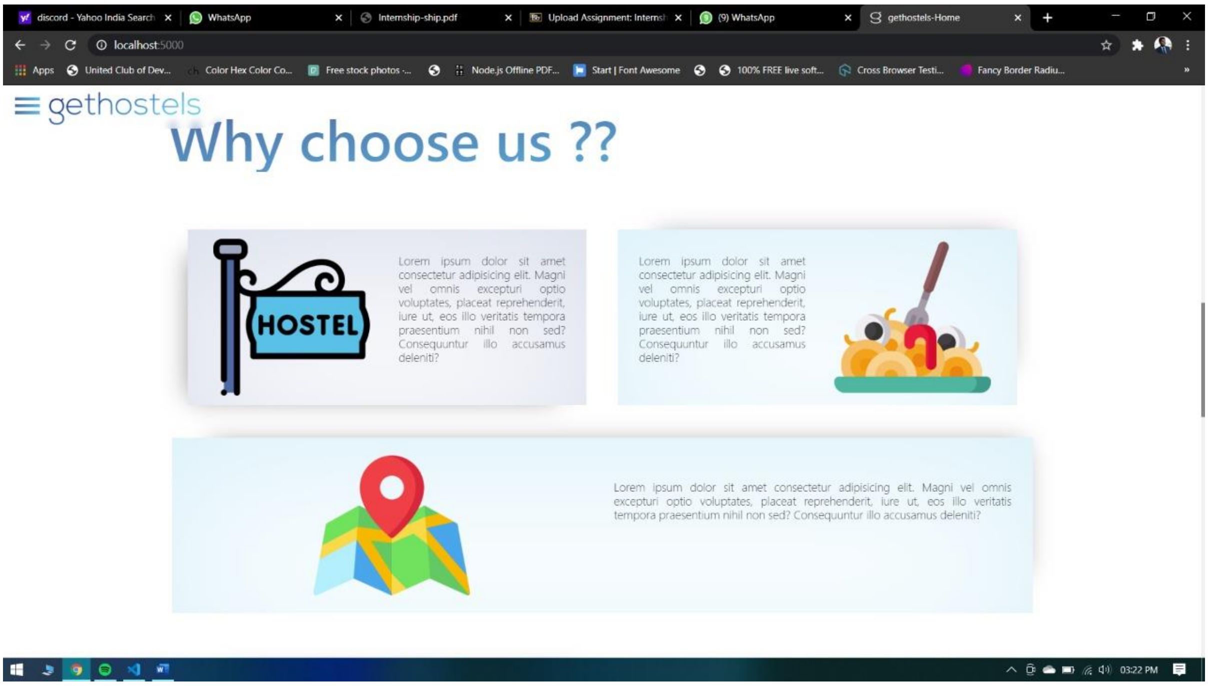
While working on this project we not all utilised our skills but also developed with all the efforts we put into it. The idea to work together and distribute the work among each other has let us to know the value of team work.

SCREENSHOTS

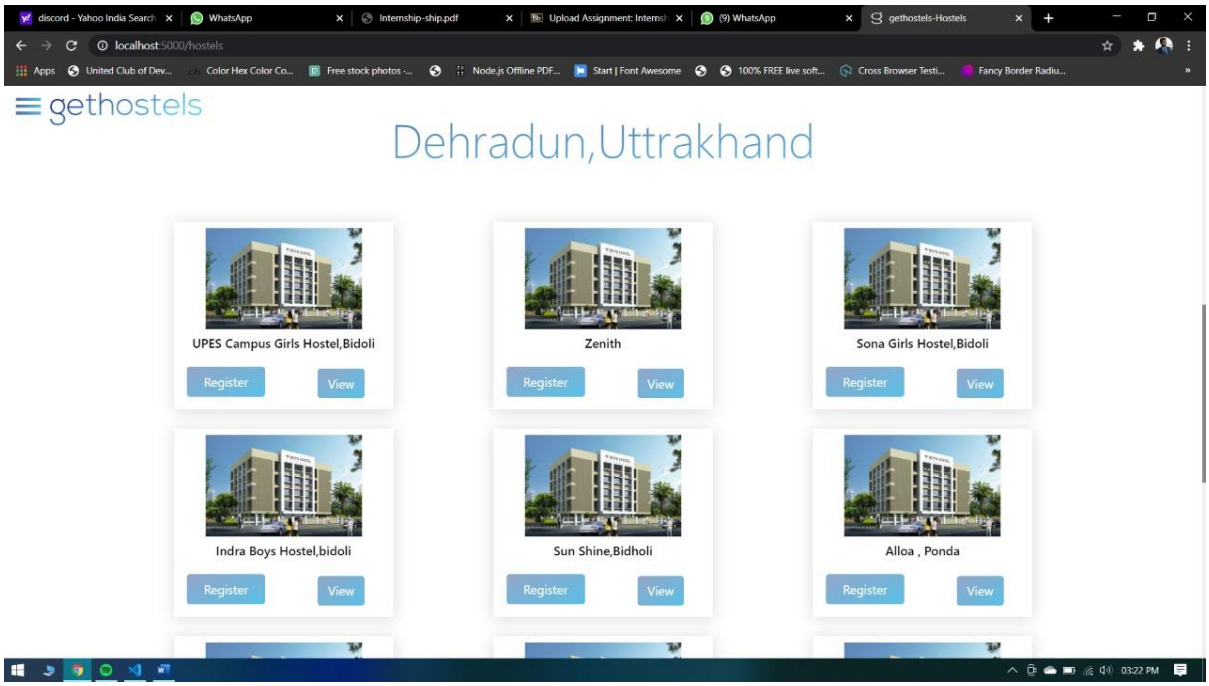
This is the front page of our website



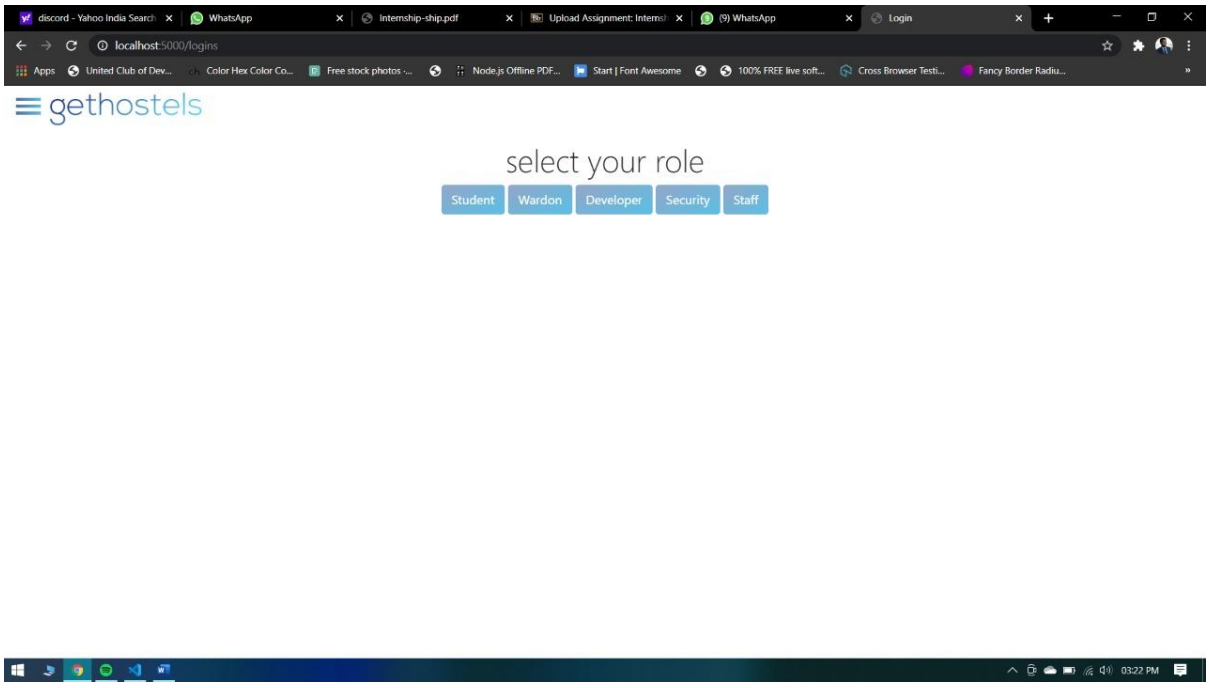
This is the home page where we have tell “why choose us”



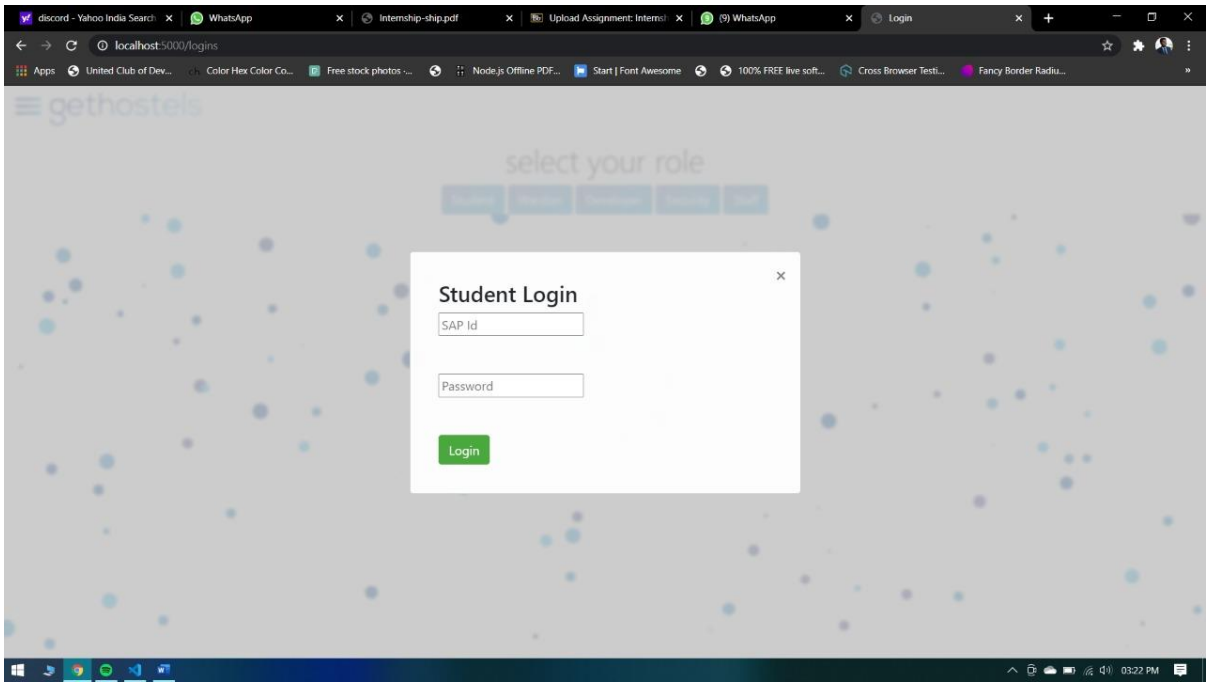
This is where our hostels list available



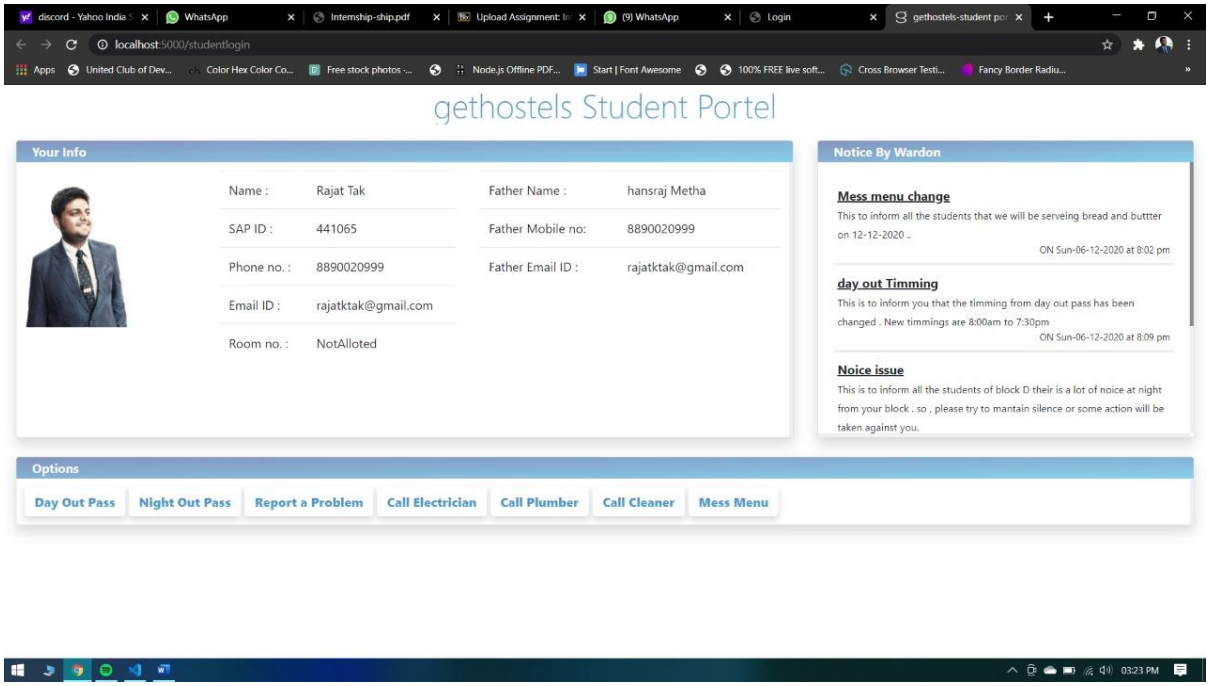
This is the main portal page with respective roles given



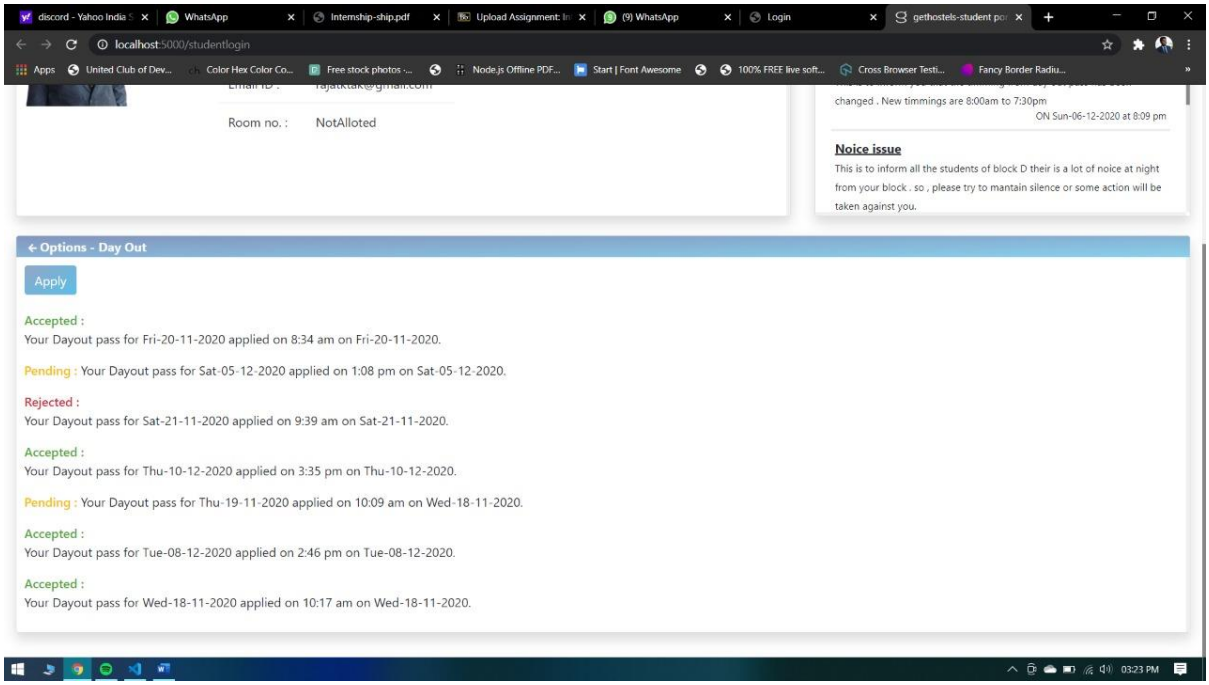
This is the login page for students



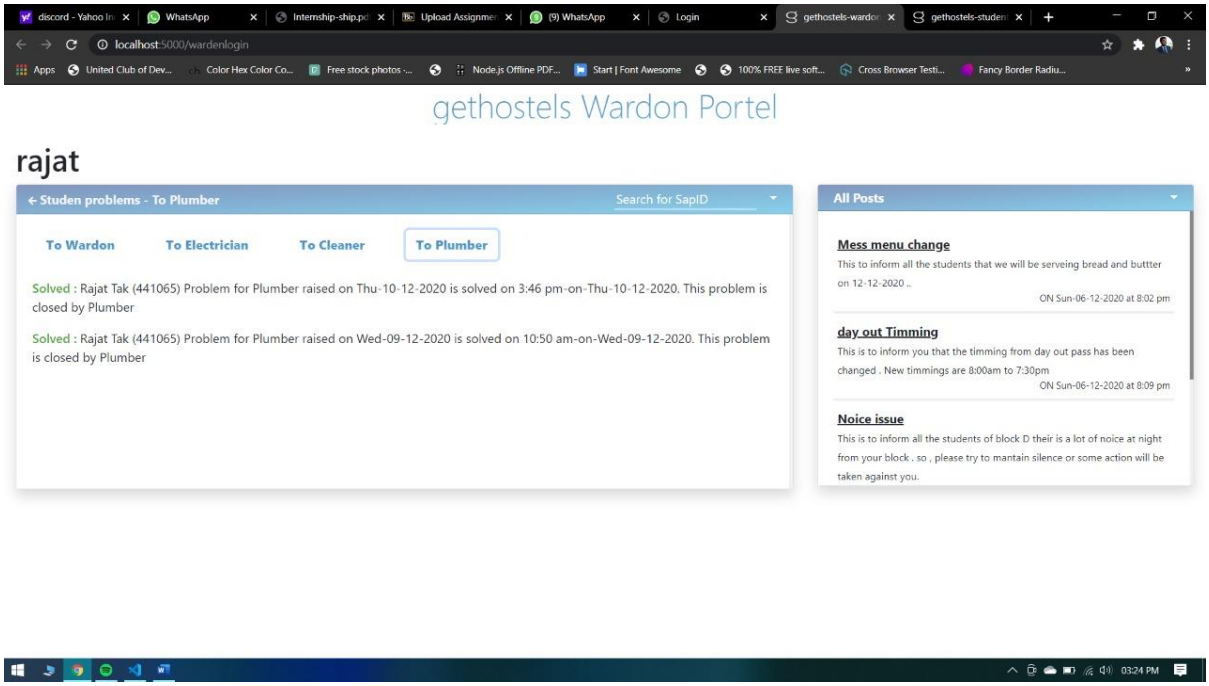
This is the page after logging in student portal



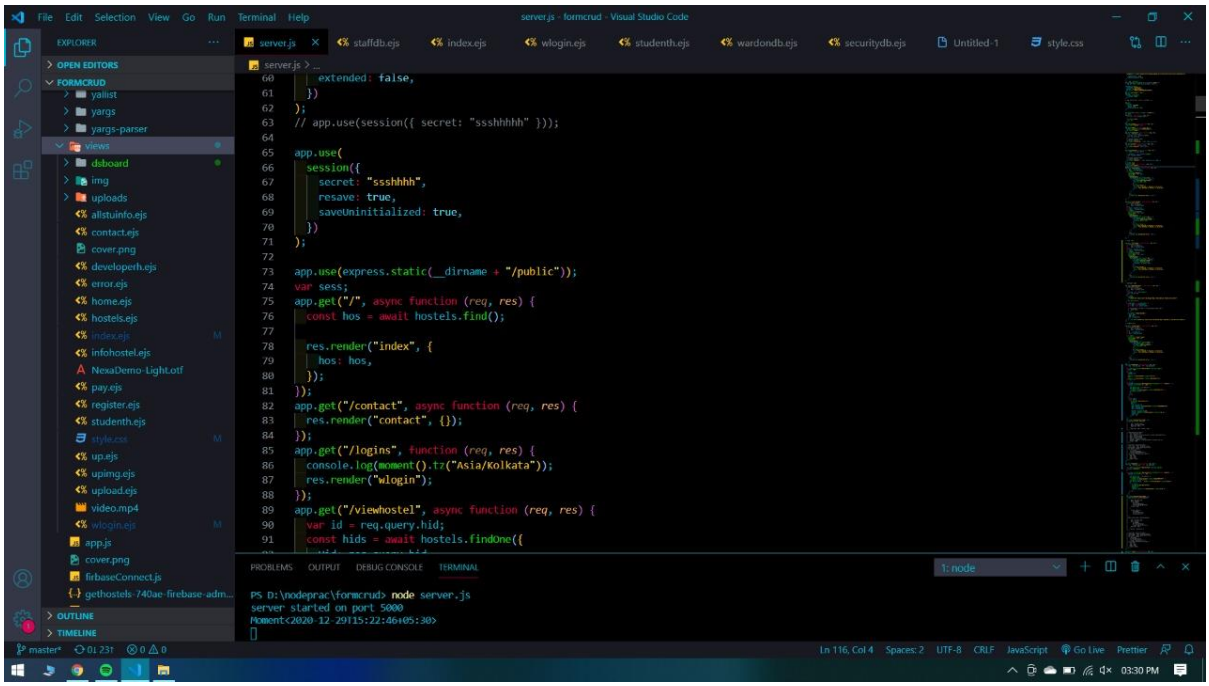
This is the where all the day-out night-out pass records and any query records are available

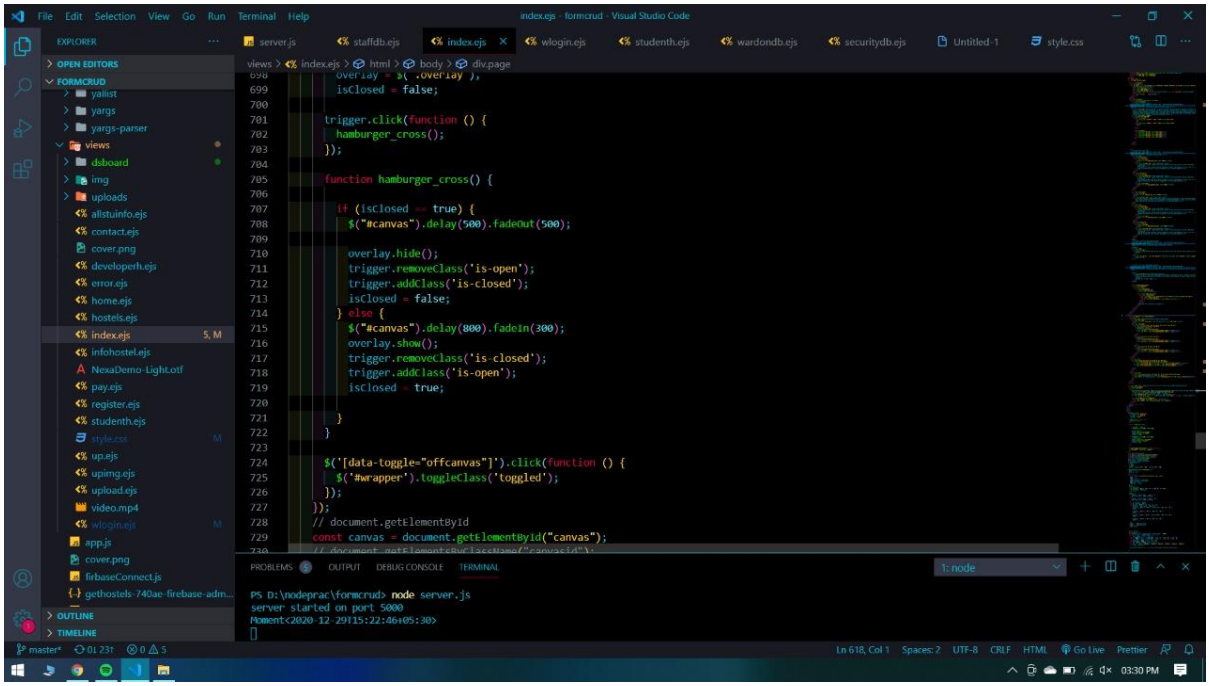


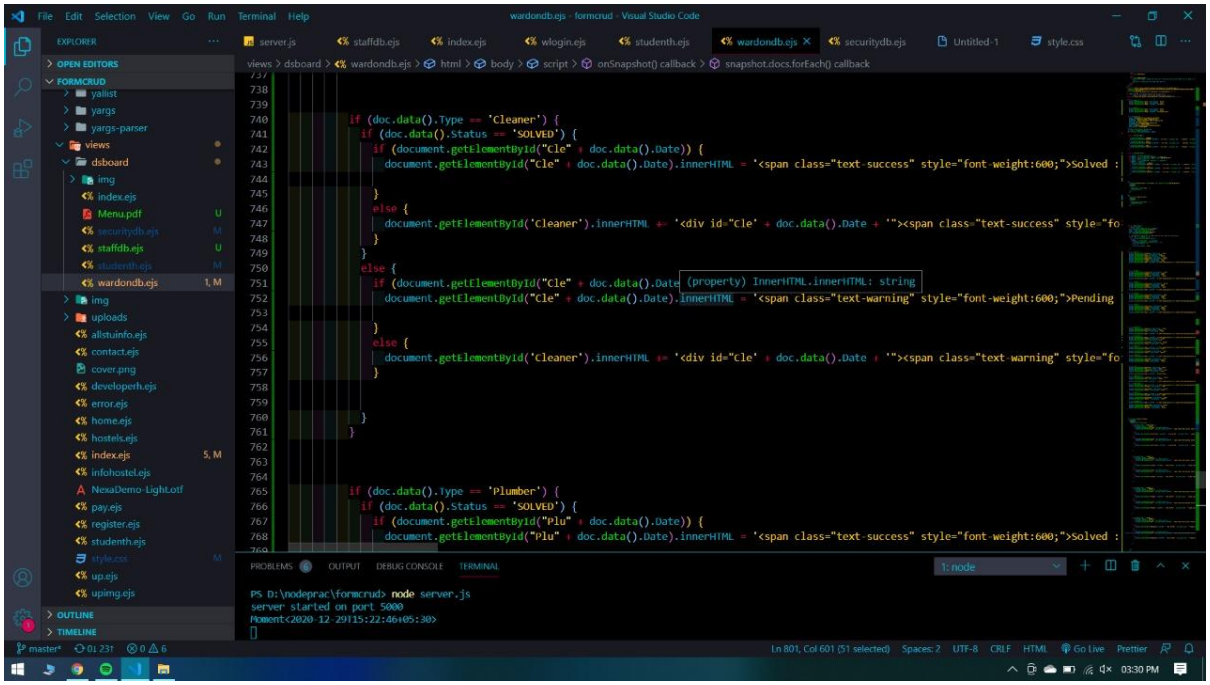
This is the look after logging into warden portal



This is some of the backend code-:



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wardondb.ejs - formcrud - Visual Studio Code
EXPLORER
OPEN EDITORS
FORMCRUD
server.js
staffdb.ejs
index.ejs
wlogin.ejs
studenth.ejs
wardondb.ejs
securitydb.ejs
Untitled-1
style.css
views > dsboard > wardondb.ejs > html > body > script > onSnapshot() callback > snapshot.docs.forEach() callback
if (doc.data().Type == 'Cleaner') {
if (doc.data().Status == 'SOLVED') {
if (document.getElementById("Cle" + doc.data().Date)) {
document.getElementById("Cle" + doc.data().Date).innerHTML = 'Solved :
}
else {
document.getElementById('Cleaner').innerHTML += ' <span class="text-success" style="fo
}
}
else {
if (document.getElementById("Cle" + doc.data().Date
(property) InnerHTML.innerHTML: string
document.getElementById("Cle" + doc.data().Date).innerHTML = 'Pending
}
else {
document.getElementById('Cleaner').innerHTML += ' <span class="text-warning" style="fo
}
}
}
if (doc.data().Type == 'Plumber') {
if (doc.data().Status == 'SOLVED') {
if (document.getElementById("Plu" + doc.data().Date)) {
document.getElementById("Plu" + doc.data().Date).innerHTML = 'Solved :
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1: node
PS D:\nodeprac\formcrud> node server.js
server started on port 5000
Moment<2020-12-29T15:22:46+05:30>
master*
Ln 801, Col 601 (51 selected)
Spaces: 2
UTF-8
CRLF
HTML
Go Live
Prettier
03:30 PM