Support Ticket Management System

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Bachelor of Science in Computer Science and Engineering



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DECLARATION

We, hereby, declare that the work presented in this report is the outcome of the investigation performed by us under the supervision of **Khadija Islam,** Lecturer, Department of Computer Science and Engineering, Sonargaon University, Dhaka, Bangladesh. We reaffirm that no part of this project has been or is being submitted elsewhere for the award of any degree or diploma.

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ABSTRACT

The "Support Ticket Management System" project has been implemented to reduce manual work and increase the accuracy of the work of Internet service providers. This system makes the work of customers and internet service providers easier. Internet users of all these organizations can get services by using this software at home. This software is built on a user-friendly interface. So that, an internet organization can easily add and delete customer entries and easily manage all transactions. This project is also designed with full consideration to help the users in a simple way without wasting any unnecessary time and also has the advantage of using the mobile app. The system can be applied to large Internet service providers, where customers can use the system from their homes to solve any problems on their Internet lines. Internet service providers and Internet users will also be able to exchange bills using a variety of simple methods. The customer can get the solution of any problem by simply clicking on the internet line and if there is any complaint, he can also record it. With the help of our simple app, users will be able to see which person will solve the problem on the internet line and will be able to rate and comment by writing in the app. This system will reduce the unnecessary hassle of internet service providers and internet users as well as completely reduce the waste of time as well as get a digital service.

Many internet service providers manually record their customer's new line connection and which customer's line problem or may not be able to provide service on time. Because managing such a business is very difficult. In order to provide customer service manually, keep information of internet service providers and internet users as well, especially if the customer has paid the monthly internet bill, you will get many simple solutions of such information through our online services and apps. We believe that this software and app will be very helpful in serving many popular internet service providers and internet users.

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LIST OF ABBREVIATIONS

CPU	Central Processing Unit
RAM	Random Access Memory
ROM	Read Only Memory

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CHAPTER 1

INTRODUCTION & PURPOSES OF THE PROJECT

1.1 Introduction

The work of this project can be used in various types of Internet service providers (broadband connections) industry. An effective internet service provider can help to develop a system and easily manage day-to-day operations and provide better services to internet users. It is believed that the number of people using the Internet in today's world is increasing day by day and due to which new technologies are also being discovered. Internet service providers and users can get advanced services using this advanced software and app that we have created. Lots of internet line errors occur when an internet service provider company deals with a huge number of customers. This built-in software will easily get rid of all these problems. Thus, this project is suitable for solving the above mentioned problem for internet service Provider Company and user. Through this system, the user can take the service through the app by texting the internet provider team for his problem or new line connection. Also, the internet provider company can provide efficiency while reducing time savings, reducing line errors and providing good quality customer service. In terms of the integrity and availability of the system provided, it can be concluded that this system is a suitable solution for the Internet service provider industry and the user.

1.2 Objectives

Nowadays, Internet access is the ability of individuals and organizations to connect to the Internet using computer terminals, computers, and other devices; and to access services such as email and the World Wide Web. Internet access is sold by Internet service providers (ISPs) delivering connectivity at a wide range of data transfer rates via various networking technologies. Many organizations, including a growing number of municipal entities, also provide cost-free wireless access and landlines.

Availability of Internet access was once limited, but has grown rapidly. In 1995, only 0.04 percent of the world's population had access, with well over half of those living in the United States, and consumer use was through dial-up. By the first decade of the 21st

century, many consumers in developed nations used faster broadband technology, and by 2014, 41 percent of the world's population had access, broadband was almost ubiquitous worldwide, and global average connection speeds exceeded one megabit per second.

In this society, the internet provides mothods can be classified into 2 categories which are paper based and verbal base. For internet service.

As a conclusion, this proposal is written to propose an efficient internet service to the customers to enhance and improve the existing traditional Support Ticket Management System and provide convenience, availability and integrity to Internet provider companies (ISP).

At the end of the project, it will be very useful and did a huge contribution for internet provider companies which are located in Kampar to deals with crowded situation during operation hours.

1.3 Problem Domain

Difficulties in Support Ticket Management System Disadvantages of Support Ticket Management System Tracking For those that are using traditional methods for service processing on Internet providers, this is an issue that cannot be overcome. Because the whole manual process that involves servicemen, pens and paper. You have to call the internet provider companies for each service, maybe they remember some things or forget. Then they come to solve the problem or add new connections. One problem is that they may forget to go to another customer's home to serve a customer or cut another customer's line or it will affect the relationship between the company and the customer.

Potential to increase cost of operation

The cost of running an internet provider company will continue to rise day by day due to economic inflation. When it comes to inflation, the cost for each service used to support the company's day-to-day operations will also be greatly affected. Therefore, Internet provider companies need to change the price of their services accordingly in order to maintain profitability and then reprint all the service menus to reflect the updated price. Their cost may require hiring additional staff to serve the customer and this will also increase operation costs.

1.4 Provide convenience for both employees and consumers

The system will greatly benefit Internet service workers from paper-based service delivery to Internet service providers while they are on duty. By recording the service that the customer wants to take, the service staff will be able to inform about their work situation through their mobile app.

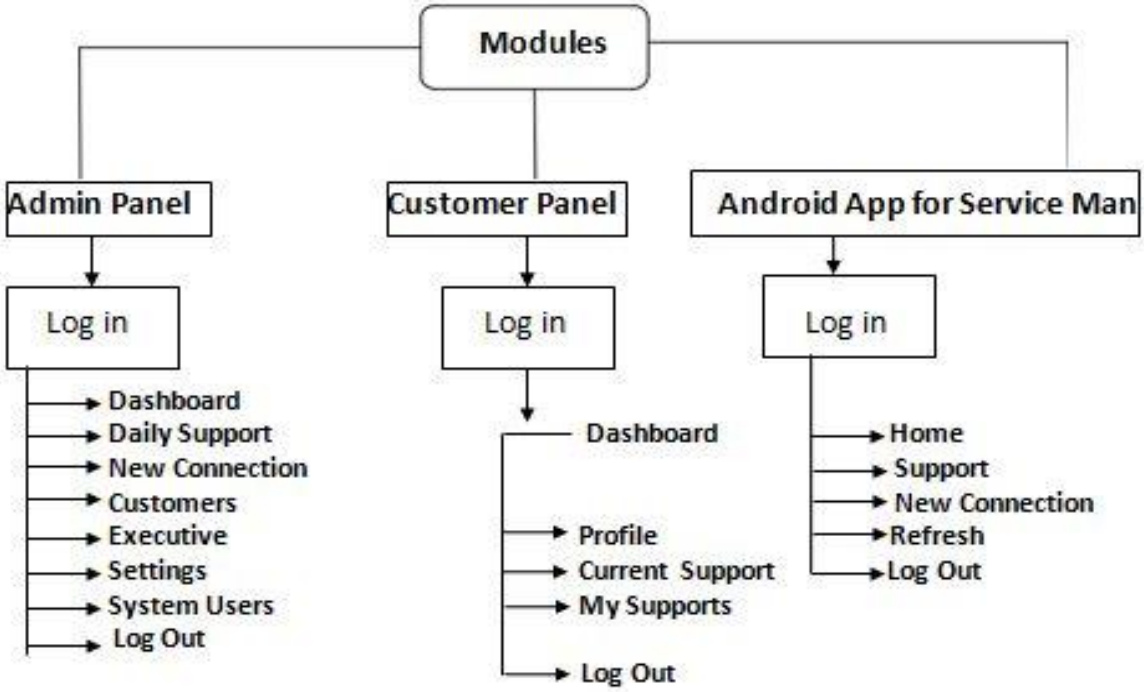
This will allow the customer to know for sure the time of his service. Assume that a service worker is engaged in one task, then the company can be relieved of responsibility by commanding another service worker to perform the task.

Therefore, using this system it can eliminate this minor section of the command taking process. In addition, it facilitates customers to provide their services in a short period of time and it can increase customer satisfaction and turnover rate.

1.5 Assist ISP to plan ahead

Whenever service employees confirm the service for customers from their mobile app, the details of that service will be stored in the customer report and database. Staff may verify the details of the previous service to resolve any misleading and misunderstandings that occurred.

1.6 Project Overview Panel



CHAPTER 2

LITERATURE REVIEW

2.1 Supporting system

In the age of our generation, due to the advancement technology of the World Wide Web, computers have become an integral part of our daily lives which has become an Internet that allows each world to communicate with their computers and share information across the globe. The World Wide Web has made great contributions to many initiatives that use this process to share information within and outside the enterprise (Kapnaga, R, 2014). From the benefits of the World Wide Web, many Internet providers implement a system known as online support services to assist in their business processes. Online support is a strategy that allows customers to access their services online via the Internet using a web browser installed on their computer or smart phone. An Internet provider company can easily manage their business by applying this system. This makes the system progressively easier for both Internet users and Internet provider companies than in the past. Customers can avail a support anywhere and anytime whenever internet connection is available for them. Customers can access the website to determine the package of their choice and the delivery method will be delivery or pick up and finally it will double check and show the customer the details of all orders for confirmation. On the other hand, the system also greatly illuminates the workload of the internet provider company. Customers can easily get the service by logging in to their account. Also, the data will be displayed on the computer screen along with the corresponding option. This helps internet provider companies to provide their customer service very easily and reduce human error.

Strength

The system is very suitable for internet provider companies as it also reduces the time required for internet service customers in their office, business or home and support service. There is no need to call any customer or go to the office of the internet provider company in person to avail the above service. In this case the user can take the service from home using the system. Meanwhile, it helps the internet provider company to get better customer service as internet provider companies should serve their customer without any delay.

Weaknesses and limitations

The main weaknesses of the system will depend on the internet connection. The system cannot run without an internet connection. Since the customer has to place an order through the internet as a medium and the data for the next process will be sent to the database of the internet provider organization, the customer will not be able to access the web service without an internet connection. In addition, if the Internet Service Provider (ISP) is under maintenance, it will have a tremendous impact on the Internet provider organization that relies on the online service system for their business. Not all systems are efficient enough. Because a lot of senior citizens are not computer educated, they do not really understand how to use the web service. So, if they want to place an order using the system, it will be very troublesome for them.

Moreover the internet provider company will always need at least one computer for customer service with always internet connection and all the executive support man will need one android mobile with always internet data connection and one android mobile connection with customer internet which is very troublesome and expensive.

2.2 Service Request and Service Time

Internet service providers may take approximate time to send their executives after submitting the customer service. An executive will have time to get to the place of service within a maximum of 30 minutes.

In addition, Internet providers can set their service time from 8 am to 10 pm.

CHAPTER 3

METHODOLOGY

3.1 Proposed Methodology

The software methodology that choosen to develop this System is Throwaway Prototyping. Throwaway Prototyping Model is especially useful when the project needs are vaguely and poorly laid out. It functions by providing proof that something can indeed be done in terms of systems and strategies. Throwaway Prototyping Model is used for certain projects and will eventually be discarded after the project has been completed. It is also known as Close-Ended Prototyping. Throwaway Prototyping Model is implemented through the creation of prototypes and thereafter gathering feedback from end users to check if they find it good or not. This is valuable to get a better understanding of the actual needs of customers before a product or service is developed and delivered. The reason to choose Throwaway Prototyping to develop this system is due to it can develop a new system in a short time compare with other software methodology. Other than that, user might not clearly understand what they really require in the system. Therefore, Throwaway Prototyping is where the objective to develop the system rapidly and to understand the user's requirements and hence develop a better requirements definition for the system.

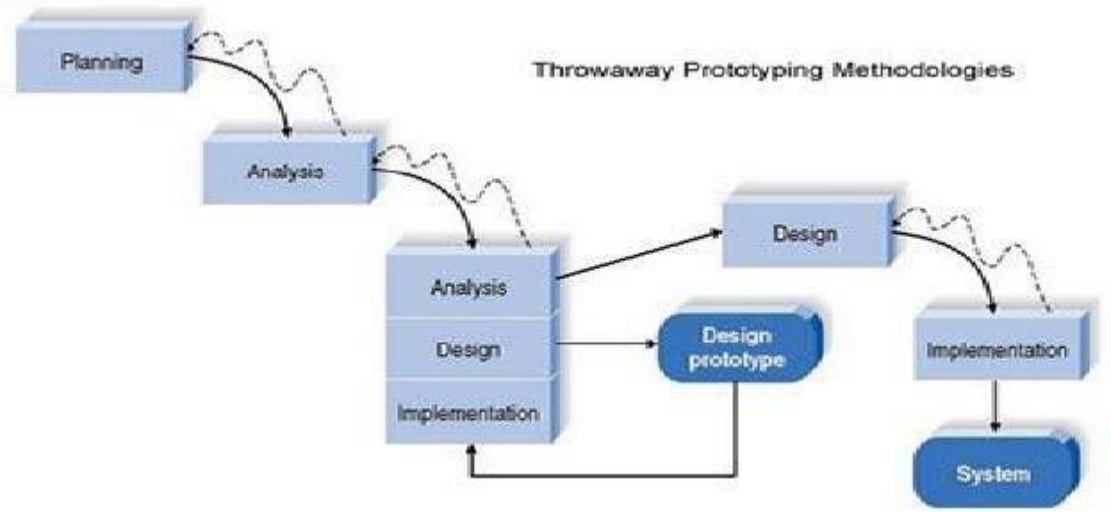


Figure: 3.1:- Diagram of Throwaway Prototyping processes

3.1.1 Planning & Analysis

First and foremost, in planning phase will conduct Joint Application Session (JAD) with users in order to gather and understand the business needs and system requirements that users are not clear. During the JAD session, will make use of CASE tools such as HTML, CSS, Bootstrap and Java Script and so on to generate the user interface that shows users to verify the user requirements. Furthermore, the activity of observation on the users' daily work in order to understand and has clarity viewpoint of the business process that operate every day. At the end, a work plan which includes the project's Gantt chart, Network Diagram, resource sheet, resource usage and cash flow management will be generated. Then, will follow Gantt chart and Network Diagram as a guideline to perform the tasks that scheduled to develop the system.

3.1.2 Analysis, Design & Implementation of prototype

After gather the user requirements from JAD session and observation. Will starts make analysis, design and implement each and every module base on the user requirements that gathered.

3.1.3 Design Prototype

In this phase, the work is to assemble every modules that had been implement in the previous step to complete a finalize system prototype. Prototypes will be introduced to end users who will utilize them for testing and evaluation purposes. At this time, they will be providing feedback, clarify needs and relay requirements. As per requirements of end users derived through feedback and testing, the prototypes will be continuously altered until such time it has reached near-perfection. (Repeat step 2 to step 3)

3.1.4 Design

Once everything has been set and issues have been properly addressed, the prototype will then be "thrown aay" which means discard and the system will be design, taking into consideration the feedback derived during the verification process.

3.1.5 Implementation

This is the last phase, which will develop each and every finalize modules within time frame from design phases and assemble it to be a final version system and deliver to end user.

3.2 System Planning

First of all, in planning phase the system for development will be identified and selected in order to solve the problem that discuss in chapter 1. Several studies are needed to have more clearly understanding about the system requirement. In addition, the SWOT analysis techniques will be used interpret the strength, weakness, opportunities and limitations of the basic requirement for the propose solution. Next, a project timeline will be created to have a clearly understanding of what should do according to the project life cycle. The project timeline typically is a graphic design showing a long bar labeled with dates alongside itself and usually events labeled on points where they would have In this semester, the Documentation for Final Year Project will be complete in seven week. The Documentation include of the design of the system, this will serve as a reference that allow me to develop the prototype of the proposed project more efficiency. Start from week 8, the prototype of the proposed project will start develop. After that, the full project development will start in the new coming semester and continue until the testing phase. The system will being test and the system will be debug to solve any error that found during testing. The feedback get from the system tester will collect and use as the reference in the system.

3.3 System Analysis

In system analysis phase, interview will carry out with potential user of the propose solution to gather and collect useful information for the propose system. Next, system requirement such as user requirement, software and hardware requirement will be generated and based on the system requirement, project scope and objective is defined.

3.4 System Specification

Admin Panel: From admin panel an admin user can manage new connection, customers support, executive support, system user profile create, customers profile create, executive profile create, can show the support list and all others support and information in the system has included.

Customers Panel: From customers panel a customer can create his/her daily support, edit his/her profile information. He/she also can find the list of support he/she has been taken previously. During support time, he/she can see the executive person is busy or free. Customer can enter the feedback about the service.

Executive Mobile Application: From the app of the executive, an executive can see his daily support and new connection.

3.5 System Features and Modules

Admin Panel:

- Admin user can create, edit and delete support ticket and can change ticket status.
- Admin user can get report of support ticket based on date, status, customer, executive.
- Admin user can create, edit and delete New Connection and can change connection status.
- Admin user can get report of New Connection based on date, status, customer, executive.
- Admin user can create, edit and delete customer and can change customer status.
- Admin user can create, edit and delete executive and can change executive status
- Admin user can update and add new settings like site title, contact info, message sending status, category, packages.
- Admin user can create, edit and delete system user and can change user status.

[Note: Only super-admin and admin user has permission delete and manage system user]

Customers Panel:

- Update Profile info
- Create new support
- Tracking support status and give feedback
- Report of taking supports

Support Ticket Mobile Apps Feathers:

- See list of daily support Tasks
- See details of individual task
- Mark as complete after completing task

3.6 Hardware & Software Requirements

3.6.1 Hardware

1. Intel ® Core i3 CPU 3.0 GHz or above

2. 8GM RAM

3. 500GB Hard Disk Drive (HDD) + 24G Solid State Drive (SSD)

4. Monitor

5. Wireless Access Point

6. Ethernet Connection with internet access

7. Mobile phone with android operating system (Version 6+)

In this project, a computer with sufficient processing power is needed. The computer is require for the developer to have project development such as coding for the mobile application, database creation and modification. For the complete system to work, several hardware requirements must be met. First, it require an android based smartphone in needed to deploy the software application and this smartphone is require to connect to the wireless access point to perform request and respond processes that access to the database. Next, database is a must for the entire system to store and retrieve the necessary data. Furthermore, a laptop or desktop is required to host the database and manipulate the entire system.

3.6.2 Software

Web Server	Lampp, Xampp
Database	MySQL
IDE	VS Code and Sublime Text 3
Language	PHP (Server side), Javascript (scripting), HTML 5 (Markup), CSS 3
Framework	Codeigniter (PHP), Jquery (JS Library), Bootstrap 4 (CSS)

3.6.3 Hardware Interfaces

There are three external hardware devices used by the proposed system, each related to a user interface. These devices are the wireless tablets and the displays. All the devices must be physically robust and immune to liquid damage and stains. The devices(with the possible exception of displays must also have good industrial design aesthetics, as they are to be used in place of internet provider companies able and notepads and will be in direct contact with customers. The devices behave as 'terminals' sense that they never have a full system image, do not store data and are not used for the core logic of he system. However, they should be fully capable tablets that can use textual data from the server alone with local UI/interpretation code to display Elements and take input. All order and transaction records should be stored on the server, not these tablets. The performance of dumb terminals over a area the size of a internet provider companies is likely to be unacceptable. In all the cases, the hardware takes information from the proposed system and processes the information to display. It als provides input information to the proposed system.

CHAPTER 4

SYSTEM DESIGN ON SUPPORT TICKET MANAGEMENT SYSTEM

4.1 Project Design

At the end of the system requirements collection, several relevant diagrams have been generated in order for the preparation of system model design. The design phase activities include the design of project architecture and graphical user interfaces.

System Evolution: Referred to as the model of the system, the database in the center of the whole sequence system. Although this would be a bit extreme, it explains the point that the only part of the system that will be relatively stable is the database. On the other hand, it is very likely that other elements will continue to evolve over time. For example, with the growing popularity of mobile applications, we really want to make the web application available as a phone application as well. It may also make some sense to order recovery systems on the web, or even mobile, applications because some users may prefer to use them. We're also sure that if this system goes into real use, it will generate many requests for additional features that we didn't consider before, but it will work. For this reason, we think that the application can be constantly evolving, which we consider to be a very good thing.

4.2 Project Flowchart

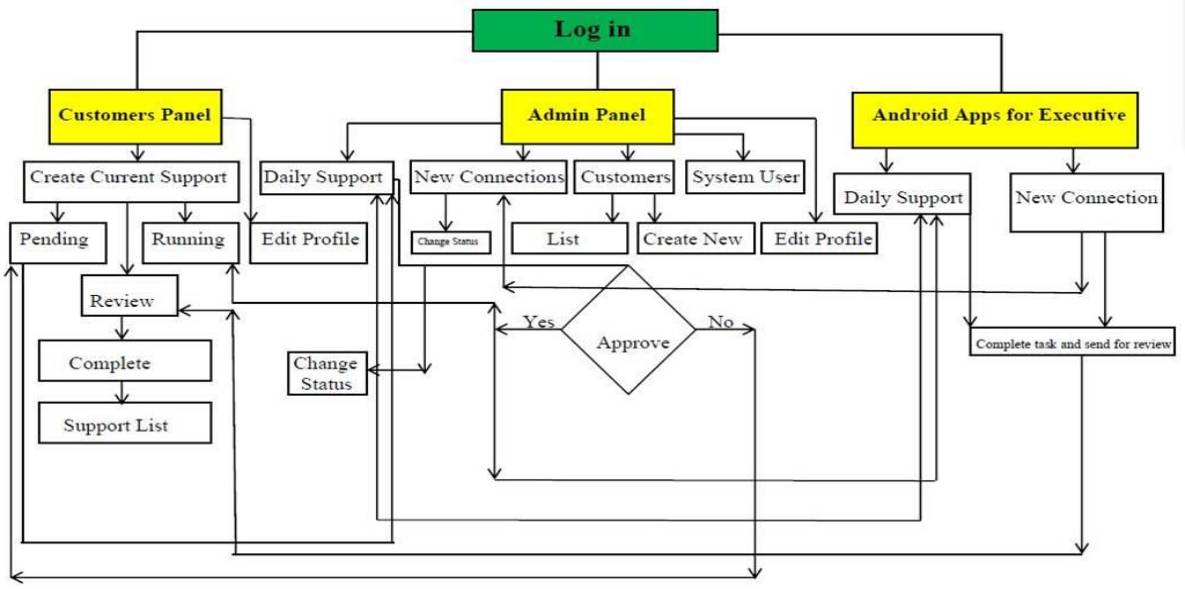


Figure 4.1: Flowchart

4.2 Admin Panel

4.2.1 Admin Sign in Form

Support Ticket Management System Sign in is used for define user, after authorized the user a user can used this software. Other-wise user will not allow using this software. Every user has to a unique password which will grant from authority, provide from this software.

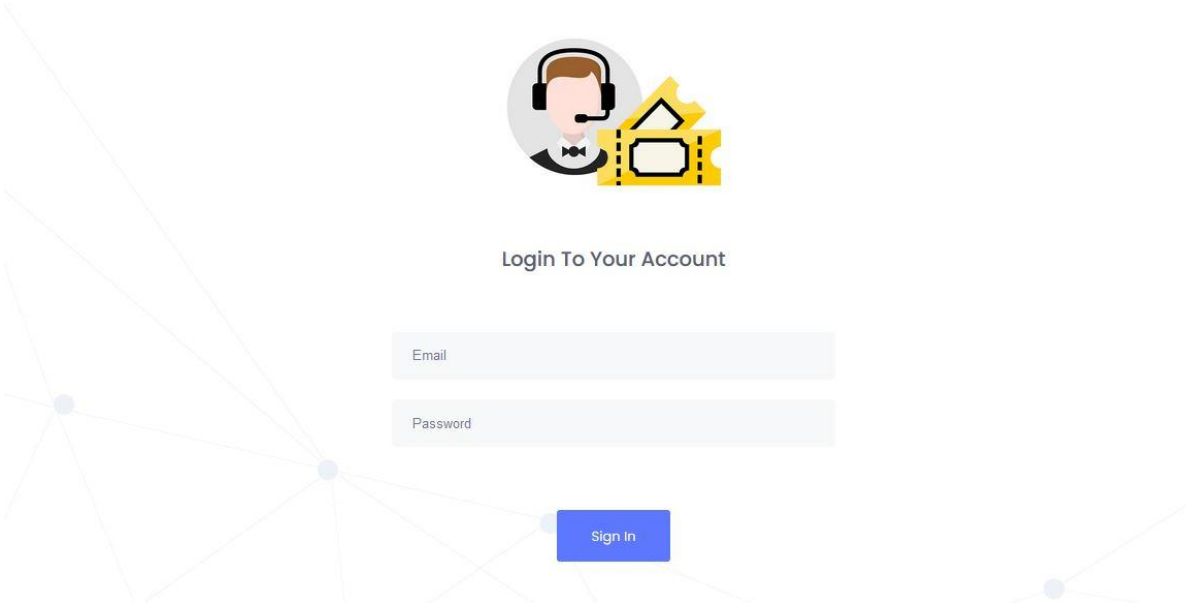


Figure: 4.2.1 Login Screen

1. At first we need a browser and just open a new tab.

2. Then, type https://onesky.com.bd/support/dashboard

3. Here, For Admin Sign in we are using Email (developer@support.com) and password (123456) match form the back end database after Sign in and go to the next module.

4. Another part is very quantity and its individual and summation are also severed in database.

5. Information code also can used here if you it is needed.

6. Every document has the result with summery, details, it also passable to maintain the day ways or day over information results.

4.2.2 Dashboard - Daily summary

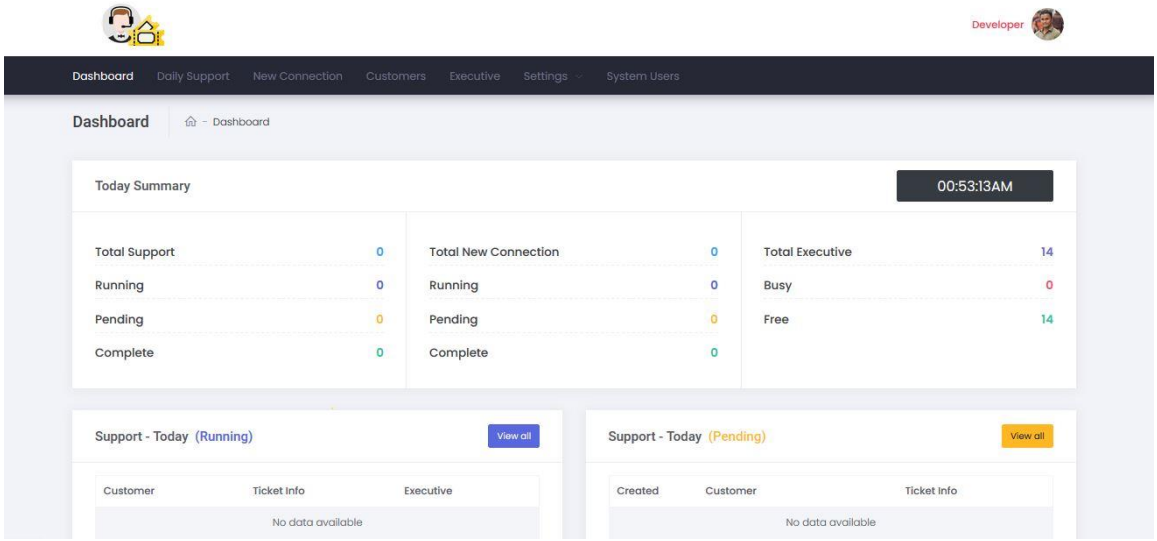


Figure: 4.2.2 Dashboard - Daily summary

The homepage or home page is the name of the main page of a website where visitors can find hyperlinks to other pages on the site. By default, the homepage on all web servers is index.html, however, can also be index.html, index.CSS, index.php, or whatever the developer decides.

After signing up, we see several options Like the given picture.

Dashboard

Daily Support

New Connection

Customers

Executive

Settings

System User

and the top of the right corner we can see the profile picture. By clicking the profile picture we can see 2 options **Change Password** and **Log Out.**

4.2.2 Dashboard - Daily summary

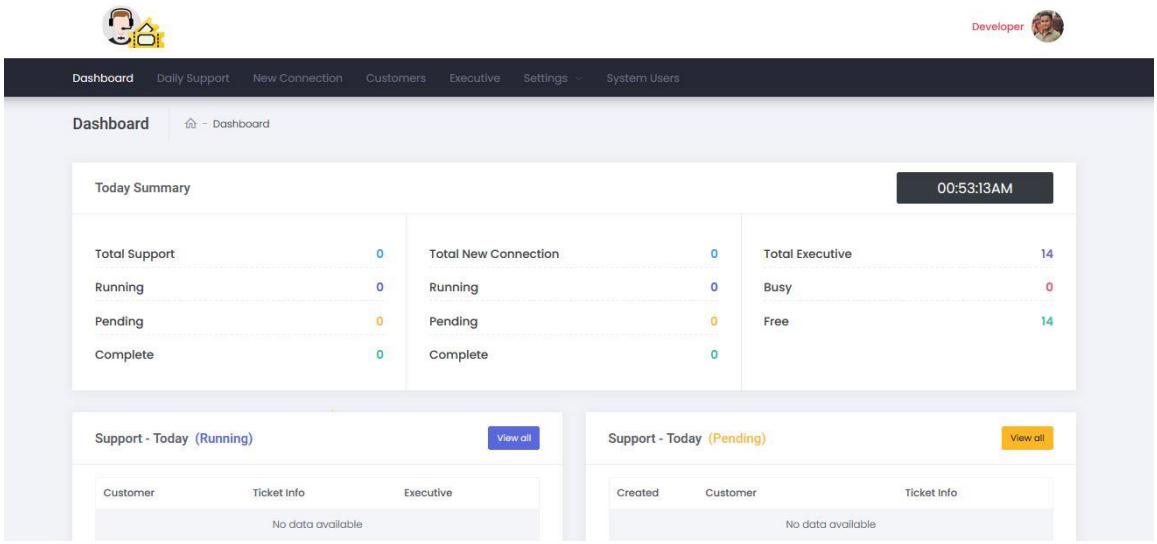


Figure: 4.2.2 Dashboard - Daily summary

The homepage or home page is the name of the main page of a website where visitors can find hyperlinks to other pages on the site. By default, the homepage on all web servers is index.html, however, can also be index.html, index.CSS, index.php, or whatever the developer decides.

After signing up, we see several options Like the given picture.

Dashboard

Daily Support

New Connection

Customers

Executive

Settings

System User

and the top of the right corner we can see the profile picture. By clicking the profile picture we can see 2 options **Change Password** and **Log Out.**

4.2.3 System Users

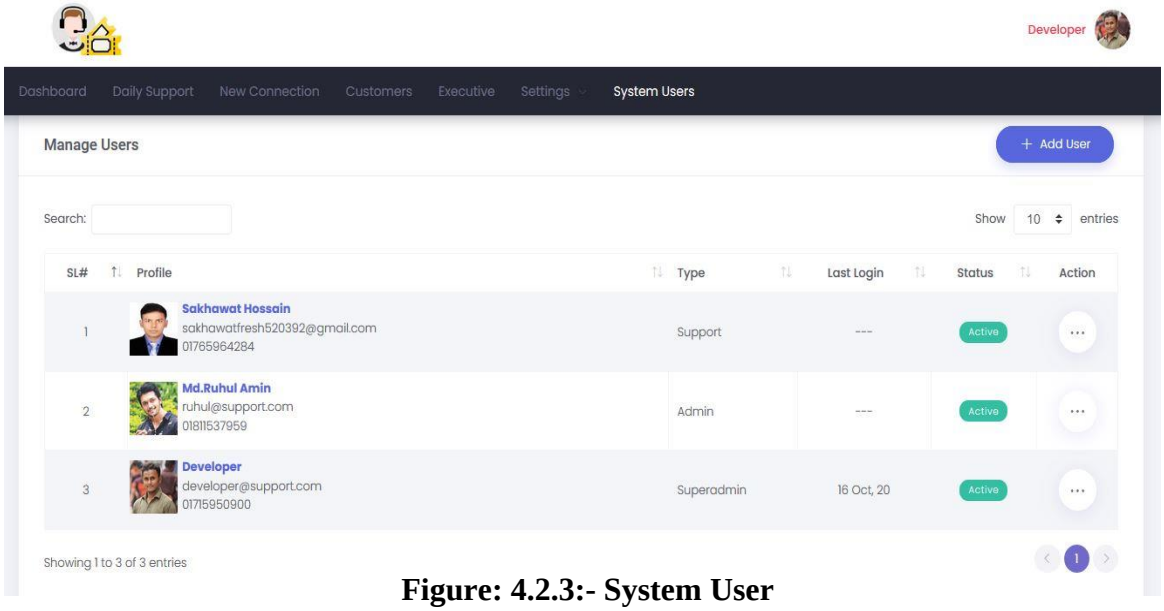


Figure: 4.2.3:- System User

This is the first interface that we can see several options in the system user. Here the user profile will show, such as: picture, name, email, e-mail. You can see the serial in the profile, you can see what type it is. Last time user logged in and status active or inactive. From the search option, we can also find out by searching with the employee name. By clicking on status we can also do employee active / inactive if desired.

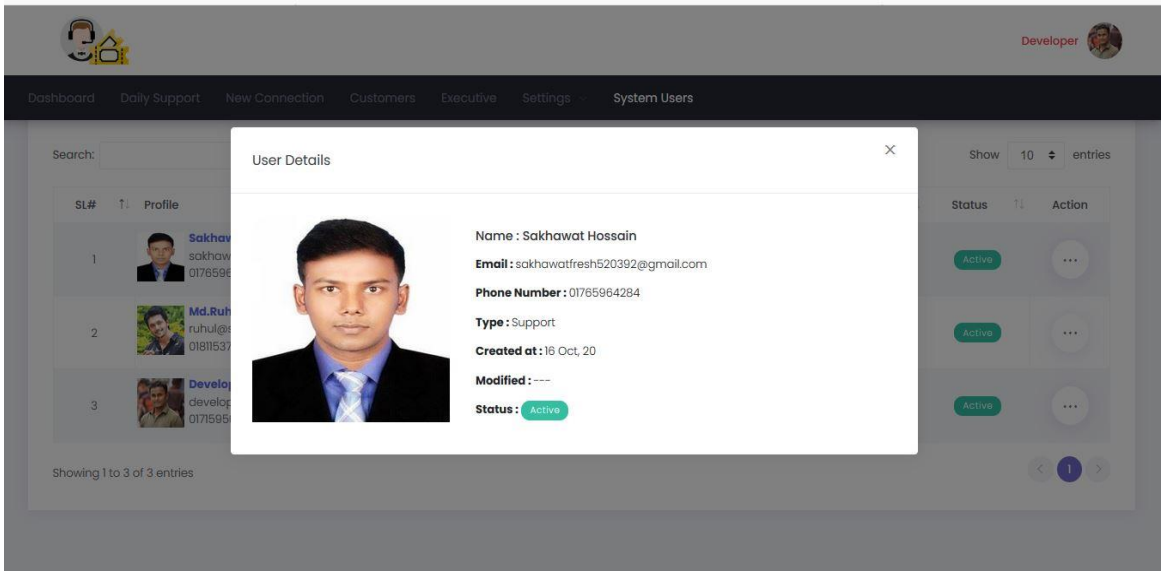


Figure: 4.2.3.1:- System User Profile View

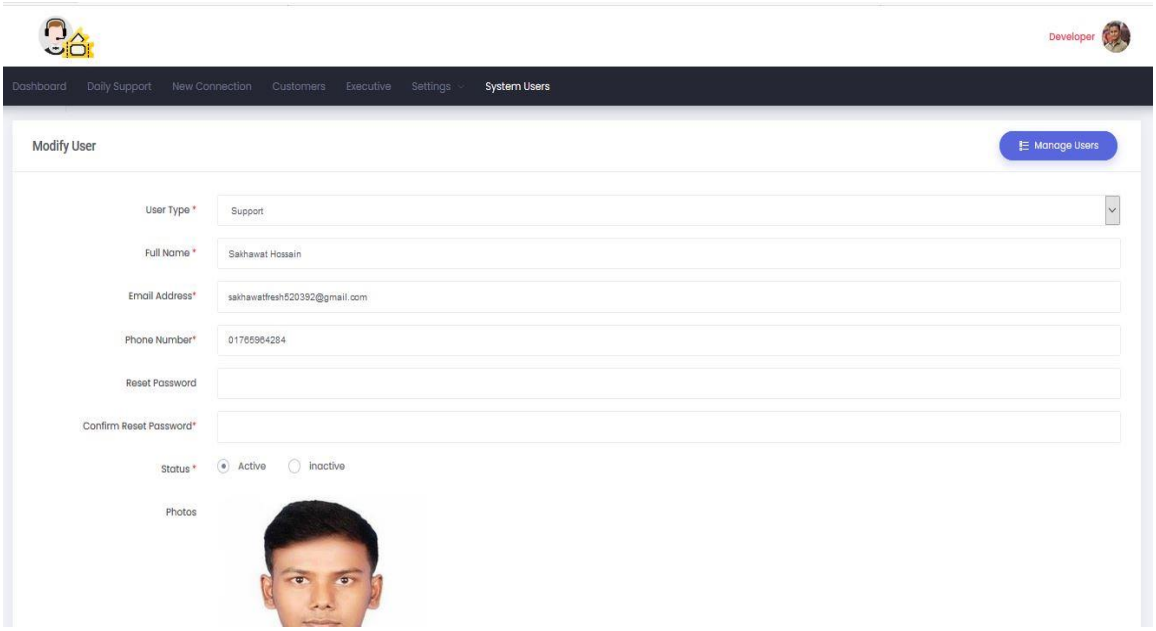


Figure: 4.2.3.2:- System User Profile Edit

In this interface, Also by clicking on the action we can see the profile view of the employee such as: picture, name, email, phone number, create at, modify and status.

We can edit the same option by going to edit. If I want, I can delete the employee.

4.2.4 Add a new system user Form

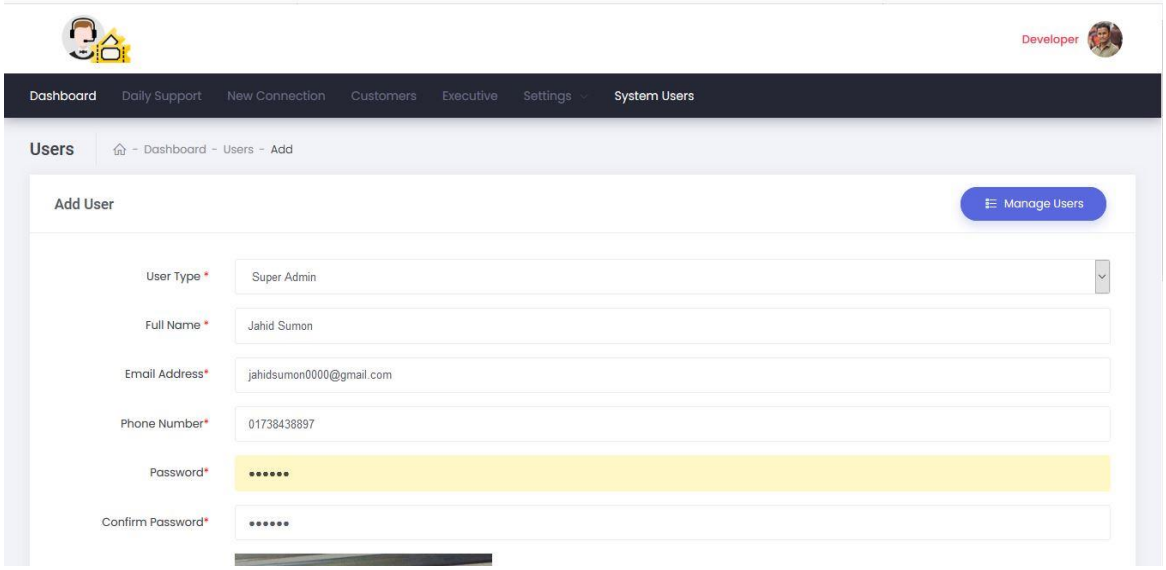


Figure: 4.2.4:- Add a New System User Form

A new user can be added to this interface only after completing some options. First, you have to select the type of user in the User Type option. For example: we have some options of support, admin, super admin. Any new option can be added if desired. You have to select any one. Then the user's full name, email address, mobile number, password, confirm password, profile photo (can also change / remove). Clicking on the save option will create a new user ID. In that case we will see a new notification screen (Well done!
Users Added Successfully!!)

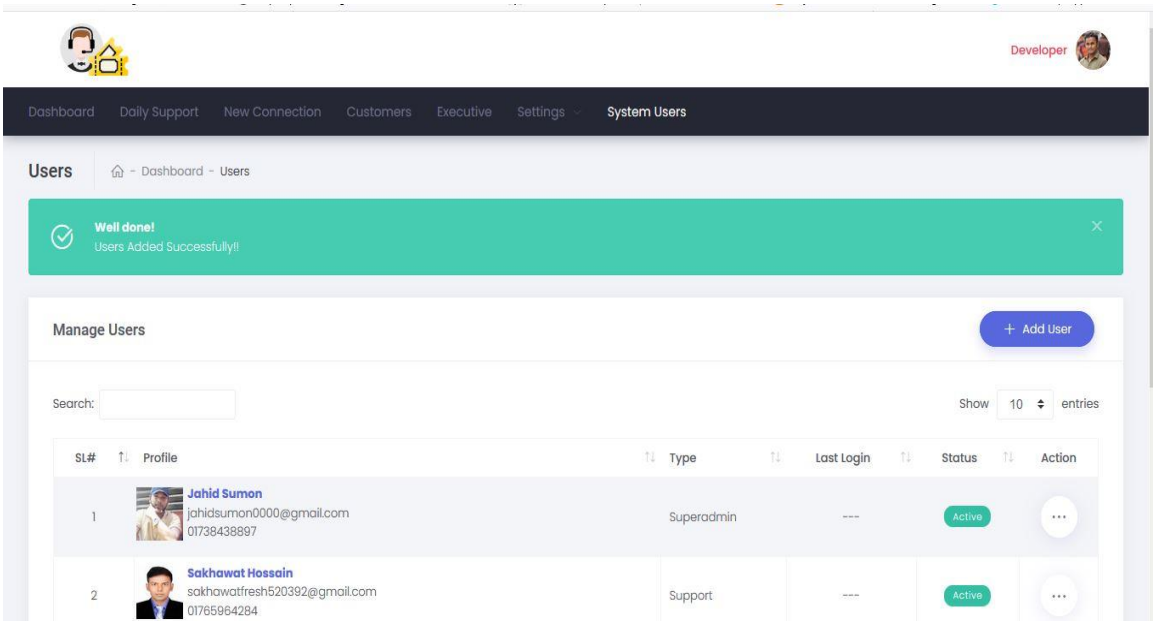


Figure: 2.4.1:- After Adding a New System User Form

Once the user is created, a notification will be sent to the mail. We can also click on Manage User to redirect to the System User page.

4.2.5 Customers

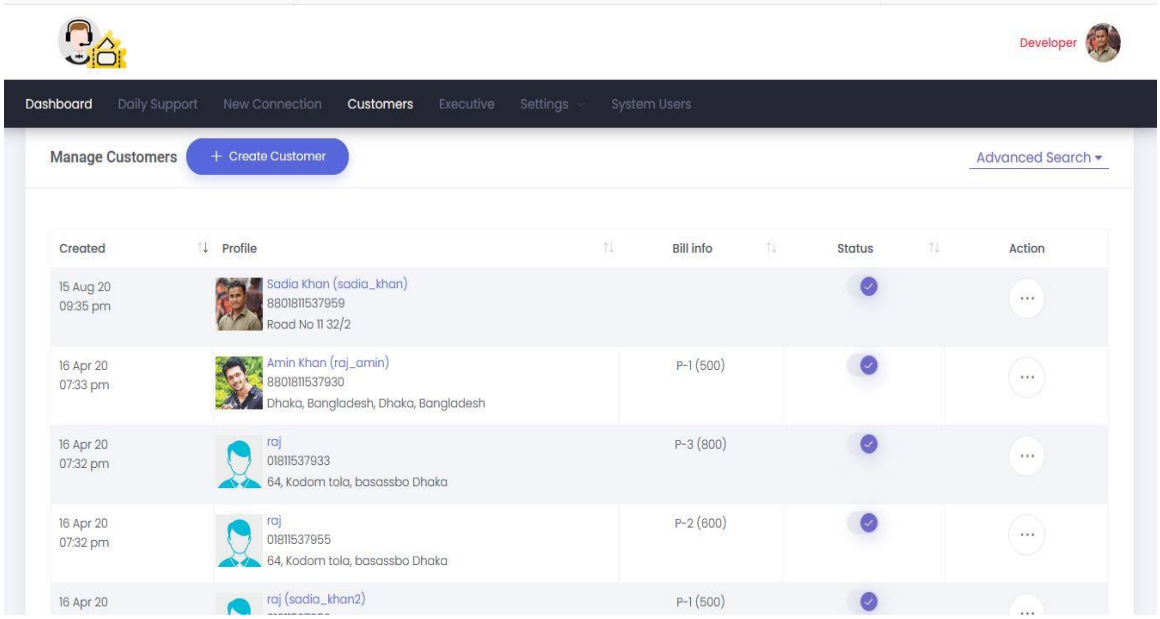


Figure: 4.2.5:- Customers

Customer interface which we can see the various options of the system user. Clicking on the customer's name here will show the profile, such as: picture, name, email, e-mail. You can see the date created by the customer's profile. The customer will show which package is currently running / which package he is invoicing. Last user login and status enabled or disabled.

From the Advanced Search option, we can search for any starting date and end date by searching for the customer's name.

From choosing status we can give active / inactive customer search. We can also find customers by packaging. We can do this if we want to enable / disable the employee by clicking on the status.

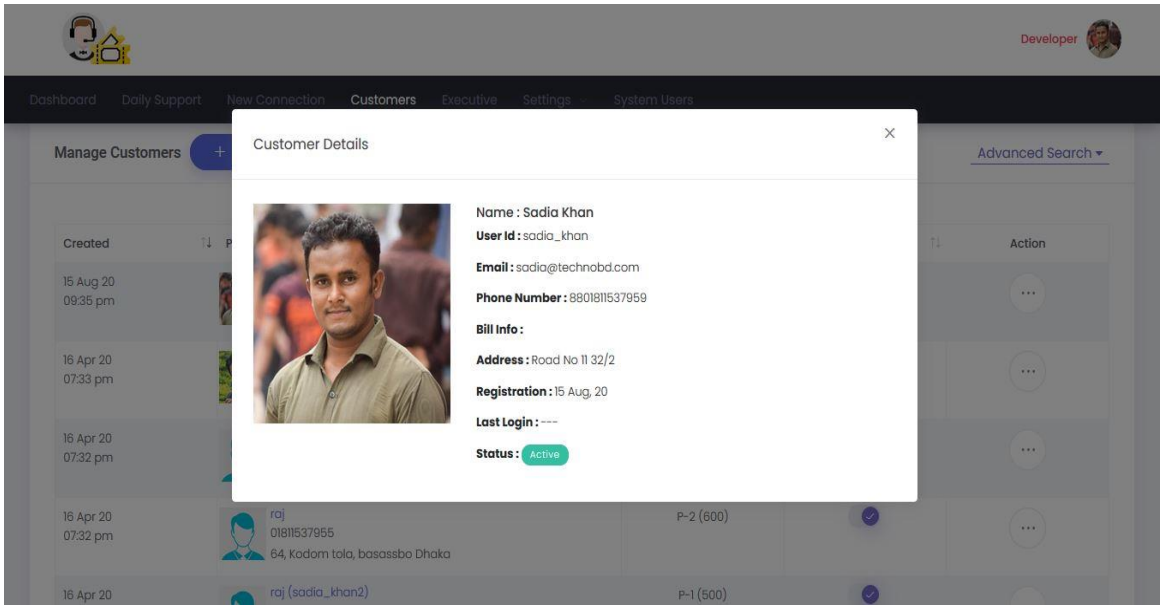


Figure: 4.2.5.1:- Customers Profile View

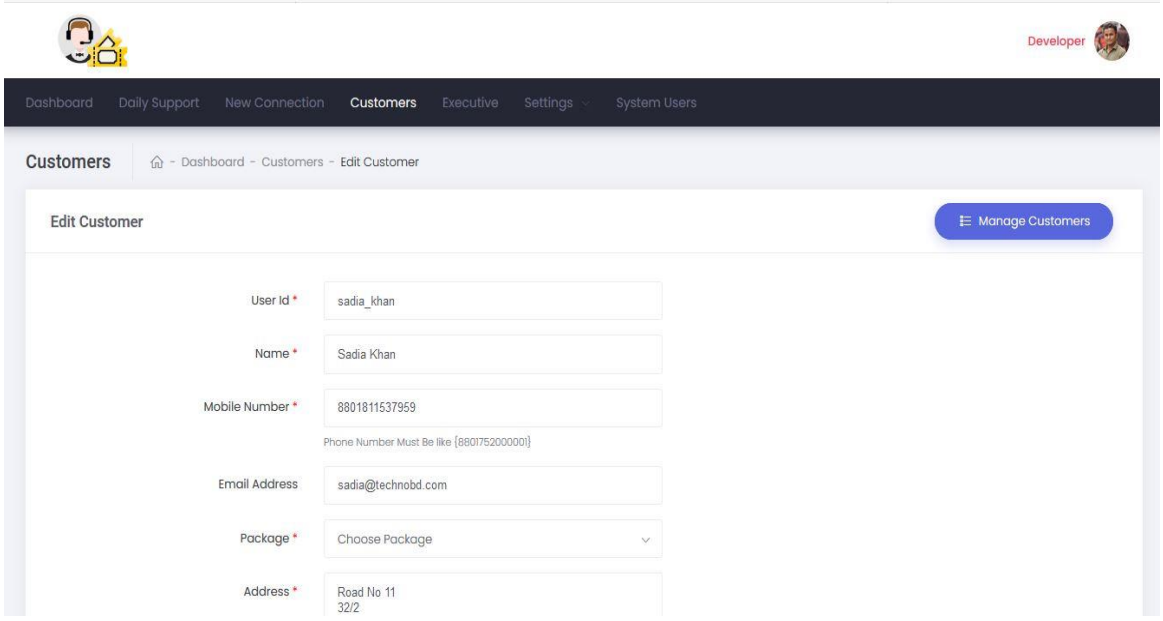


Figure: 4.2.5.2:- Customers Profile Edit

In this interface, we can also view the employee profile view by clicking on the action such as: picture, name, user id, email, phone number, bill info, address, registration, last login and status.

We can edit the same option by editing. I can delete the customer if I want.

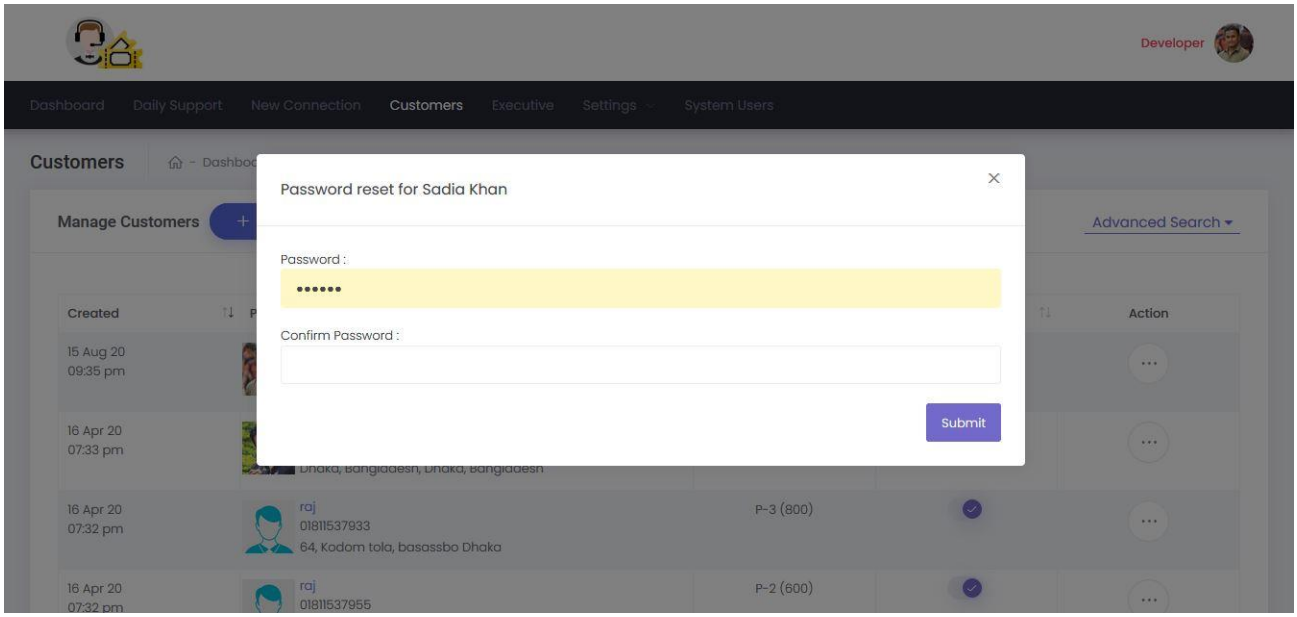


Figure: 4.2.5.3:- Reset Password

If for some reason a customer forgets the password. Then you can reset the password by clicking on status.

4.2.6 Settings

General Setting

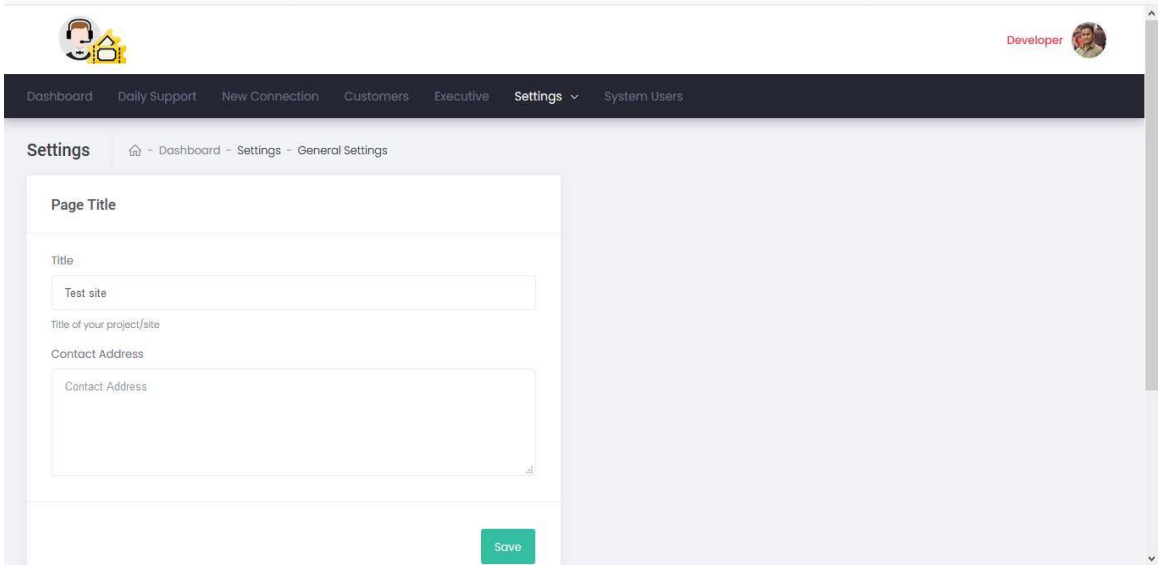


Figure-4.2.6:- General Settings

In the general settings we can give and change the title of the page if we want. And we will be able to give the official address, contract mail and mobile number to the contract address of Customer Support.

4.2.7 Category

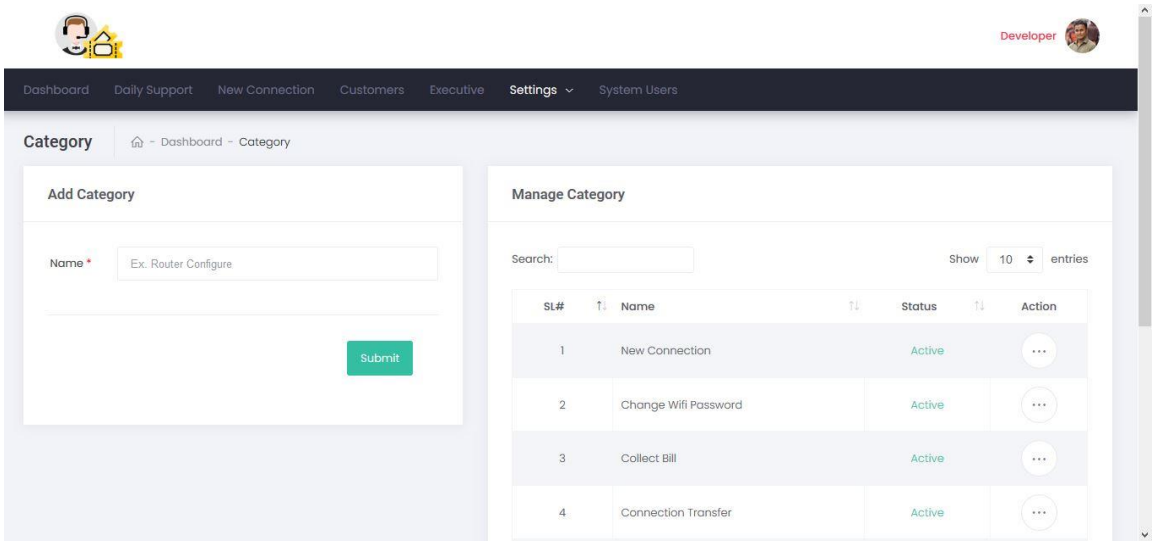


Figure-4.2.7.1:- Add Category

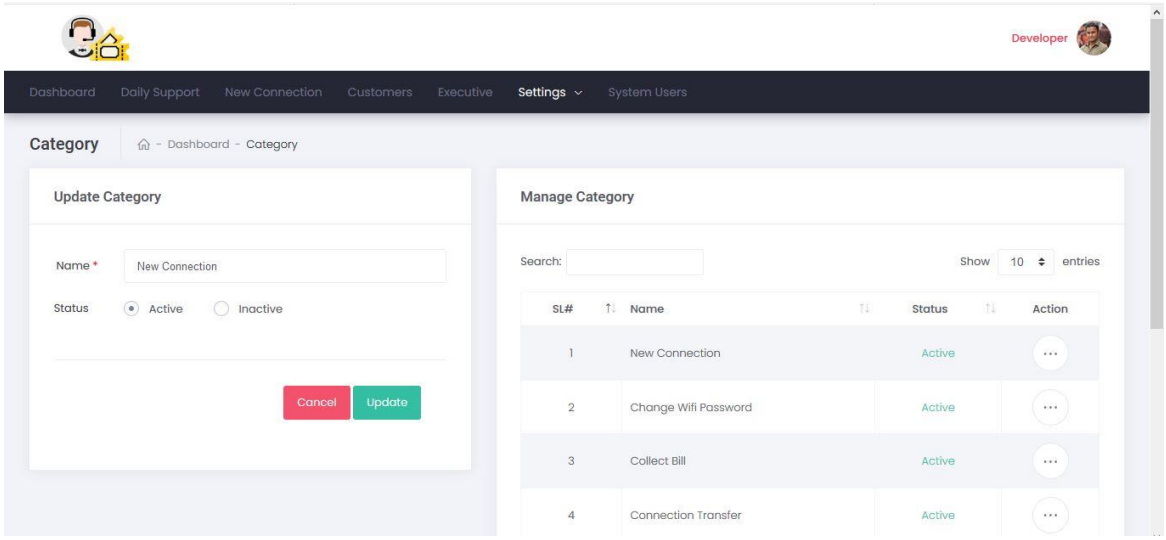


Figure-4.2.7.2:- Edit Category

This interface is what kind of support we can have, such as: New Connection, Change Wifi Password, Collect Bill, Connection Transfer, Change ONU, Line Problem, Router Configure We can add different categories. It will be added only if you write and submit something in the name option in the ad category here. In this interface, also by clicking on the Manage Category we can see All the Category Status such as: Serial Number, Name, Status and Action. From choosing status we can give active / inactive category status. We can delete each category by clicking on the edit option and then clicking on the edit and delete options.

4.2.8 Packages

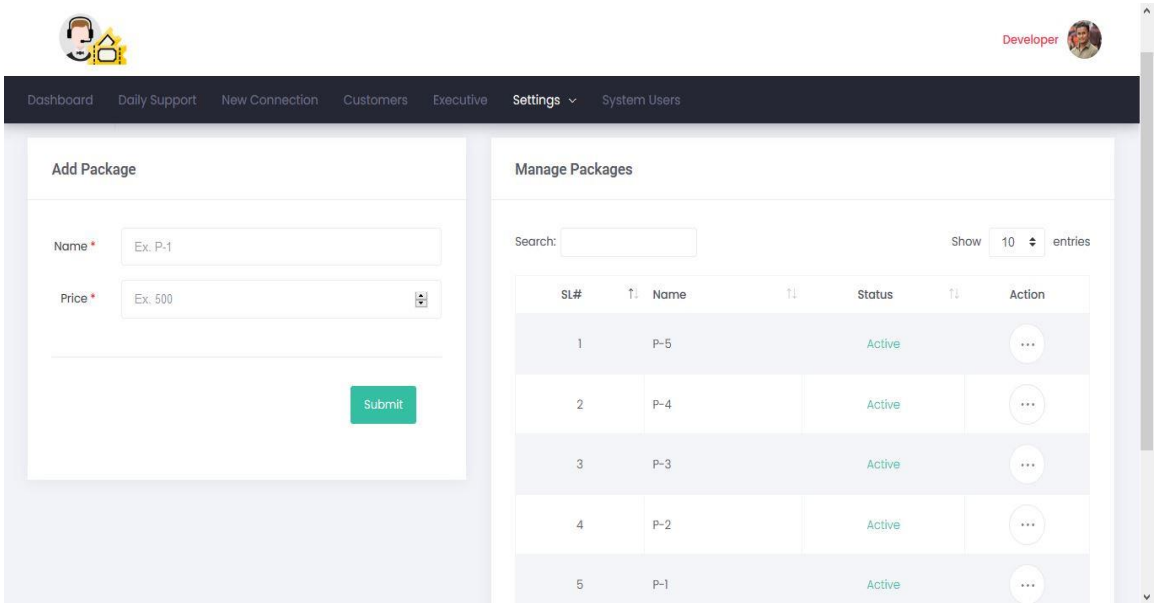


Figure-4.2.8.1:- Add Packages

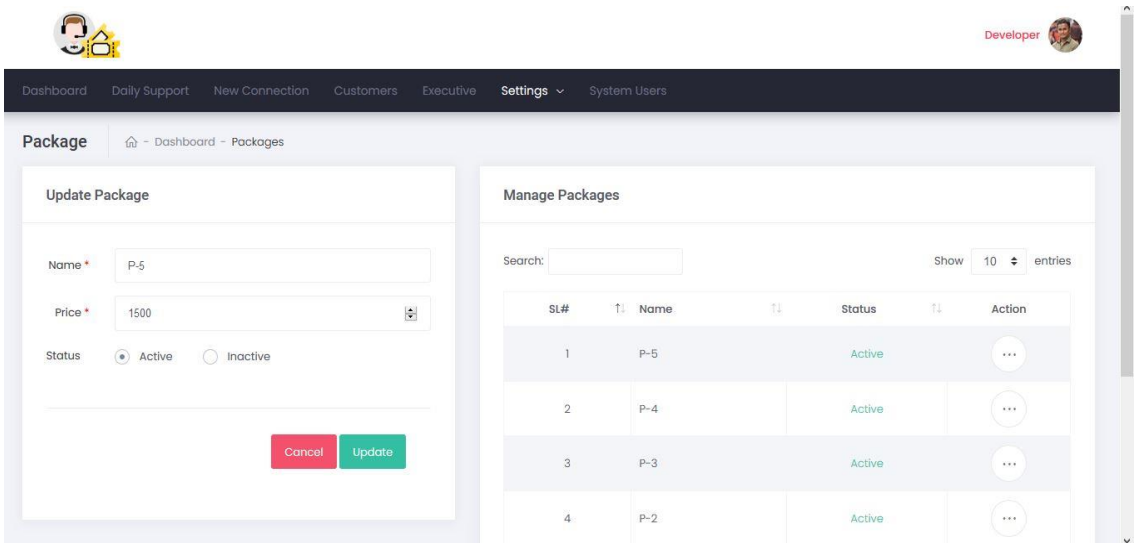


Figure-4.2.8.2:- Edit Packages

This interface means we can have different types of packages. It will be added only if you submit something by typing something in the name and price option in the ad category here. In this interface, also by clicking on the Manage Category we can see All the Category Status such as: Serial Number, Name, Status and Action. From choosing status we can give active / inactive category status. We can delete each category by clicking on the edit option and then clicking on the edit and delete options.

4.2.9 Executive

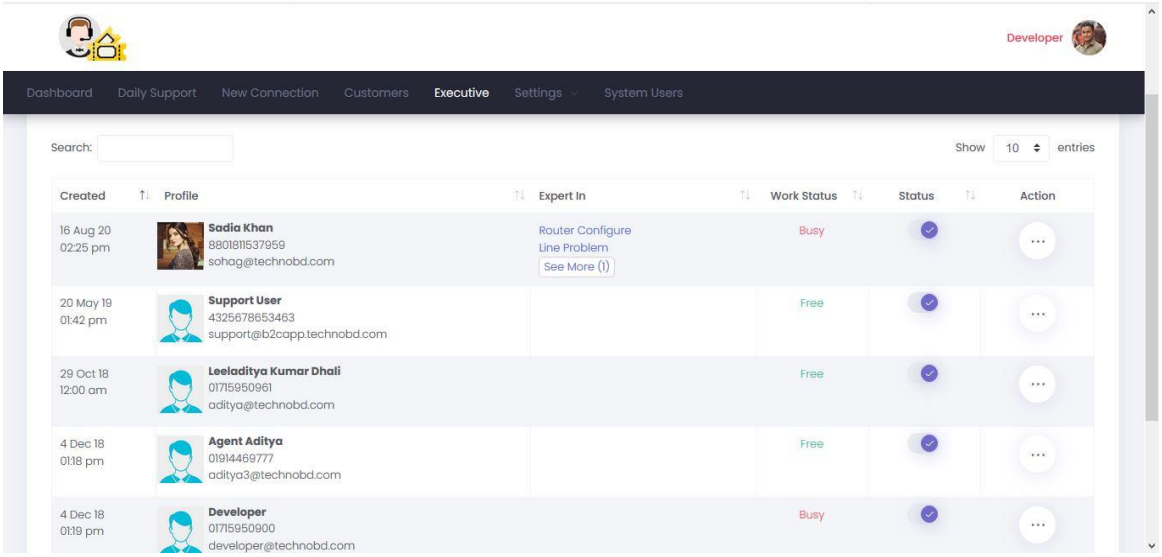


Figure-4.2.9.1.:- Executive Panel

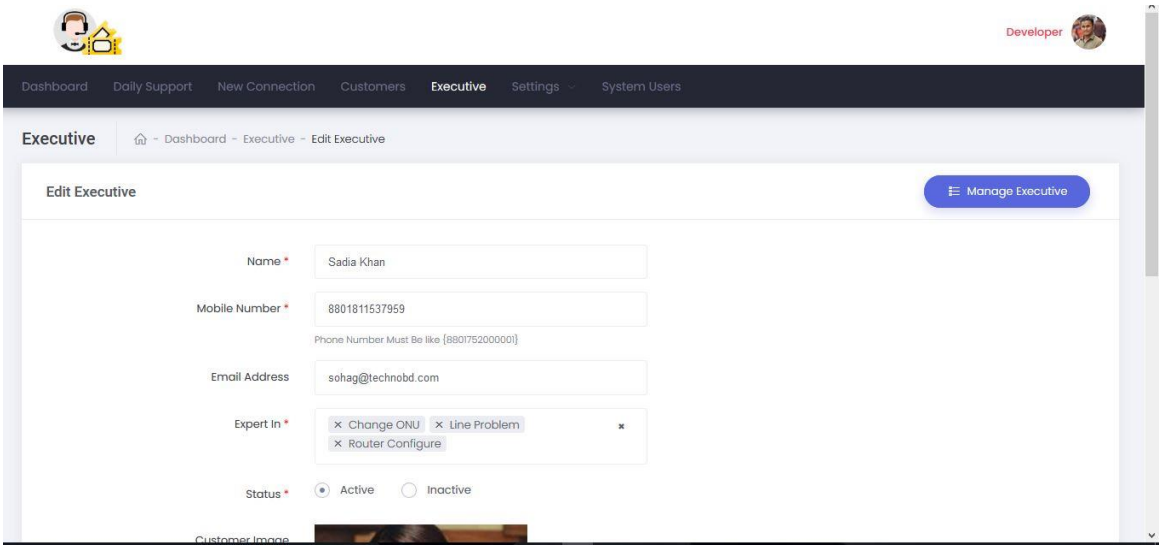


Figure-4.2.9.2:- Executive Panel Edit Option

This interface is mainly for those who will work in our field or servicemen. If we click on the executive option, we will be able to see the status of some servicemen. For example: Serviceman's profile Create Date, Profile (Name, Phone Number, Mail ID), Expert in (he is proficient in any work), Work Status (Busy / Free), Status (Active / Inactive) can all be edited / viewed. We can delete each executive by clicking on the edit option and then clicking on the edit and delete options.

4.2.9.1 Create Executive

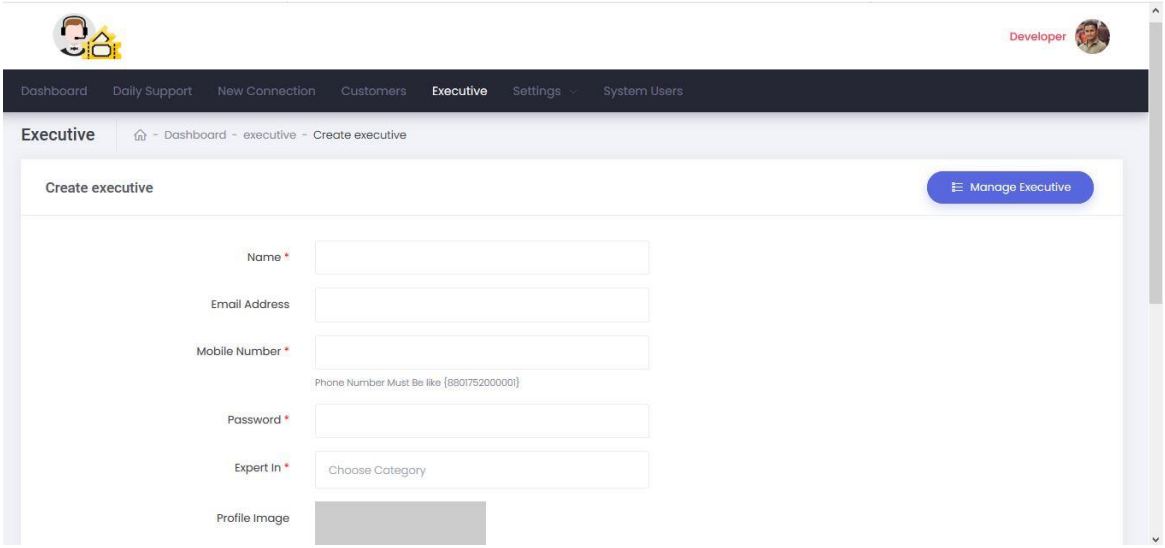


Figure-4.2.9.3:- Create Executive Profile/Works

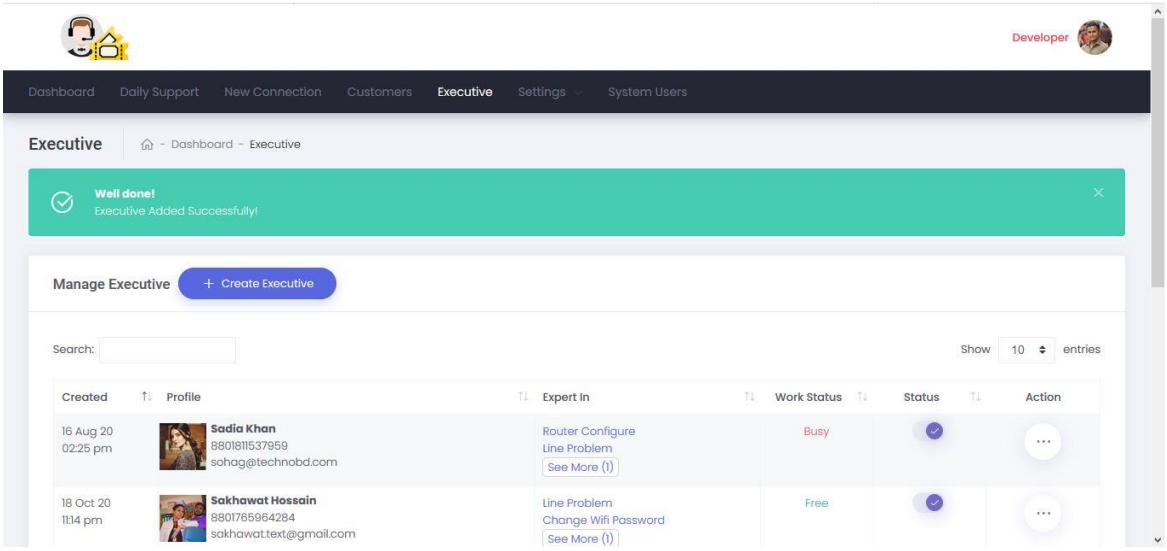


Figure-4.2.9.4:- Create Executive Profile/Works Done

A new executive can be added to this option only after some options have been completed.

First you have to click on the Create Executive option. Then the full name of the executive, email address, mobile number, password, expert in (new connection, collect bill, line problem, etc.), profile photo (may also change / delete). Clicking on the save option will create a new executive. In that case we will see a new notification screen (well done! Executives successfully added!!)

Once the Admin/Super admin is created, a notification will be sent to the mail. We can also click on Manage Executive to redirect to the System Executive page.

4.2.9.2 Daily Support

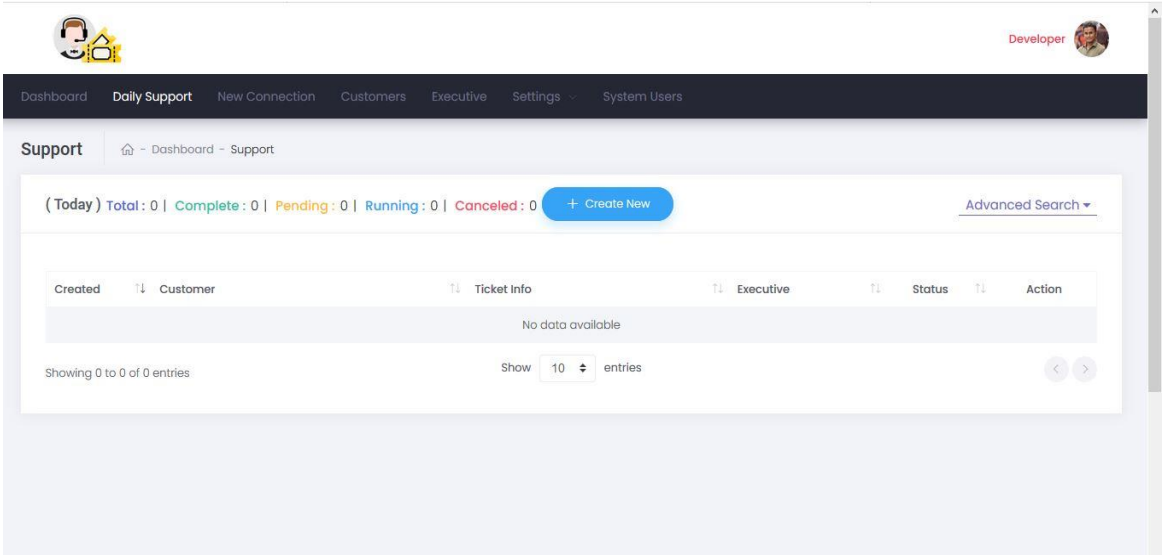


Figure-4.2.9.5:- Daily Support Panel

In this interface in which we see a variety of system user options. This panel is the most important. From here, we will have a list of all the support we can give our customers, which we can search for in different ways. This interface will provide an overview of how many customers are receiving support from us, which customer work is complete, whose work is pending, running and canceled.

4.2.9.3 Add a new ticket

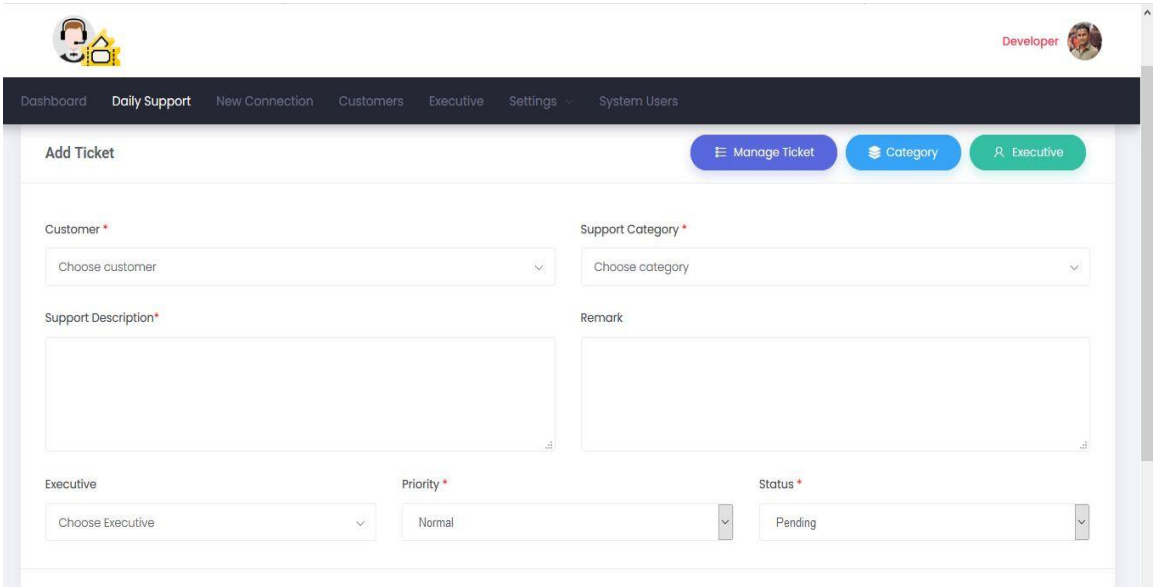


Figure-4.2.9.6:- Add a new ticket

This option will basically be with the customer. Even then we put this option here as well. So that, the same work can be done from this admin panel. We will first select the customer, then specify what type he wants. Then we will write something in the support description option (for example, I need to change my WiFi password, come soon). Then I will select the executive who will do this job for me. Then we will give customer base in priority (for example, depending on whether someone runs a line of Rs.500 or Rs.5000). Then we will save the status pending or running.

4.2.9.4 Advanced Search Option in Ticket

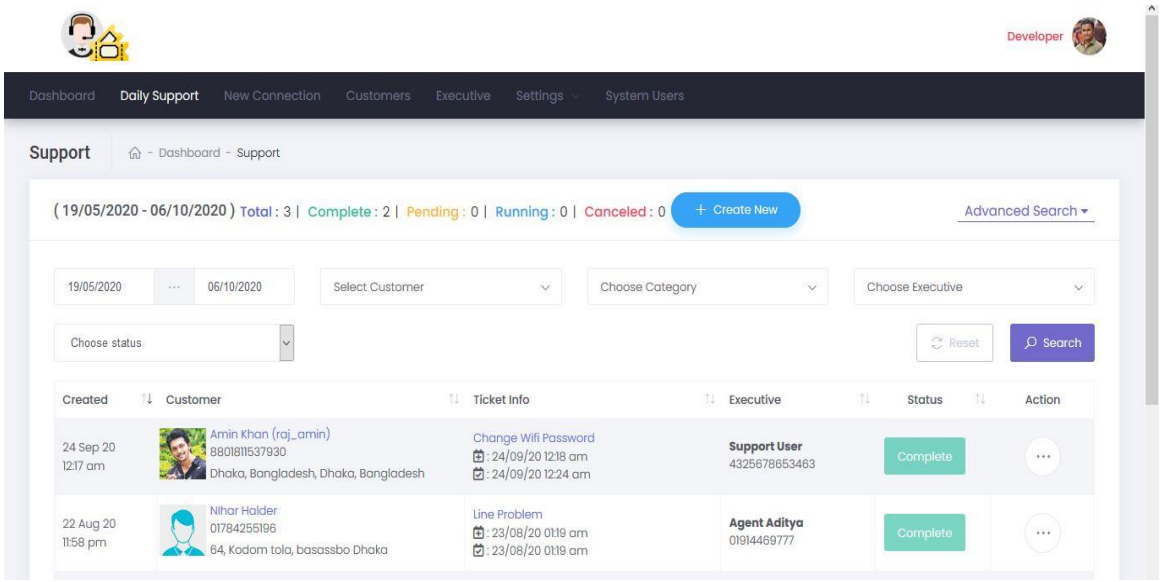


Figure-4.2.9.7:- Advanced Search Option in Ticket

First you need to click on the Create Daily Support option. Then here is a list of support tickets. We can do date wise search if we want, for example: I can see what support I have taken from 15/10/2020 to 20/10/2020, if we want we can also find out the full one month / one year report. We can also search the list by selecting the customer by clicking on the Select Customer option. We can also search the list by selecting the category. Or we can do the same in the search option in the list by selecting executive.

4.2.9.5 New Connection

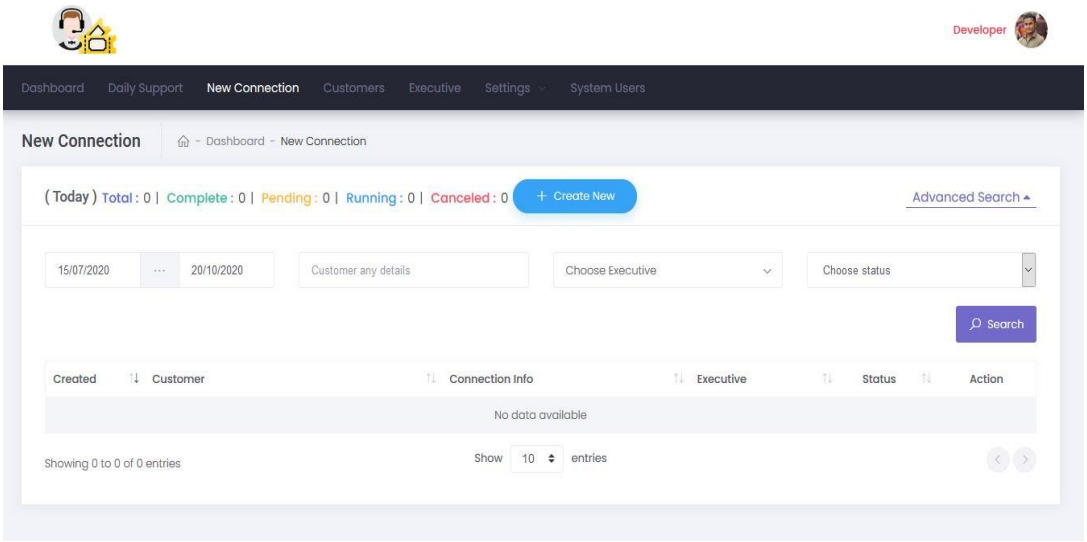


Figure-4.2.9.8:- New Connection Panel

In this interface in which we see a variety of system user options. This panel is the to see all categories of customer. From here, we will have a list of all the support we can give our customers, which we can search for in different ways. This interface will provide an overview of how many customers are receiving support from us, which customer work is complete, whose work is pending, running and canceled.

4.2.9.6 Add a new connection

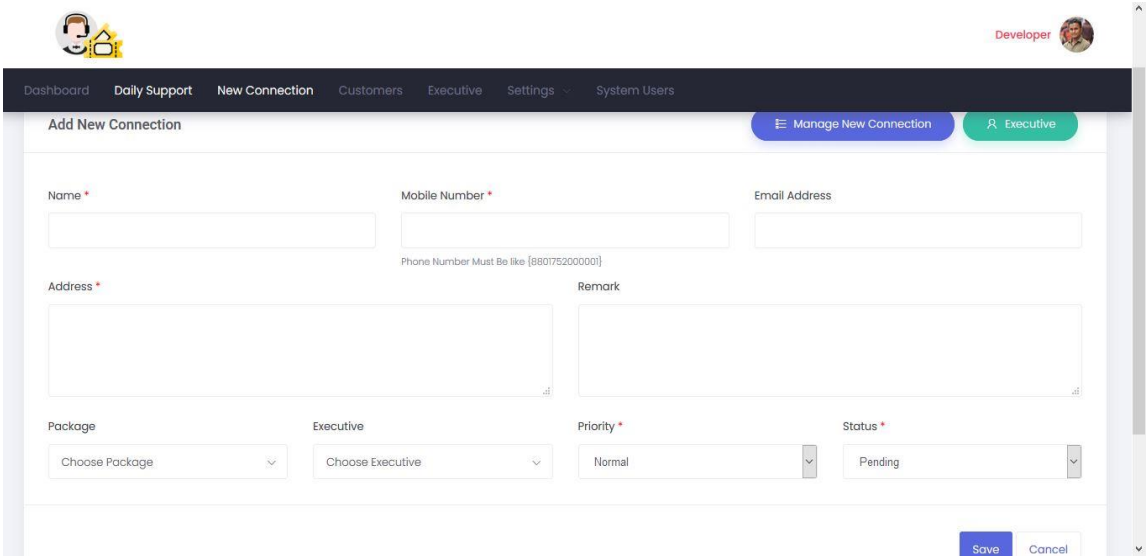


Figure-4.2.9.9:- Add a new connection

This option will basically only for the admin panel. Even then we put this option here as well. We have option like Name, Mobile Number, Address, Remarks Package (here includes different kind of packages include one), Executive (here includes so many executive expert person select one), Priority (Which kind of packages a customer use it can be given depending on it) and the status (Running or Pending). Then click the Save button to Save the customer data.

4.2.9.7 Advanced Search Option in New Connection

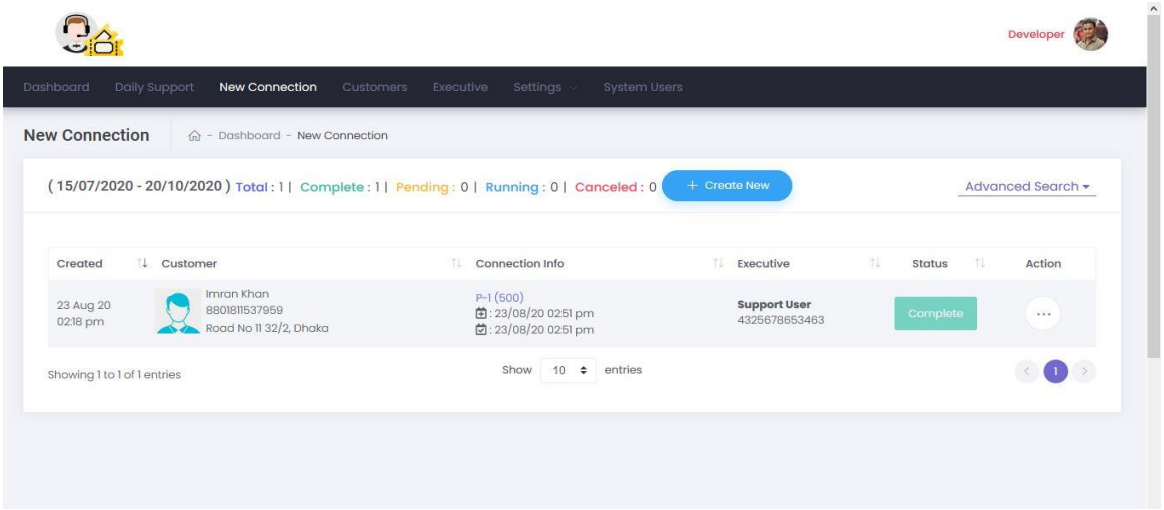


Figure-4.2.9.10:- Advanced Search New Connection

First you need to click on the New Connection option. Then here is a list of all customers. We can do date wise search if we want, for example: I can see which date a New Customer I have taken from 15/10/2020 to 20/10/2020, if we want we can also find out the full one month / one year report. We can also search the list by selecting the customer by clicking on the Select Customer option. We can also search the list by selecting the category. Or we can do the same in the search option in the list by selecting executive.

4.2.9.8 Change Admin Password

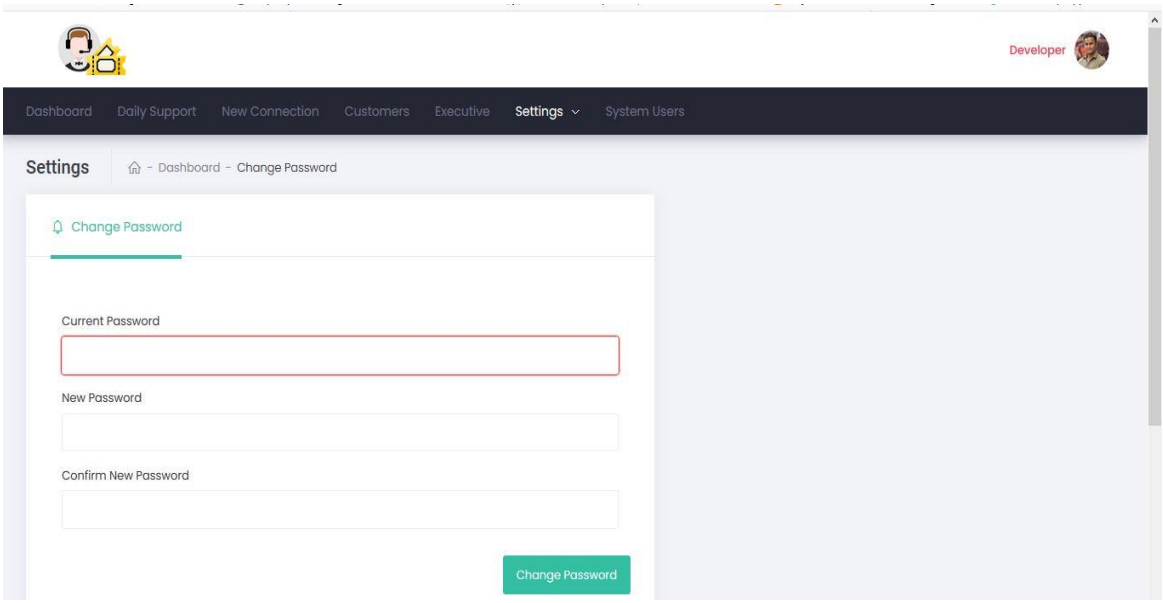


Figure: 4.2.9.11:- Change Admin Password

Click on the image on the right, you will get an option to change the admin password. After clicking, you have to give the current password first. The password will then be changed when the new password and confirm the new password. Here we will show an error if the current password is wrong or the new password and the confirmed new password do not match.

4.2.9.9 Log Out

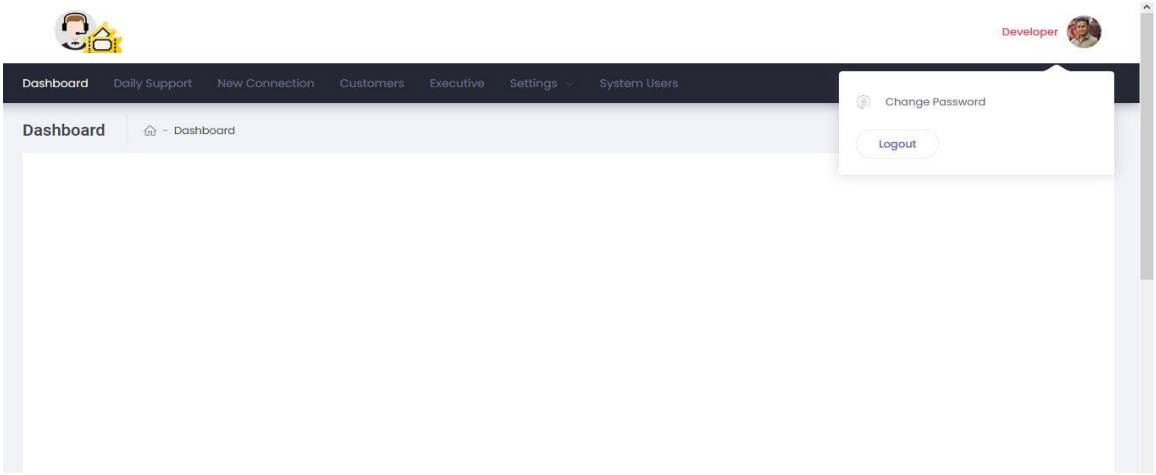


Figure: 4.2.9.12:- Log Out from Admin Account

Click on the image on the right, you will get an option to Log out. Just click on the Log out button we will exit from the Software.

4.3 Customer Panel

4.3.1 Log into Customer Panel

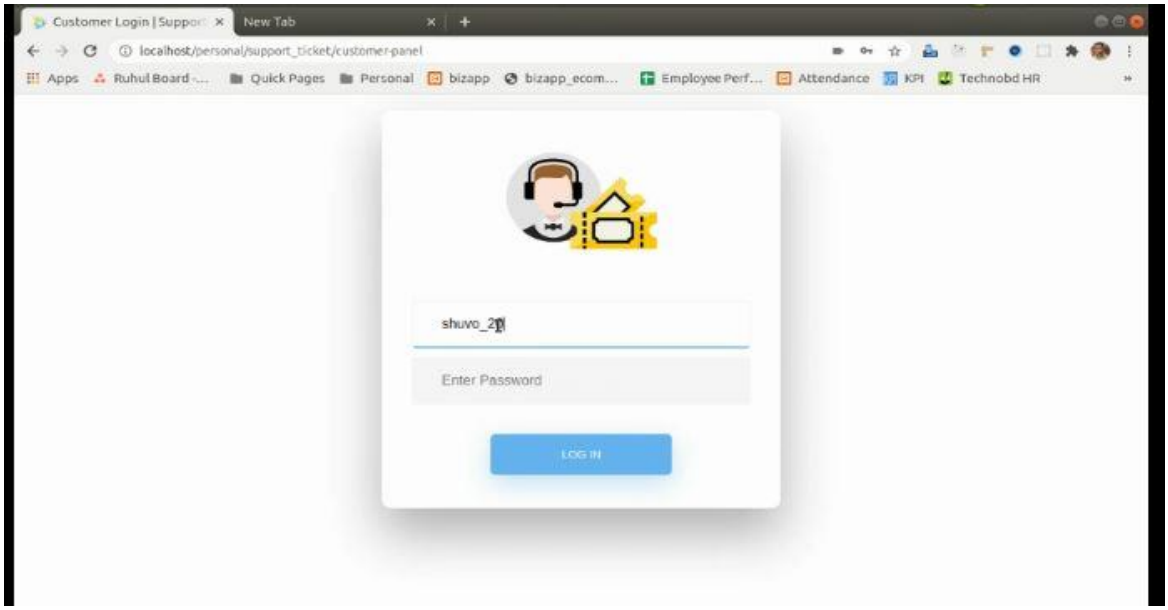


Figure: 4.3.1:- Log into Customer Panel

This is a review of the customer panel. This panel can only be viewed by the customer by logging in to his account and the customer will create his ticket or support accordingly. Which can be found in the main application of support.

In order to login to the customer panel, the customer will first need a user ID and password, which is what all the customer information was previously input in the admin panel and also the user ID and password were given.

In that case, we will give the unique user ID of the customer here because many customers may not have emails or the same customer may use more than one line.

4.3.2 Customer Panel Dashboard Review

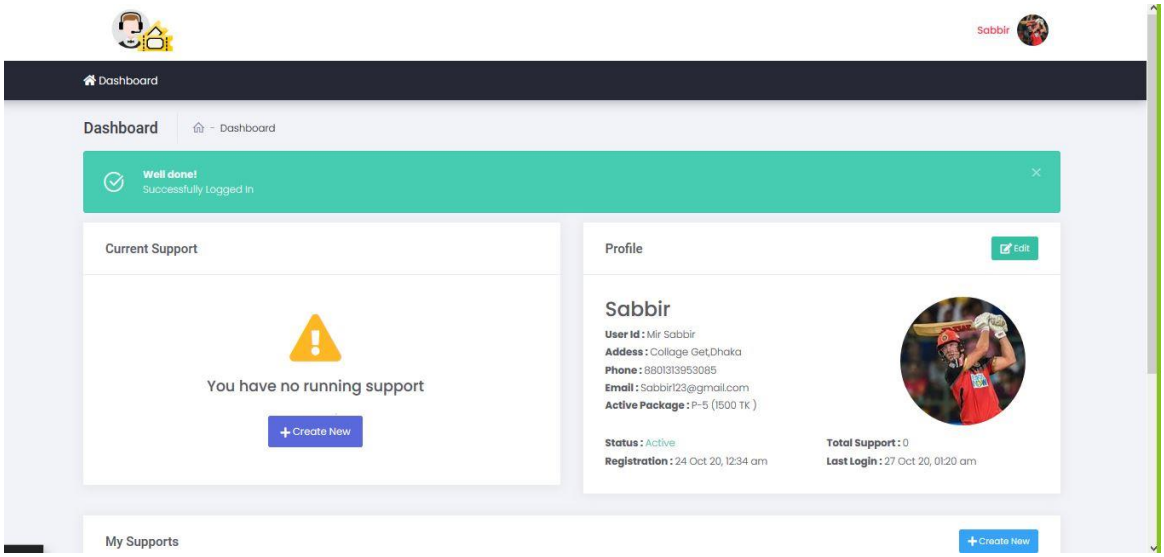


Figure: 4.3.2:- Customer Panel Dashboard

After logging in to the customer panel, a message like this has been sent to the top bar. We see three options in the dashboard of the customer panel

1. Current support

2. Profile

3. My support

This panel is simply designed. Much like the admin panel is designed, but a completely different panel for customers. This panel is for customers only. The customer will not be able to see anything in the admin panel or anyone in the admin panel will not be able to see the customer panel.

4.3.3 Customer Profile

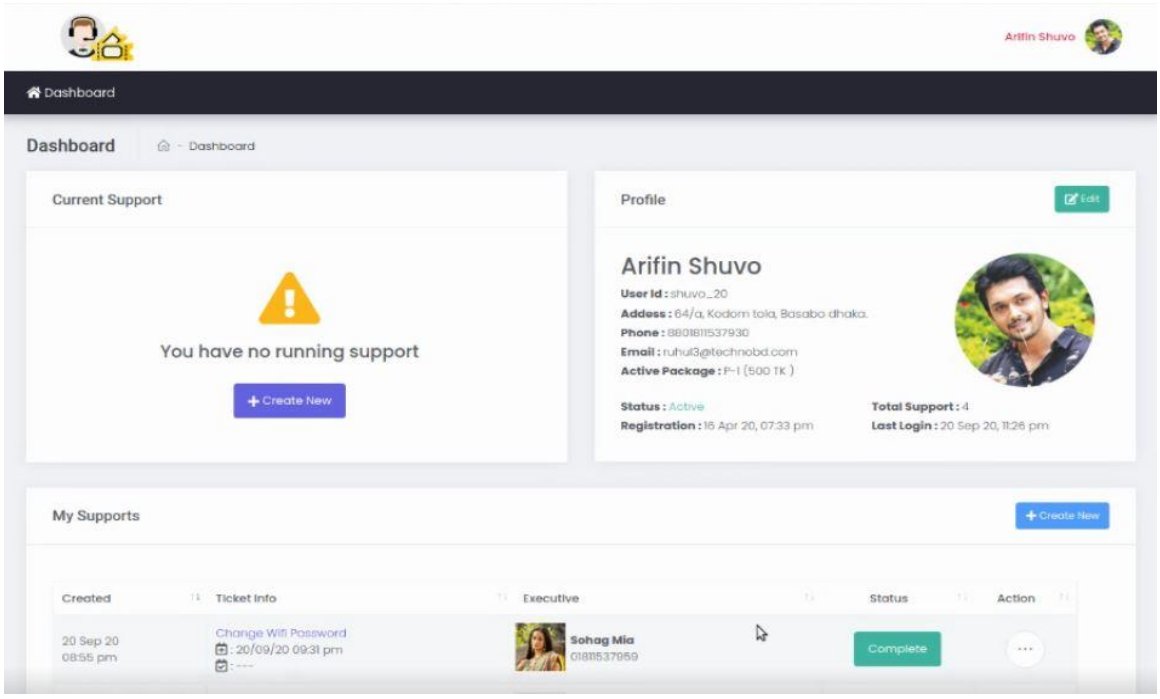


Figure: 3.3:- Customer Profile

The customer profile will first show the customer's name. Then I will see the user ID that I gave while logging in. Then customer address, phone number, email address, active package (name of the package the customer is using + amount of money), customer status (active / inactive), total support (a number of how much support they have used so far), registration (/ On which date he has registered) and when he last logged in will be able to see the date and time.

4.3.4 Edit Customer Profile

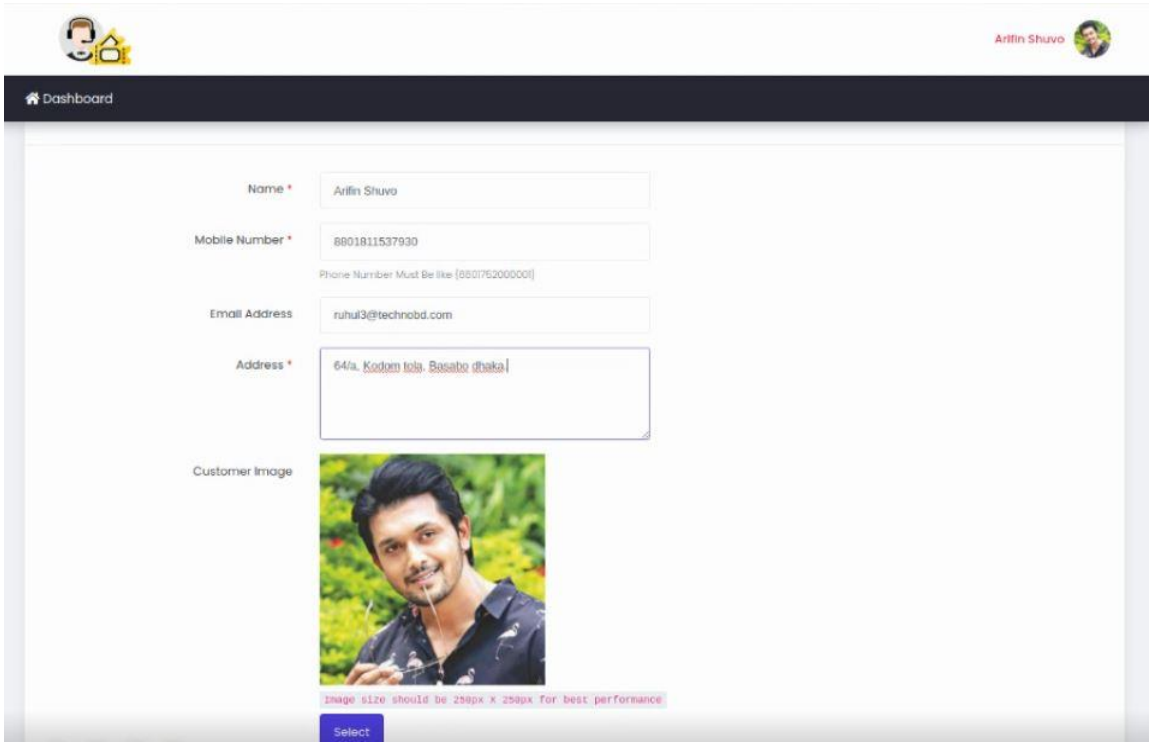


Figure: 4.3.4:- Edit Customer Profile

In this interface, Customer can also edit the customer profile by clicking on the action such as: Name, Mobile Number, Email Address, Address & Customer Image. Then clicking the Save its successfully done.

4.3.5 Create Current Support

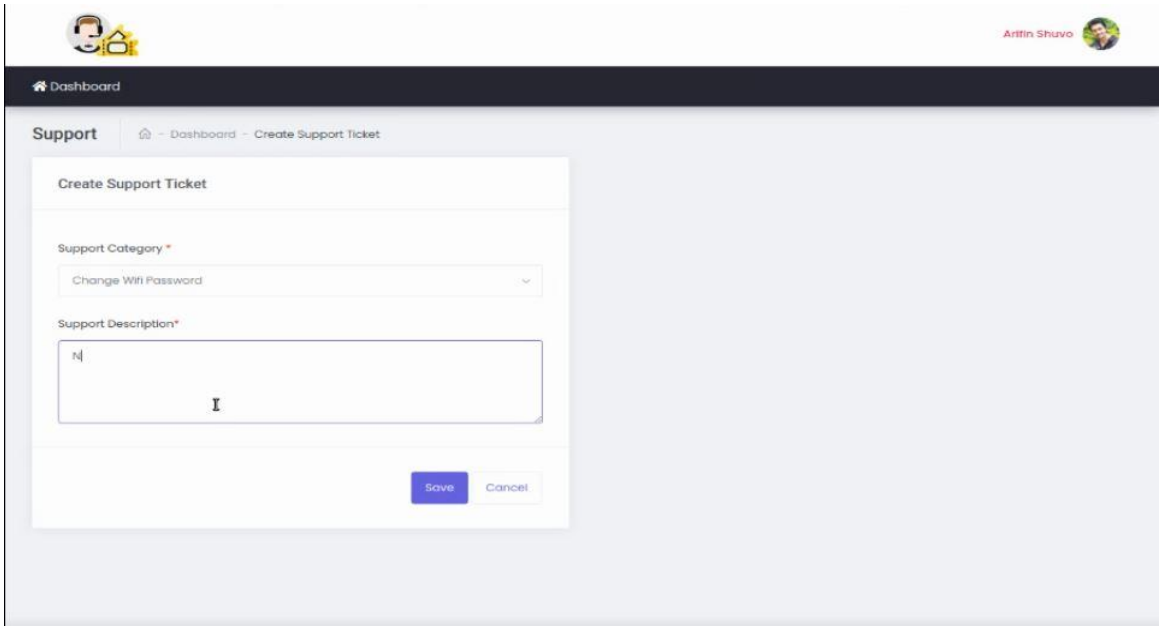


Figure: 4.3.5:- Create Current Support

If you look at the current support interface, 2 texts show. One is "You Have No Running Support" and the other is Create New. A customer must create his support ticket by clicking on the Create New option.
After clicking here you have to enter the category of support and in the support description the customer can write anything in English / Bangla as a note down for his support. Then, if you click on the save option, the ticket will be successfully added.

4.3.6 View/Delete Current Support

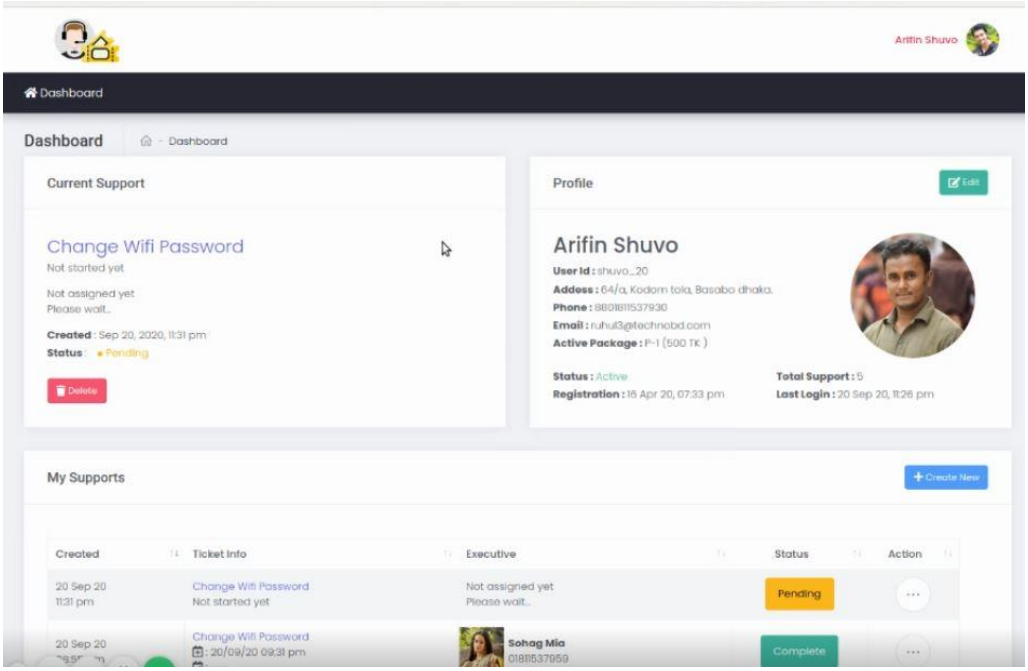


Figure: 4.3.6:- View/ Delete Current Support

The new support provided by the customer is coming in the current support interface. The customer will see 'Not Start Yate' there and his support is not assigned from the admin panel.

You can see when it was created and the status can be seen. If the customer wants, you can also delete his support.

Then after submitting from admin panel, his page update will be updated automatically.

4.3.7 Current Support Running

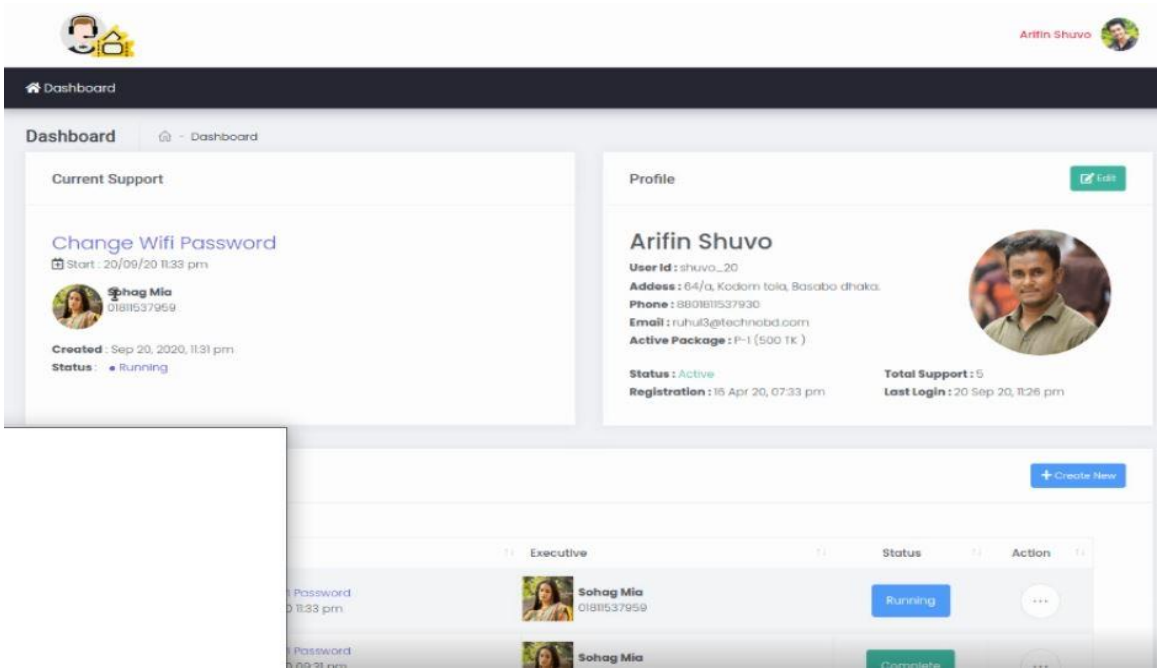


Figure: 4.3.7:- View/ Delete Current Support

The Current support is assigned from the admin panel. The customer will then be able to see which executive has been assigned to assign the task to his panel and see the profile and phone number of that executive. And below will show the running status of his work.

4.3.8 Current Support Complete

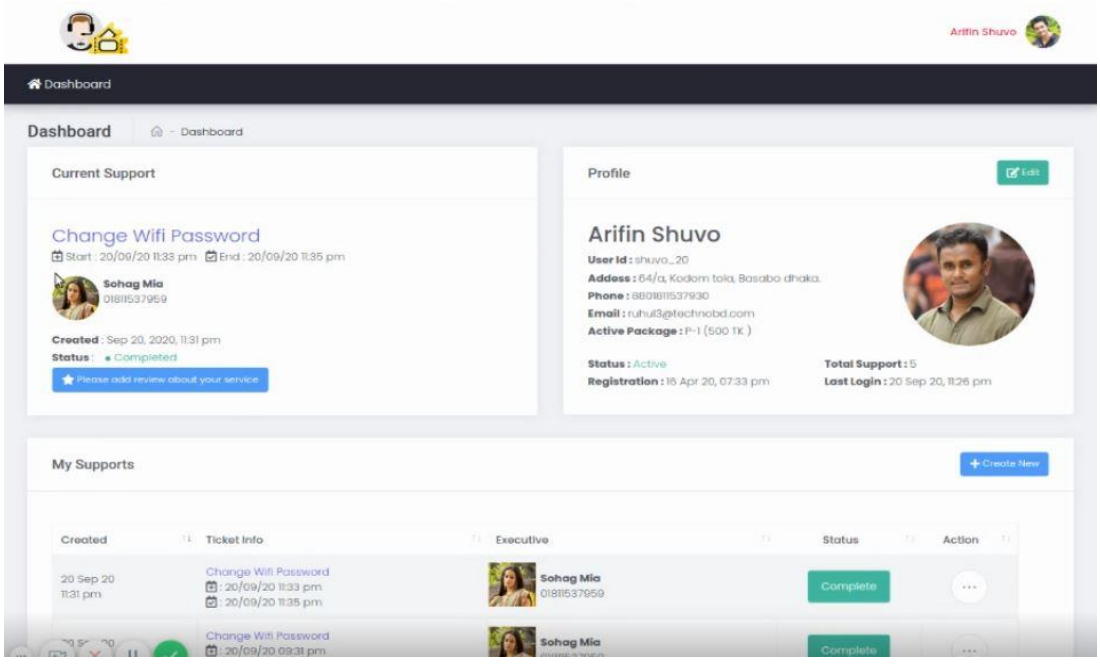


Figure: 4.3.8:- Current Support Complete

After completing the executive work, give a complete review through the app. The customer will then be able to see the complete work review on his panel. But the task will not go away until the rating is given in the review. Here 10 is a very good rating and 1 is a very bad rating.

After giving it, everything from the customer's created ticket will go to the My Support list below.

4.3.9 My Support List

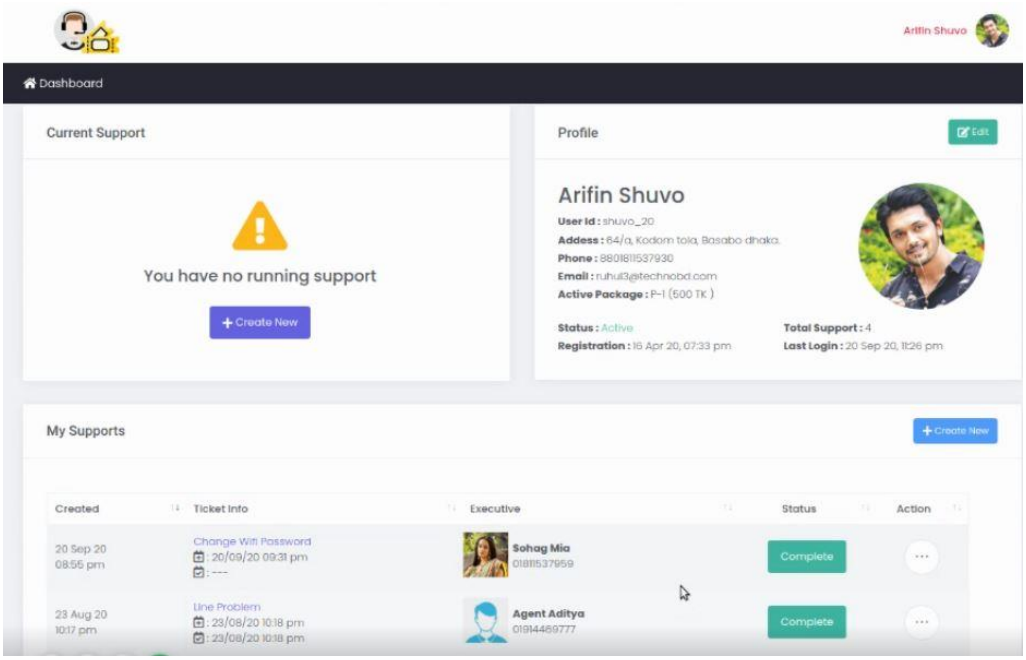


Figure: 4.3.9:- My Support List

From this My Support List, customers can see how much support they have received. For example: Create Date and Time, Ticket Information, Any Executive Support, Status and Action.

4.4 Android App for Executive Person

4.4.1 Android App Overview for Executive



Figure: 4.4.1:- Mobile App for Executive Person

We have created this app for those who will go to the field and serve the customers. It is designed for use by executives very simply.

4.4.2 Sign in apps for Executive

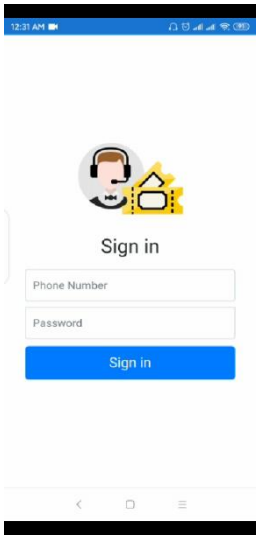


Figure: 4.4.2:- Sign in apps for Executive

We have used phone numbers and passwords for executive persons to login to the app. We will be able to login inside the app to give the phone number and password.

4.4.3 See the option after sign in

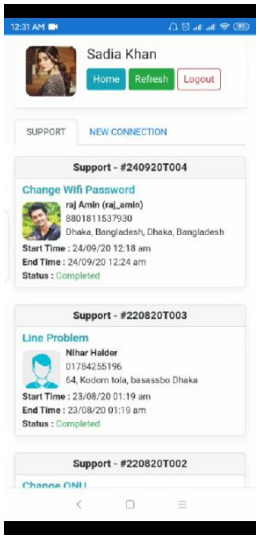


Figure: 4.4.3:- See the option after sign in

The executive person will have a home button after logging in to the app, a support option, new connection, refresh and log out button.

4.4.4 See the option after sign in

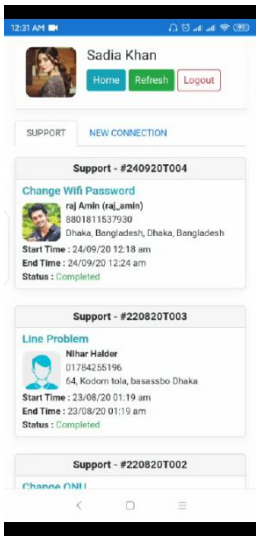


Figure: 4.4.4:- See the option after sign in

The executive person will have a home button after logging in to the app, a support option, new connection, refresh and log out button.

4.4.5 See the option after sign in

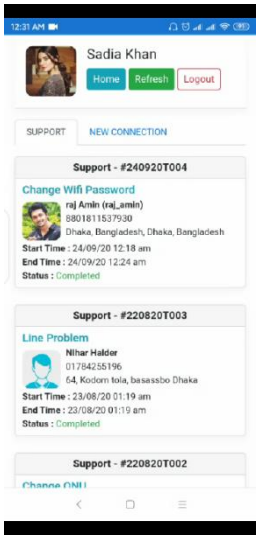


Figure: 4.4.5:- See the option after sign in

The executive person will have a home button after logging in to the app, a support option, new connection, refresh and log out button.

4.4.6 Support Option



Figure: 4.5.6:- Support Option

Only executives can complete and view the rest of today's tasks in the app.

4.4.7 Account Support Option



Figure: 4.4.7:- Support Option

Only executives can complete and view the rest of today's tasks in the app.

4.4.8 New Connection



Figure: 4.4.8:- New Connection

Only executives can complete and view the rest of today's tasks in the app. Only executives can complete and view the rest of today's tasks in the app. All you have to do is click on New Connection to complete and submit.

4.4.9 Log Out from apps

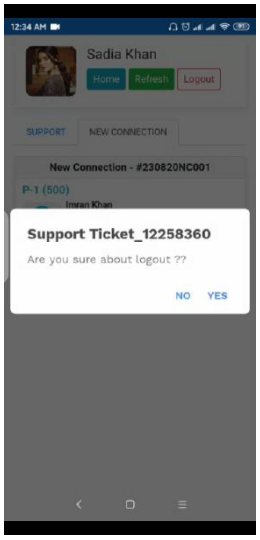


Figure: 4.4.9:- Log out from apps

Clicking on the log out button will show us the text "R u sure abit logout". If you do, you will be logged out of the app.

CHAPTER 5

SYSTEM SEATING

5.1 Project Implementation & Testing

At the end of the system design, it is the beginning for the actual coding to develop the proposed system. During development phase, the table structure of the database will be first built in order to provide a suitable data types that suit the system back end development, system connection and data transfer. Next, the computer side client program will be developed and follow by will be the web services that allow mobile phone client program to communicate with the server and lastly mobile phone side client program will be developed. In testing phase, several test cases will be carry out to test the system in order to determine the system reliability and system accuracy. According to the test cases, a system testing report will be generated for further review to figure out the system weaknesses and made improvement accordingly. In the deployment phase, several training will be provided for the particular staff such as how to operate the system, the procedure of handling different event and several instruction that need to be follow when operating the system.

5.2 Implementation Issues & Challenges

During the system implementation phase, several challenges need to be confront because it involve end users to test the production system with various situation. The possible challenges may face are as following:

User without background

The users are required to have basic knowledge of how to operate a computer system android mobile phone in order to use the system. This will be difficulty to give training to the user as the basic knowledge information can be obtained from internet easily.

The screen size of different device

This would be one of the issue that will encounter while implementing the system. Because user are able to download the mobile application from the official website and use it as a client device to place order. Therefore, if the user device screens size are too small or too big. The content and interface of the application may not consistence.

Server performance

During real time system implementation, three would be a huge number of client that access to the server at the same time. Therefore, it may slow down the connection and performances of the system and even causes the server down if the issue goes beyond the level of acceptance.

5.3 Development Tools

5.3.1 Database Environment

The proposed system will need a database system to support in order to store the huge amount of data. MySQL database system will be chosen to support the proposed system because it is well-known open source relational database management system. Other than that, MySQL database system provides software developer with a client program with easy understanding graphical user interface that can communicate to the MySQL database server named as MySQL Workbench 6.3 CE. By doing so, software developer can interact with the database system with the user friendliness client program and without using the command prompt, at the end it may speed up the development progress.

5.3.2 Web Technology

The proposed system is a cross platform system, which include Web base client application and Android mobile application client. Therefore, it require to implement web services in order to support the Android mobile phone client device to fetch data from the database server and store data back to the database server. In this project, Xampp Server is used to support the issue that mention earlier. Xampp Server is a Windows web development environment that built-in comes together with the Apache, PHP and MySQL database. Furthermore, PHP will be the programming language that used to create the web services that store in the server and it is able to call by the Android mobile phone client to perform particular task.

5.3.3 System Platform

The project is a cross platform based system which includes Web browser and Android mobile application in order to operate the proposed system software.

5.3.4 Visual Studio Code and Sublime Text 3

Both Visual Studio Code and Sublime Text 3 is integrated development environment that are supported by Java programming. Furthermore, Sublime Text 3 is used to develop the computer client side program and Visual Studio is used to design and develop the Digital table.

5.4 Test Plan

After the system has been developed, it will move to system testing phase. In system testing phase, the developed system is required to install on appropriate devices for testing purpose. After the system installation has been completed, the system testing task will be performed by different roles of user such as manager role and staff role. The purpose of system testing is to identify and determine the degree of system stability. At the same time, it is given an opportunity for developer to figure out error or bug that has not been raise and encounter during the system development phase. Those error or bug that has been found during the system testing activities will be solved before the system. release. Each and every testing before system testing phases is actually tested by the system developer itself. Therefore, it might cause some biases toward the testing due to the system developer have knowledge about the system software logics and lead the result to be inappropriate.

5.4.1 Unit Testing

First of all, unit testing will be the first testing method that used to test the developed system. It consists of testing activities that test the system module by module which has not been integrated as a whole. By doing unit testing, developer are able to identify error and bug easily since it is finding the error and bug through a unit part of the system rather than finding error through the complete system. In addition, developer will test the unit part of the system with the validation and the correctness of data value. Valid and invalid input will be entering to test and ensure the system processes perform with an expected result.

5.4.2 System Testing

System testing of the software and hardware is a testing conducted on a system which is complete, integrated system that works as a whole. System testing is a critical testing procedure that must be conducted by software developer before the system released. During system testing it can evaluate the system's compliance with its specified requirements according to the system design. Furthermore, several testing activities in system testing test not only the design of the system, but also the behavior and the believed expectations result from the customer. In addition, various complex test cases that used to test the system are according to the business process requirements which are collected from the user. Meanwhile, errors or bugs that detected during the testing is required software developer look into it from the initial step of the business process to the end of the process to ensure it have expected result in order to solve the errors or bugs to determine the degree of system stability.

5.4.3 Acceptance Testing

Last but not lease, acceptance testing also known as user acceptance testing would be final testing procedure that perform to test the developed software system. In acceptance testing, the testing activities are different compare to the testing activities that mentioned previously because the tester that tests the system will be the final user which do not have knowledge about the system logic. If the final user encountered an error while using the system, system developer are required to maintain the system as soon as possible and release a new patch for the existing system to recover the error. Meanwhile, final user will use the system that visualized as to support their real business routine operation, therefore software support team are required to stand by to provide technical support while final user need any help or support that regarding the system. If there is no errors detected by the final user while using the system for a long period, the development job of developer is consider as complete and the system will be a final system product.

CHAPTER 6

SYSTEM EVALUATE AND DISCUSSION

6.1 Proposed System Completion

The proposed system is designed and developed to address all the problem statements described in the first chapter of this report. First, the advanced system provides a feature that enables support ticket management System to solve the problem of tracking. Using the system, employees are allowed to place service tickets using the system. This proposal is written to propose an efficient internet service to the customers to enhance and improve the existing traditional Support Ticket Management System and provide convenience, availability and integrity to Internet provider companies (ISP). The system is very suitable for internet provider companies as it also reduces the time required for internet service customers in their office, business or home and support service. There is no need to call any customer or go to the office of the internet provider company in person to avail the above service. In this case the user can take the service from home using the system.

6.2 System Strength and Limitation

6.2.1 System Strength

The system is very suitable for internet provider companies as it also reduces the time required for internet service customers in their office, business or home and support service. There is no need to call any customer or go to the office of the internet provider company in person to avail the above service. In this case the user can take the service from home using the system. Meanwhile, it helps the internet provider company to get better customer service as internet provider companies should serve their customer without any delay.

6.2.2 System Limitation

The system is not compatible with IOS mobile devices as the mobile application is developed in Android environment. Therefore, for IOS mobile phone user may not able to install the application in their mobile phone and experience the system. Meanwhile, the internet provider companies has prepared some Android mobile devices which are used to resolve the issue that mention above. Next, due to the mobile phone client devices are required to connect to the wireless intranet in order to communicate with the server. It is very important to identify a suitable location that used to install and set up the wireless access point in order to ensure the wireless signal coverage is able to reach the entire internet provider companies area.

6.3 Future Enhancement

The system can implement a feature which is real time notification from the mobile phone application to the service task. We will develop mobile application for customer panel. This feature enable customer to request customer service through using the mobile application rather than using web browser. In addition, the mobile application also can implement a feature that allow customer to update the service status.

CHAPTER 7

CONCLUSION AND FUTURE WORK

7.1 CONCLUSION:

After a decade, the advancement and innovation of technology help people to manage their task easily and efficiently. In many other industry area have been used management system to assist their business grow long time ago, therefore it is also a trend that cause F&B industry to make use of a management system for their business. At the end of this project, the system can reduce and replace the human manpower task, reduce the time consume for each transaction and generate report for further management purpose by fully utilizing the system. Obviously, the propose system can help improve the productivity thus directly did an impact to the profitability of the internet provider companies. Furthermore, it can also help internet provider companies to reduce the cost of operation in term of manpower, because the system have already facilitate majority of the business process by using the system. Therefore, it is believed that the system can lead the internet provider companies business grow from time to time.

On the other hand, the technology nowadays allows the portability requirement easy to achieve. Therefore, portability has become one of the factor that have to take into consideration in the system development process. Because portability bring a lot of benefit to user while they using the system such as it provide convenience, accessibility, easy to communicate and etc. Hence, portability has done an impact to the social that everybody is much more preferable to complete their task with portable device.

In order to fulfill these all requirement, our proposed method is combined the support ticket management system which is in mobile platform into the support ticket management system which is in computer platform. The integration of both features which develop a system that can let user to have an experience of portability which is user can process their internet through using their smart phone or tablet or laptop.

7.2 FUTURE WORK

The following section describes the work that will be implemented with future releases of the software:

- Payment Options: Add different payment options such as any type of Bank Card, Bkash or Introducing billing system.
- Adding payment methods for billing system.
- Making Mobile app for customer panel.
- Send real time PUSH notifications for any kind of action.
- Adding different kinds of services for example migration, quick SMS, quick mail and executive attendance system.

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