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Better Reviews

Reema Shavani Tummalapalli

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BETTER REVIEWS

By

Reema Shravani Tummalapalli

B.Tech, Sri Sai Ram Institute of Technology, India, 2018

GRADUATE CAPSTONE SEMINAR PROJECT

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For the Degree of Master of Science,

With a Major in Computer Science

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ABSTRACT

This is a documentary paper on the "Better Review" PHP project. This project contains a local directory guide for the general users who can get registered to the website and write or check reviews and ratings for any particular business, shop, dine, and professionals. The admin can control the whole process to provide authenticity and reliance.

The business owners can also promote their business through this website and get public search as public get to know about new business in the featured service option on the website. Business users can send promotional offers to the users that posted their reviews in their business page.

Users will be receiving notifications whenever a new user registers, when the user wants to upgrade from general account to a business account, when their business account is posted in featured services etc. The data is stored through MySQL and the front end is implemented through Bootstrap, HTML5, jQuery, and core JS. In our project we use XAMPP control panel to connect with Apache Server, PHP and MYSQL.

In this documentary presentation, we discuss about the website in detail and explain its workflows and several issues. We also explain the architecture design, internal and external risk analysis, functional area, etc. The document contains other possible issuers that are recovered to complete the project successfully and implement the website for users to know information and recommendations about local business though one search.

Table of Contents

1   Project Description

This is a PHP project called "Better Reviews". Better reviews is an online website which allows users to review ratings and recommendation for any particular business type. The application contains a local business directory, where the business owners can register their account and upgrade the information about their business page. General user can post their reviews, check reviews and further details about the business. The admin has the authority to manage, approve, change, or delete the reviews or business account, as well as, can suspend the users also.

Search bar option allows users to find a particular business using the zip code, category etc. Services based on categories like restaurants, shops, entertainment, beauty etc. can be found with a filtered search bar.

The website is also useful to business users because these positive or negative feedbacks can improve their products and services. They can also review the feedbacks and reply their suggestions or comments to the particular user. Business users can promote their business by sending promotional codes and offer details to user accounts.

Any general user who wishes to upgrade their account to business account can complete the necessary form details to register for a new business and request for an approval from the admin page. Once the page is approved the user can promote his/her business in better review application.

Admin will manage the request and have the access to accept or reject the application. Business accounts will be managed and maintained by admin. Admin can suspend or delete a particular account if the account is suspicious or does not pay for the account to be continued as a business account.

Better Reviews gives customers an outlet to tell others what they think of the business. Therefore, this application will promote the business and display the reviews and ratings based on customer evaluations and recommendations.

1.1   Competitive Information

Now a day, people want to visit or do business with authentic businesses when a customer wants to have an idea about the place or business before they visit in person. In this competitive market of business, we directly target these people who want to be aware of the local business or any place before the visit. The benefit is that these people can get reviews about this place from the authentic people who visited this place previously and henceforth the general user can get enough idea about the place or business.

1.2   Relationship to Other Applications/Projects

It is our independent project that is proposed by the PHP technology.

1.3   Assumptions and Dependencies

- We can assume that the reviews provided by the other visitor will provide support to our project and enhance the searches for any local place through our website.
- As we mention before it is an independent project and the service and capabilities will be under the control of the admin. The business providers are capable of promoting their business and we are dependent on these business users as they store their data into our database and we earn through this website by promoting their business.
- We required increasing more business users to increase the search volume and enhance our website in this competitive market.
- Users must register and login to their account in order to post their views about a particular business page.

1.4   Future Enhancements

We are looking forward to increasing our website capabilities and will add more business users to make it more usable for general users. We are also looking to add the contacting option through this the user can contact their preferred place by checking the reviews to avail their business or do the booking for their future visit.

1.5   Definitions and Acronyms

- Admin: The person who can control the overall workflow of the website.

- Business Users: The business person of the business owner who is leading a particular type of business and register here to promote the business
- General User: The authentic registered user who can review any business as well as see the other reviews also.
- Promo Offer: Business users can promote their business by sending promotional codes via notifications to users who previously visited and posted reviews on their business page.

2   Project Technical Description

The website is implemented through PHP Technology and the front end part of the project is structured with the help of Bootstrap, HTML5, jQuery, CSS and core JS. We used MySQL for data storing purpose. XAMPP control panel is a cross platform that contains Apache, MYSQL, PERL and PHP through which the database is connected with the back end server.

2.1   Application Architecture

The system shows the home page where the user can log in or register as the admin, business user, and general user. Then they can visit their account and redirect to the particular option pages that are shown on their account pages. Users can post reviews, view reviews by searching it in the search bar. The business owner can add their business or upgrade it according to the reviews and in the architecture, the Admin holds the authority to maintain the workflow and approve it as shown in the below information flow part

Database Structure
- A table for authenticated & registered members
- Storage for the business details
- Storage reviews concerning any particular or selected business

MODULE DECSRIPTION:

• Home page – Access is granted to everyone, anyone can view this page, as this is the landing page. Home page contains the website logo, Search bar with filter that helps to provide an advanced search based on category, location. Home page displays the featured business options for the user (up to 5 or 8) based on businesses with highest rating and more number of reviews.(this can be managed by the admin, to promote any particular business, like advertisement)

. • Business page – All the users and business owners can check the posted businesses page (from home page, click on a particular business, that redirects to this page) where all the details of the page given by the owner is displayed, and users with an login account (after registration) will get access to post a review (with uploading photos), and also provide ratings.

• Registration Page – Where a user or business owner can sign up with the application. Fields required for a general user: First name, Last name, Email, Password, Zip code. Fields required for a business owner: First name, Last name, Email, Password, Name of the business, category, Business phone, Business email, Business Website(Optional), Description, location(address), zip code, logo(upload), photos(upload).

• Login page – there will be a common login page, through which both the general user and business owner can login.

• Profile page – Common page for both User and Owner, where they can update their personal details. (*for general user there will be an option in this page to upgrade his account as a Business Account where he gets a popup form for the fields required for the business owner).

• Business Management – Only for the business account, where update the changes of the business posted, add new features like working hours etc.

• Review Management page – Only for the business account, Mange the reviews, check all the ratings, reviews and reply to the customers.

• Admin Login page – Only Admin can access this page.

• Admin Dash board – Where admin can be able to see all the general users registered, Business owners registered. Delete their accounts, suspend their account, able to edit & delete the reviews posted.

2.2   Application Information flows
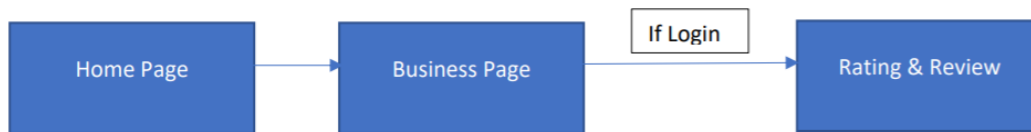
Work Flow

1)*Registration*

2)*General Progress*
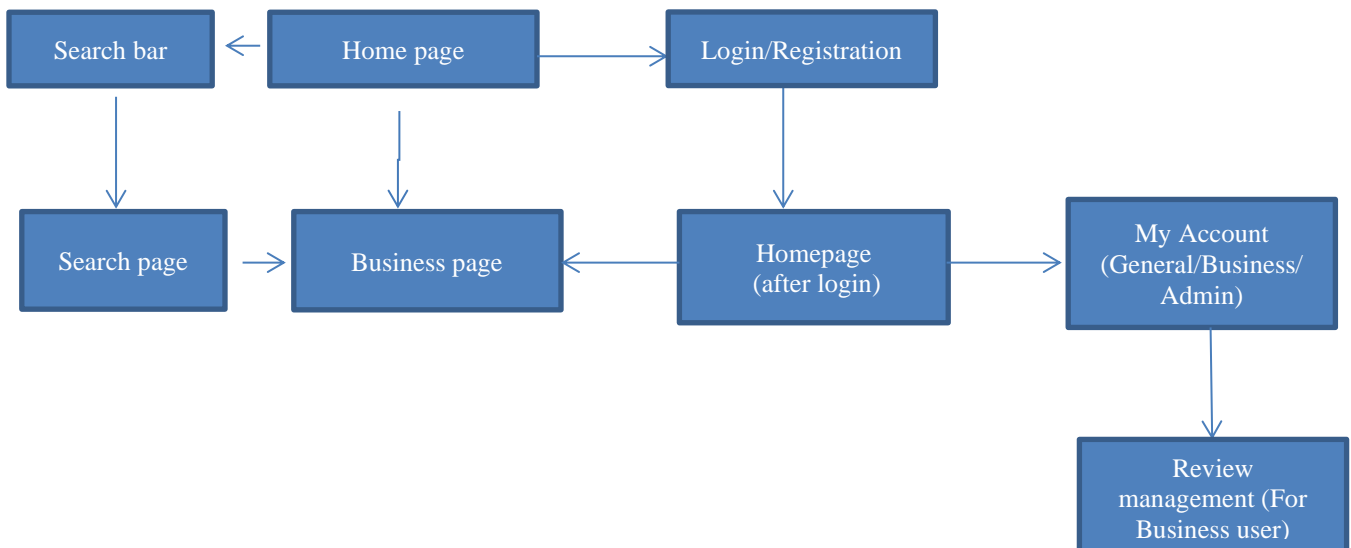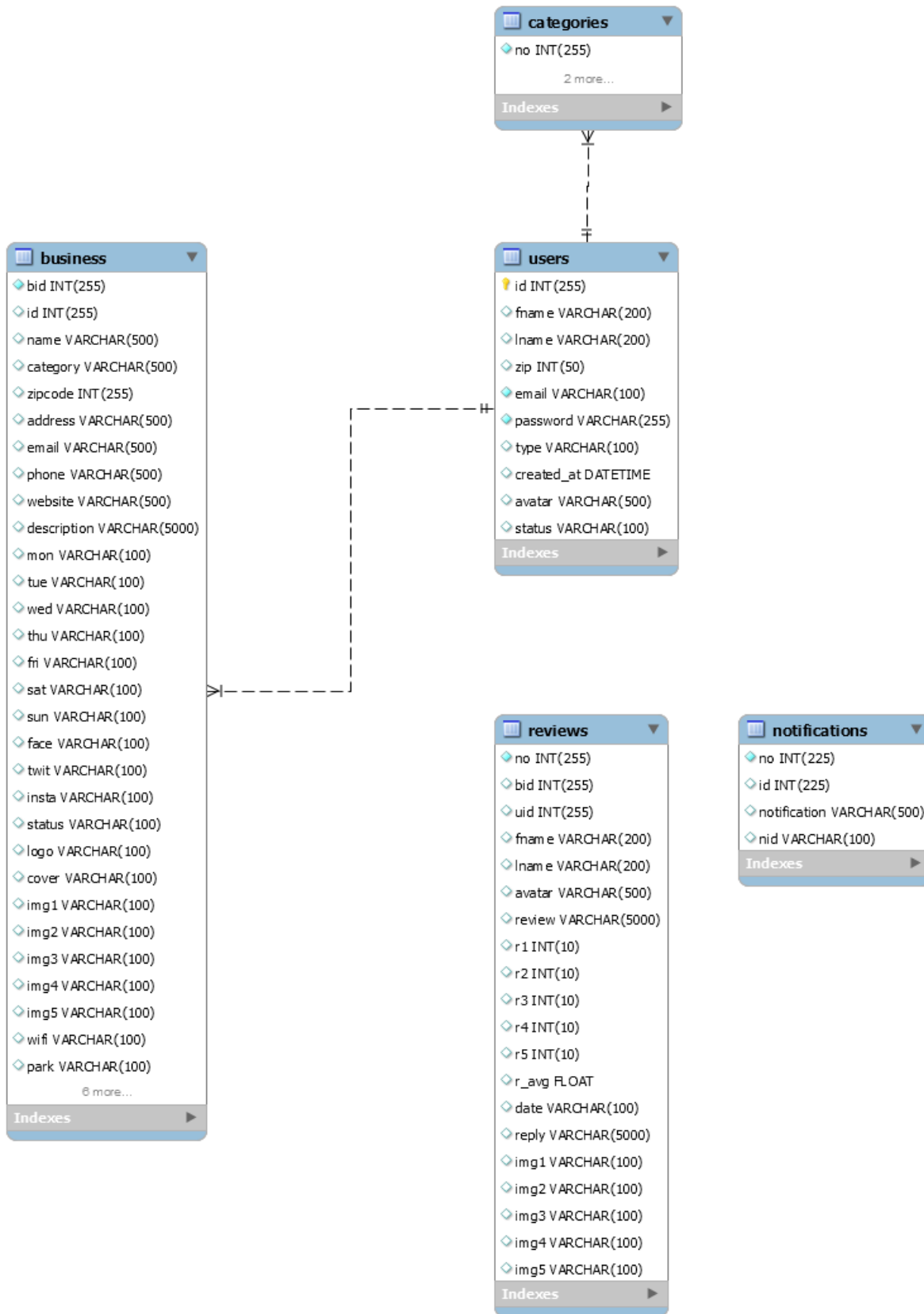

Figure 2.2.1 Work Flow

DESIGN ARCHITECTURE:

Figure 2.2.2 Design Architecture

ER DIAGRAM:

categories
- no INT(255)
- 2 more...
- Indexes

business
- bid INT(255)
- id INT(255)
- name VARCHAR(500)
- category VARCHAR(500)
- zipcode INT(255)
- address VARCHAR(500)
- email VARCHAR(500)
- phone VARCHAR(500)
- website VARCHAR(500)
- description VARCHAR(5000)
- mon VARCHAR(100)
- tue VARCHAR(100)
- wed VARCHAR(100)
- thu VARCHAR(100)
- fri VARCHAR(100)
- sat VARCHAR(100)
- sun VARCHAR(100)
- face VARCHAR(100)
- twit VARCHAR(100)
- insta VARCHAR(100)
- status VARCHAR(100)
- logo VARCHAR(100)
- cover VARCHAR(100)
- img1 VARCHAR(100)
- img2 VARCHAR(100)
- img3 VARCHAR(100)
- img4 VARCHAR(100)
- img5 VARCHAR(100)
- wifi VARCHAR(100)
- park VARCHAR(100)
- 6 more...
- Indexes

users
- id INT(255)
- fname VARCHAR(200)
- lname VARCHAR(200)
- zip INT(50)
- email VARCHAR(100)
- password VARCHAR(255)
- type VARCHAR(100)
- created_at DATETIME
- avatar VARCHAR(500)
- status VARCHAR(100)
- Indexes

reviews
- no INT(255)
- bid INT(255)
- uid INT(255)
- fname VARCHAR(200)
- lname VARCHAR(200)
- avatar VARCHAR(500)
- review VARCHAR(5000)
- r1 INT(10)
- r2 INT(10)
- r3 INT(10)
- r4 INT(10)
- r5 INT(10)
- r_avg FLOAT
- date VARCHAR(100)
- reply VARCHAR(5000)
- img1 VARCHAR(100)
- img2 VARCHAR(100)
- img3 VARCHAR(100)
- img4 VARCHAR(100)
- img5 VARCHAR(100)
- Indexes

notifications
- no INT(225)
- id INT(225)
- notification VARCHAR(500)
- nid VARCHAR(100)
- Indexes

Figure 2.2.3 ER Diagram

2.3   Interactions with other Applications

- Interaction with the business owners website or application to access and authenticate the reviews
- Interaction with security application to mitigate hacking risks
- Interaction with updating application to update the available user interface

2.4   Capabilities

- Enable user to review any place or business page.
- Enable user to identify which business or place is more suitable to them according to their needs
- Enable business owners to promote their business and get reviews & ratings according to their service
- Enable admin to add or delete data
- Enable Google maps to be accessed so business users can add their locations for their business page.
- Enable admin to suspend an account.

2.5   Risk Assessment and Management

The project has the risk of fake reviews (both good and bad). Users can post fake reviews that can misguide any other user about the particular place or business. Thus, fake reviews can lead to a bad opinion about the business place and drive the business to loss.

Recommendation:
This problem can be solved by the admin. Admin needs to communicate about any suspicious review about the place and business to its owner and confirm it is authenticated or not. Then he can change it or delete it from the website. We can limit the number of comments that can be posted by a single user which can prevent fake reviews.

3   Project Requirements

3.1   Identification of Requirements

<CPSC_8985-User_Capability-01>
The project should allow new users to be added, updated, and deleted
Implementation: Mandatory (Specific). (Note: Could be "optional" in other requirements)

<CPSC_8985-Admin_Capability-02>
The project should allow admin to check for user authentication
Implementation: dependent on the login security level (Specific)

<CPSC_8985-Application_Capability-03>
The project must allow more security level to ensure users privacy
Implementation: Mandatory (Achievable) (Note: Could be "optional" in other requirements)

<CPSC_8985-Application_Capability-04>
The project must allow more data security, privacy and reliability.
Implementation: Mandatory (Achievable). (Note: Could be "optional" in other requirements)

<CPSC_8985-Admin_Capability-05>
Admin should update software regularly concerning the software requirement for the project.
Implementation: Mandatory (Specific). (Note: Could be "optional" in other requirements)

3.2   Operations, Administration, Maintenance, and Provisioning (OAM&P)

- Data security and maintained privacy
- Reliable data storage and backup
- On-time updating process
- Routine maintenance and website updating
- Routing reviews authentication checking
- Responsible admin administration

3.3   Security and Fraud Prevention

Possible External Issues

- Fewer furnishers
- Less financial profit
- Less approval
- High competition
- The high demand of users

Possible Internal Issues
- Fraud reviewers
- Drop security level
- The gap in the checking process

3.4 Release and Transition Plan

The project will release to the customer as an online platform and developed for the users from submitting the reviews. Then the admins will look after the issues and update the website according to the customers' needs.

4 Project Design Description

As we stated previously that the website is called a better review. This is a PHP project where the website contains local business directory. This website has information about the local shop; dine as well as entertainment business and professionals etc.

Here the main three categories are present.
- The first one is the admin. The admin has to register first by providing the necessary details and then log in to the page by providing the mail ID and password. The admin can go to the account page and manage new notification, approvals, the updating and deleting tab, etc. The admin can perform operations like add, delete, or suspend the user from the website for the sake of maintaining authentic information to the website. Admin can manage both general account and business account.
- The second one is business owners. They also have to register themselves and log in. The process will be the same as admin but their access is limited. They can update their business account. Add new things to their business as well as delete the old and invalid information about their business. Their request for updating or deleting any information is notified to the admin and they need the admin's approval to complete the task. Business owners can promote their business for their profit by sending promotional offers via notifications to the users who previously posted their comments on the business page.
- The users' registration and login process are also the same as others. They can log in as the user and in their account; they can give the review for any business. The first lead on to the home page and then after searching their choices using the search bar the website will show the featured service that are promoted by admin and business owner as well as they can get "services you may like" option to have a good choice according to t their search by proving search category (shop, dine, business, etc.) and zip code.
- Admin, the business owner, and the general user are taken to the home page after login then they can go to their particular account for accessing their possible option and get desired output. After searching, reviewing, or completing the tasks of their own they have to logout their account for security and data privacy purposes. In the notification option, the admin gets a notification about an approval post or reviews, the business users get the notification about any business changers and message for the admins as well as the review post notification from the general user side. The business management tab enables users to setup the business requirement by fill-up the form or options given on this page. In the review management tab, the business owner can reply to the user who posted the reviews. In the offer management tab, the business user can send the promotion or offers that need to be provided to the users to renew their business.

5 Internal/external Interface Impacts and Specification

On the website, the internal authorities are the admin and the business owners who hold their business account for the promotion. The external authorities are the users. Here we use to develop the website through the PHP language. The internal authorities upload their data into our MySQL database and it has been uploaded after the authenticity checking. The front-end external phase has been implemented through Bootstrap, HTML5, jQuery, and core JS and the ultimate website information is displayed to the users of the website who can view and post a review for any business. We need persistent data for this project and it is providing the current reviews to the users so the persistency in updating needs to be at its high level to fetch the website with the current position of the business

5.1 Description of pages

Home page: In the homepage of the application everyone can find the first view of the application. Home page includes the application basic logo, search bar option, filter option for advance search by the category, location and zip-code.
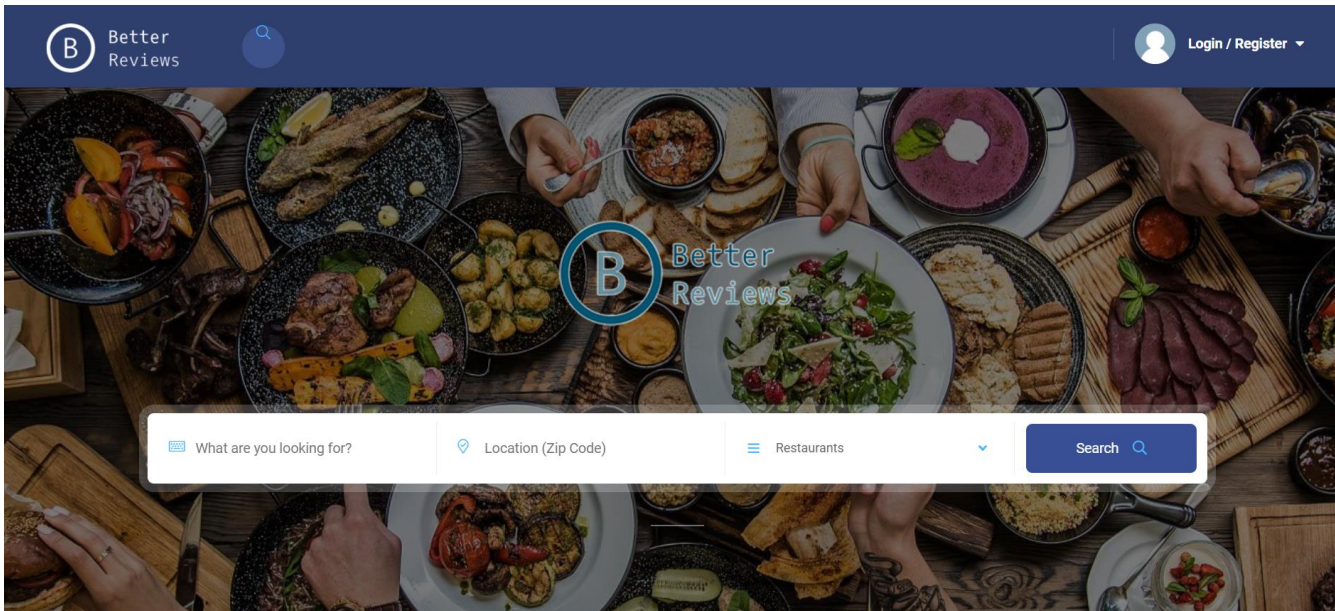

Figure 5.1.1 Home Page

Business page: In the business page the business owners, users and the admins can check for the new and existing business and business detail. The business owner details showed here and the authenticate user have the access to review there for better review service.
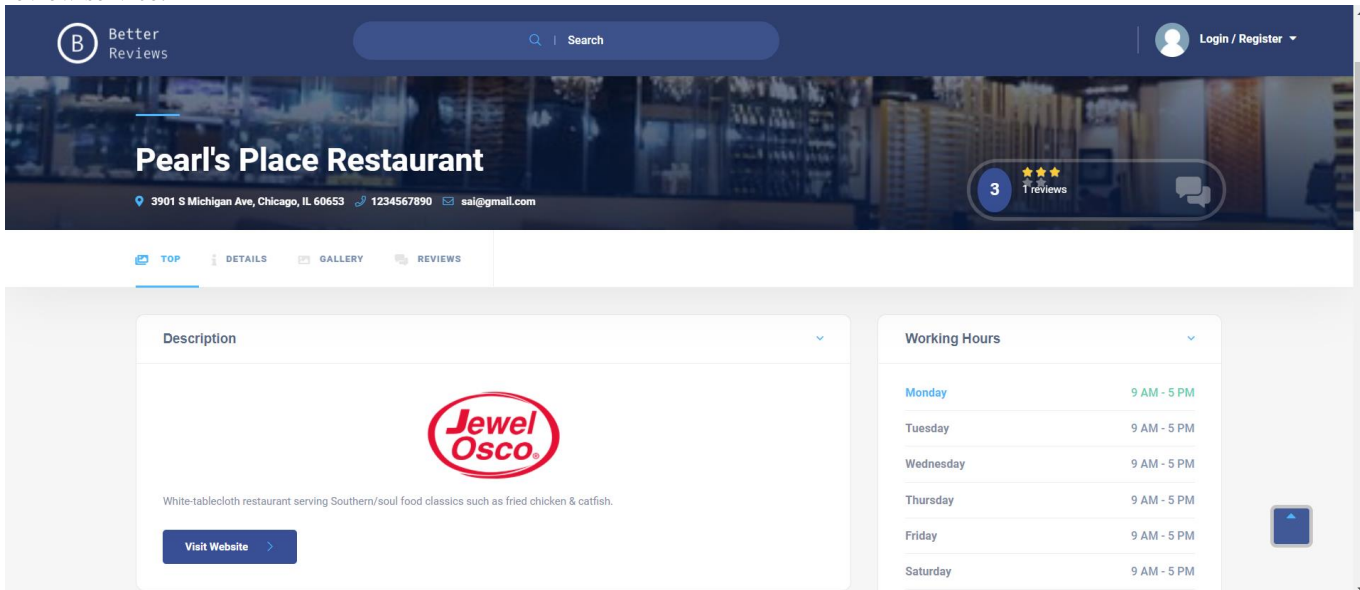
Figure 5.1.2 Business Page(a)
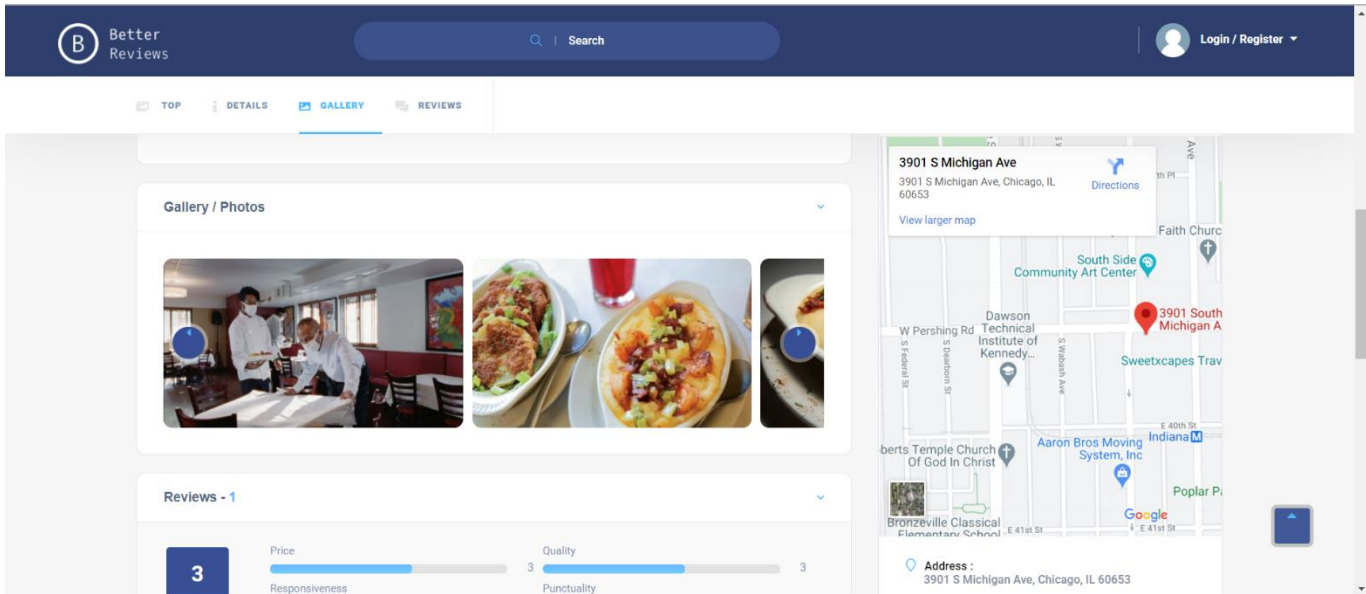
Figure 5.1.3 Business Page(b)
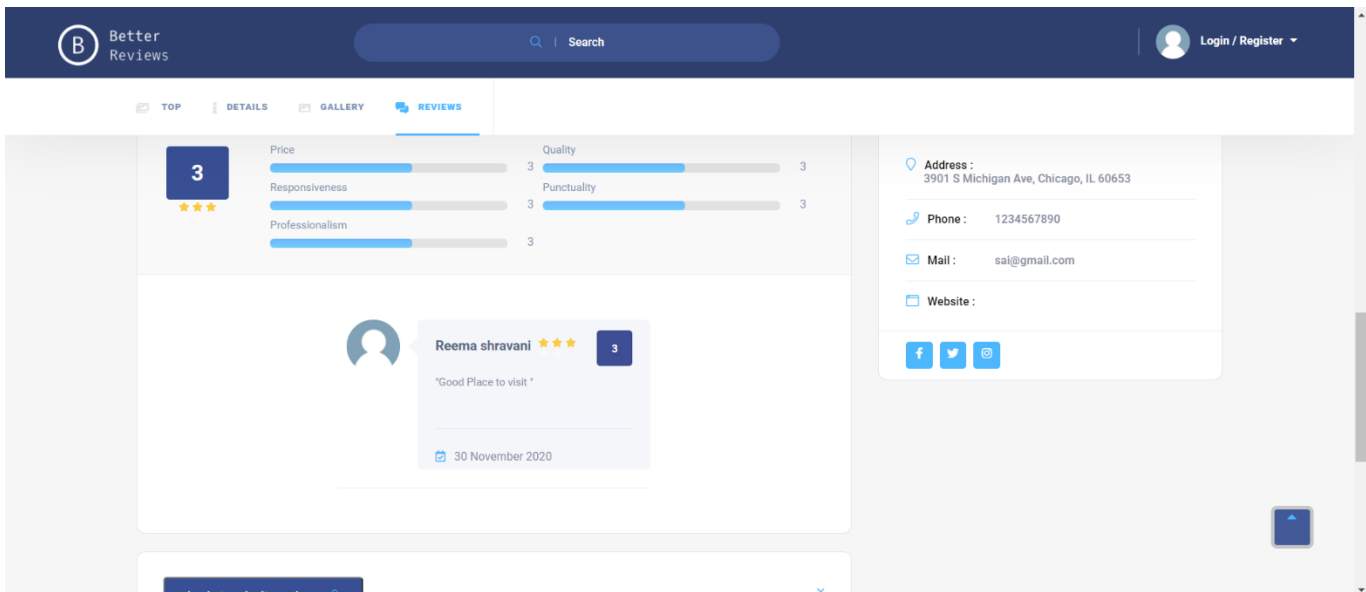
Figure 5.1.4 Business Page(c)

Registration page: On the registration page, the users and business owners can register themselves by sing up with the registration form. There are some specific fields required for the general user such as First name, Last name, Email, Password, Zip code. The business owner also need to find the fields that are First name, Last name, Email, Password, Name of the business, category, Business phone, Business email, Business Website(Optional), Description, location(address), zip code, logo(upload), photos(upload).
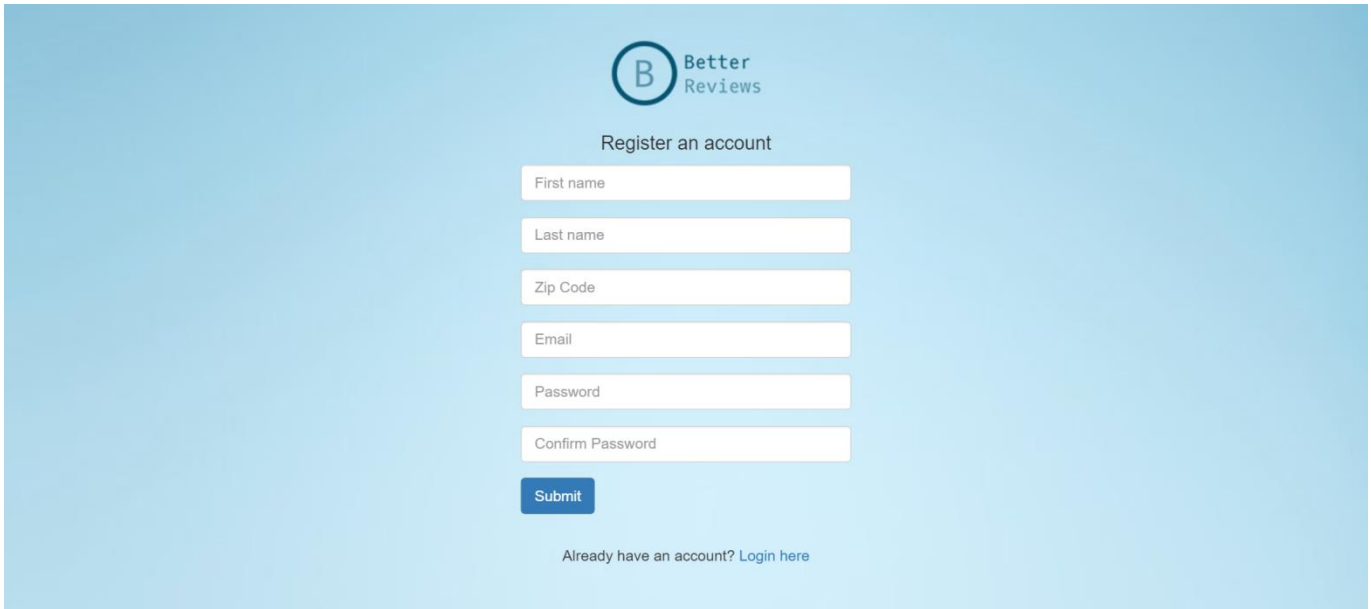
Figure 5.1.5 Registration Page

Login page: In this log in page the admin, general user as well as the business owner can login through email id and password.
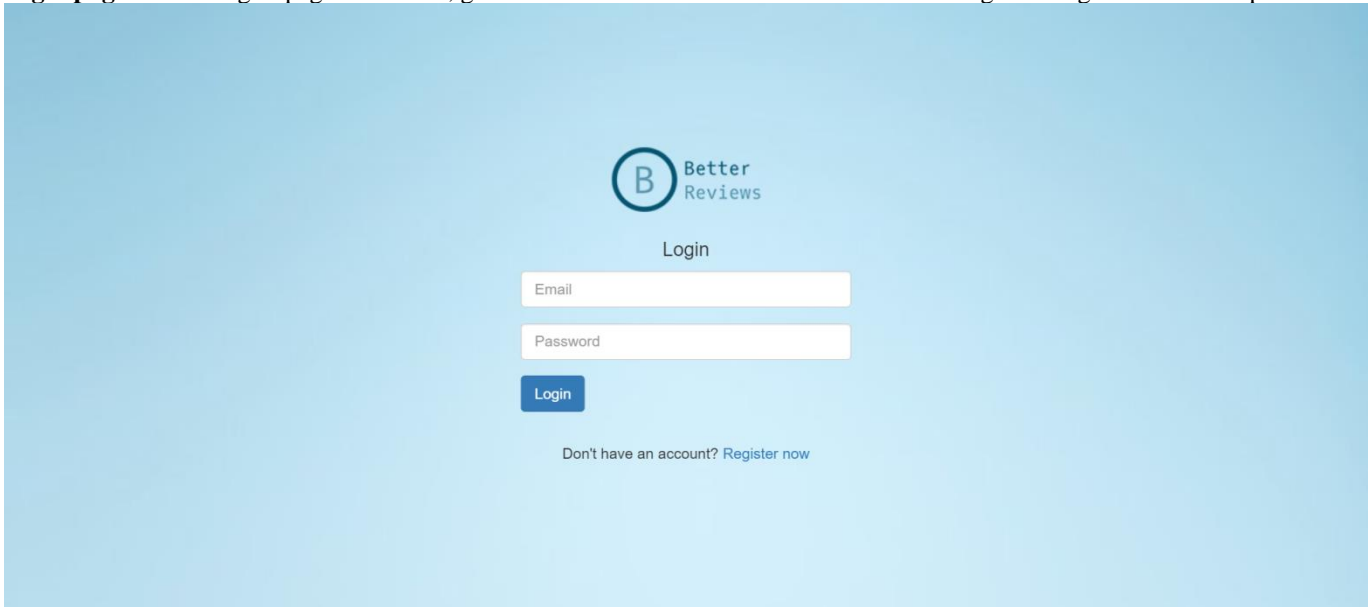
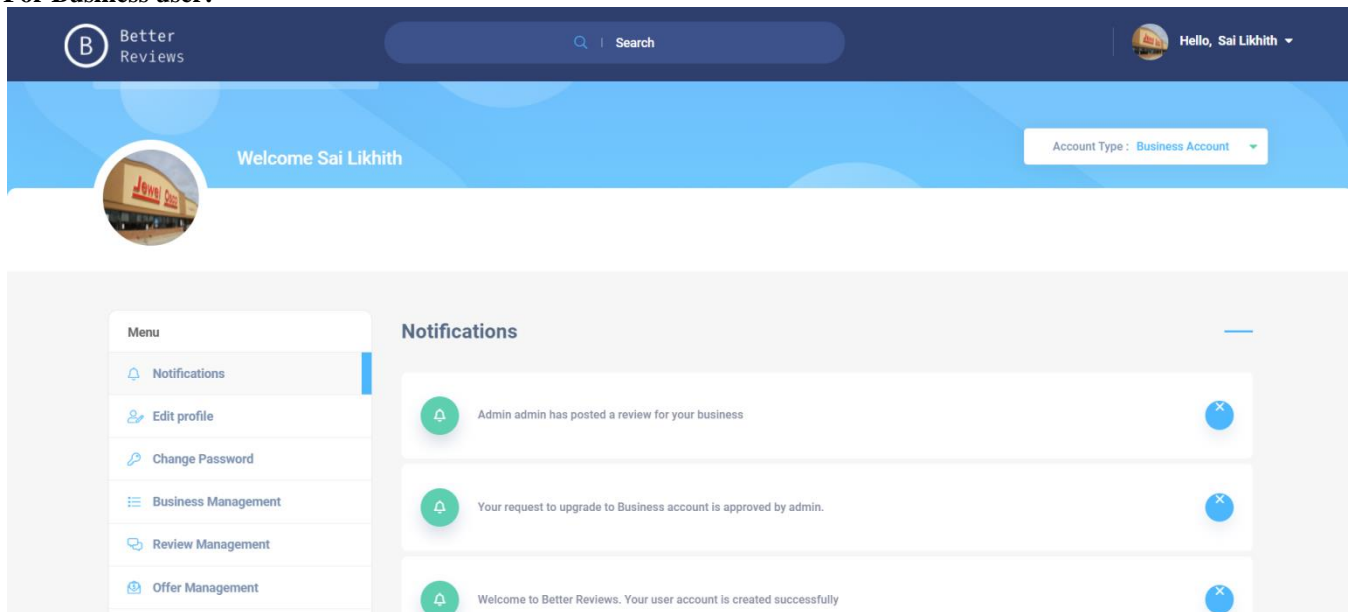**Figure 5.1.6 Login Page**

Search Results:
Once the user specifies their required fields using the search bar, the desired results are displayed in the search area.
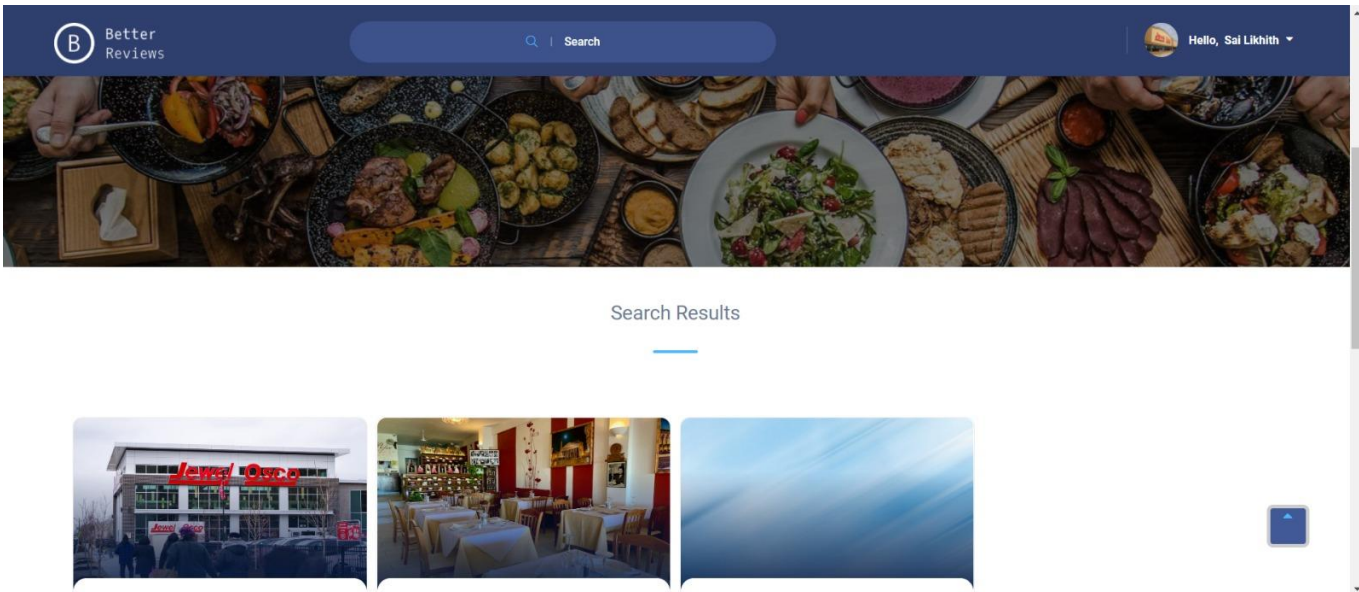
Figure 5.1.7 Search Page

Profile page: It is the common page for the user and the business owner where they can update their personal details and description.

For Business user:

Figure 5.1.8 Business User My Account Page

Business management page: It is for business account only and the business management tab enables business user to setup the business requirement by fill up the form or options given into this page.
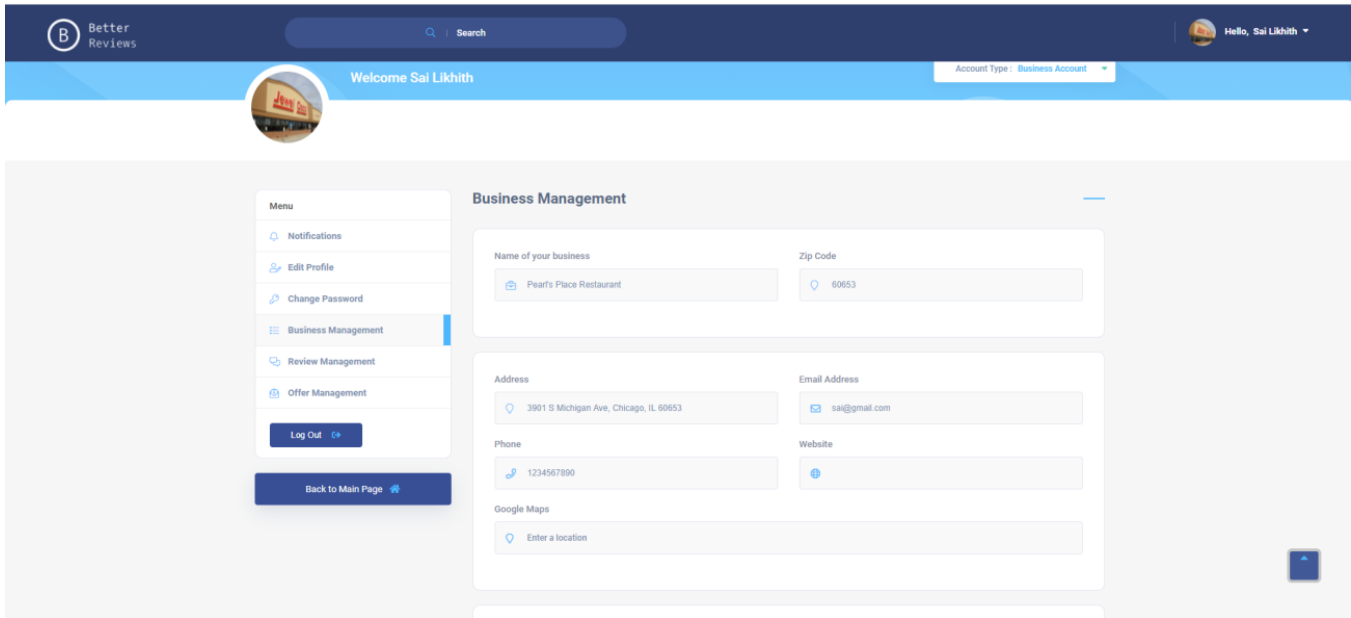
Figure 5.1.9 Business Management Page

Review Management:

Business owner can post their reply for feedback given by the visitor. Once users hit the reply button the comment gets posted in the particular business page.
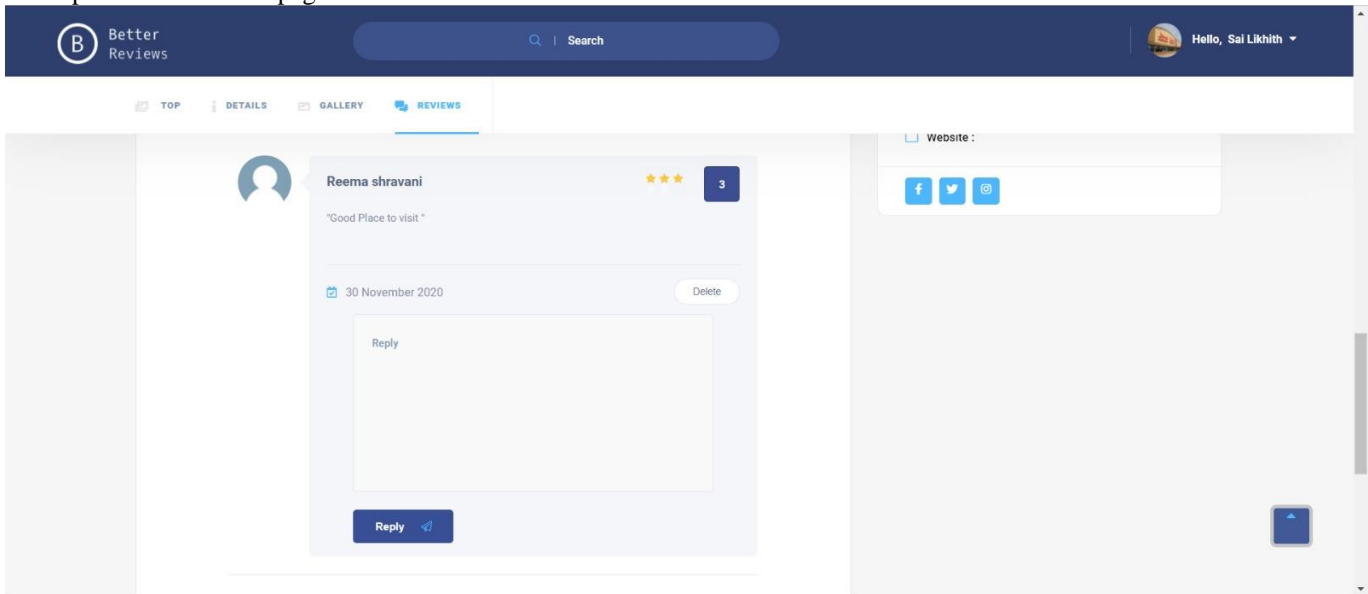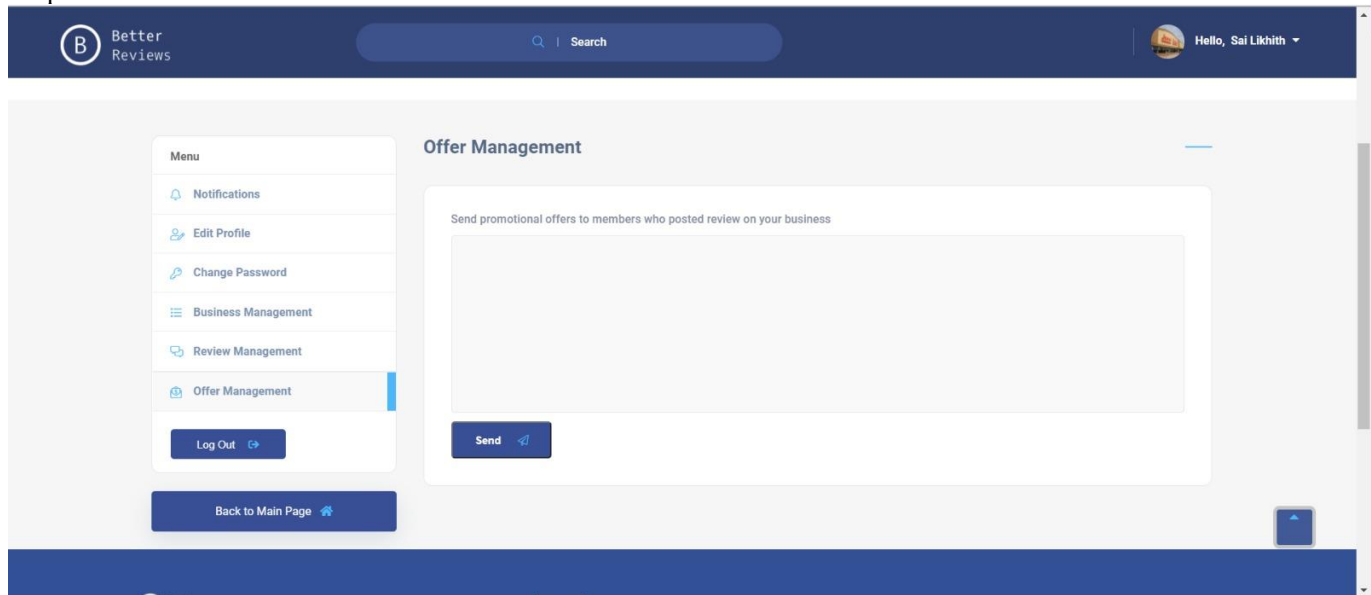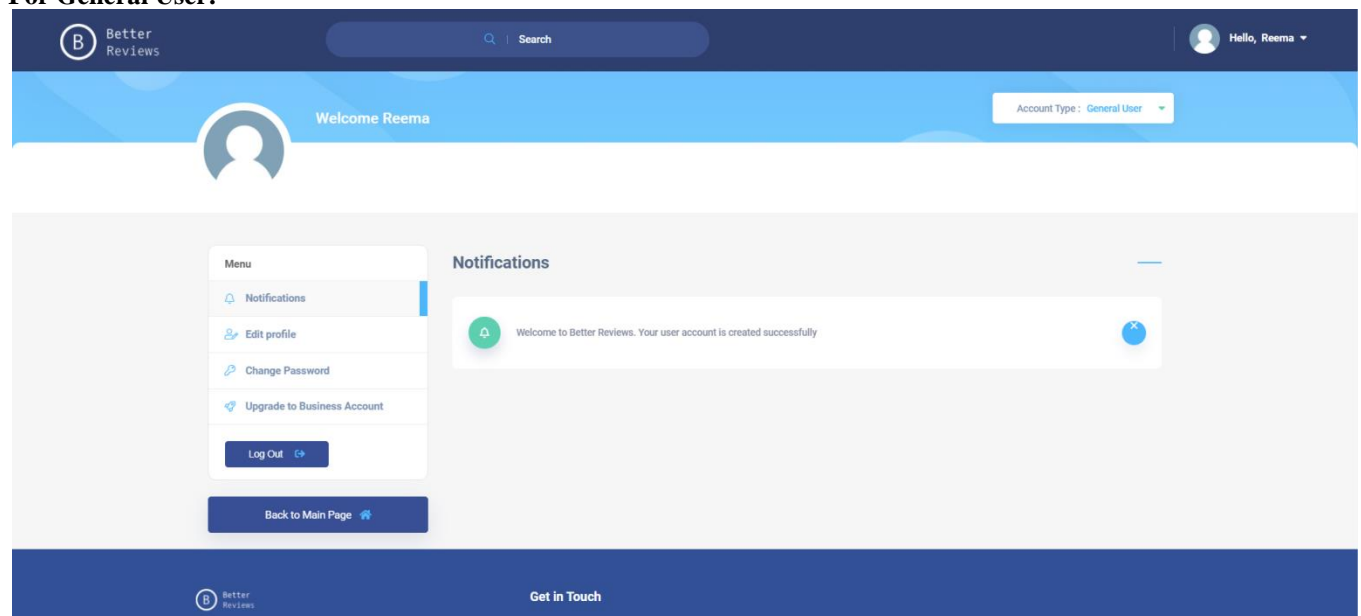

Figure 5.1.10 Review Management Page

Offer Management: Offer management allows business user to promote their business by sending promo codes and discount coupons.

Figure 5.1.11 Offer Management Page

For General User:

Figure 5.1.12 General User My Account Page

Edit profile:
Users can edit their profile by updating their first name, last name, zip code or even upload the picture.
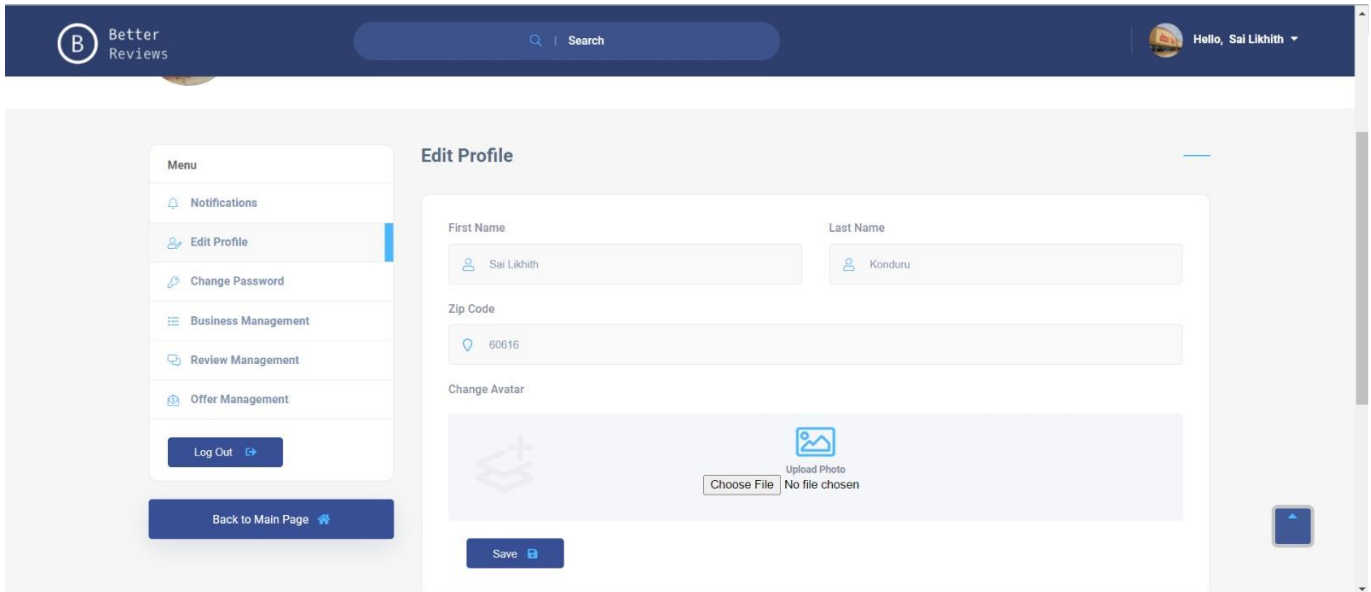
Figure 5.1.13 Edit Profile Page

Change Password:
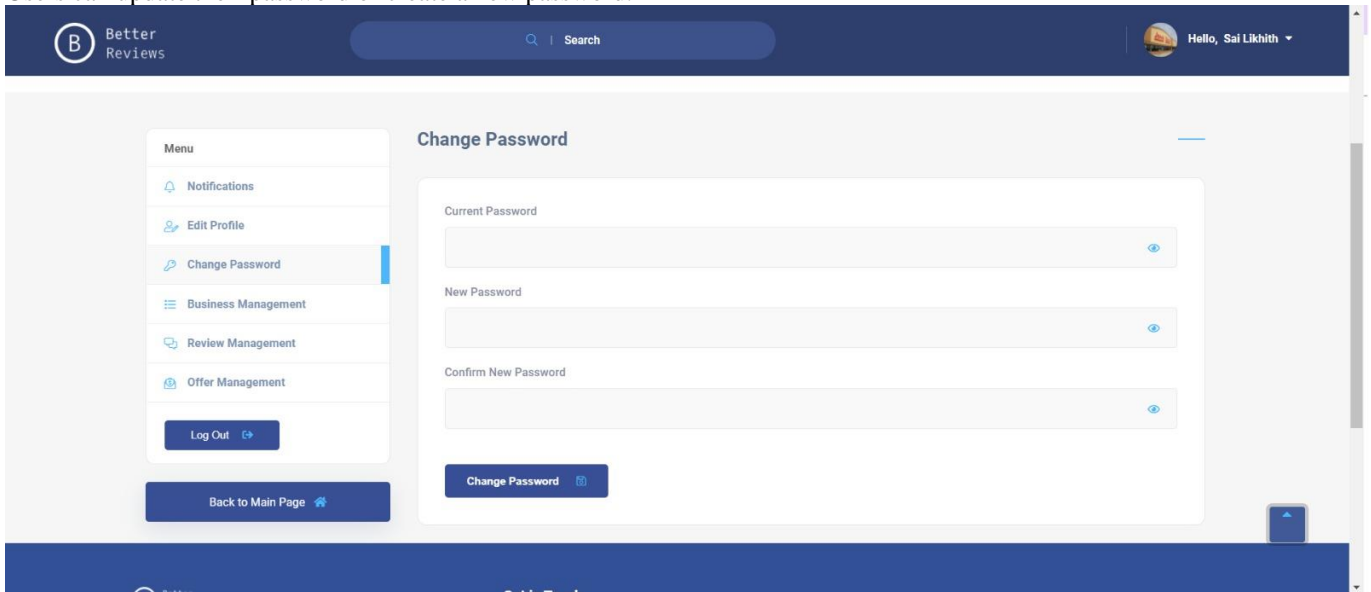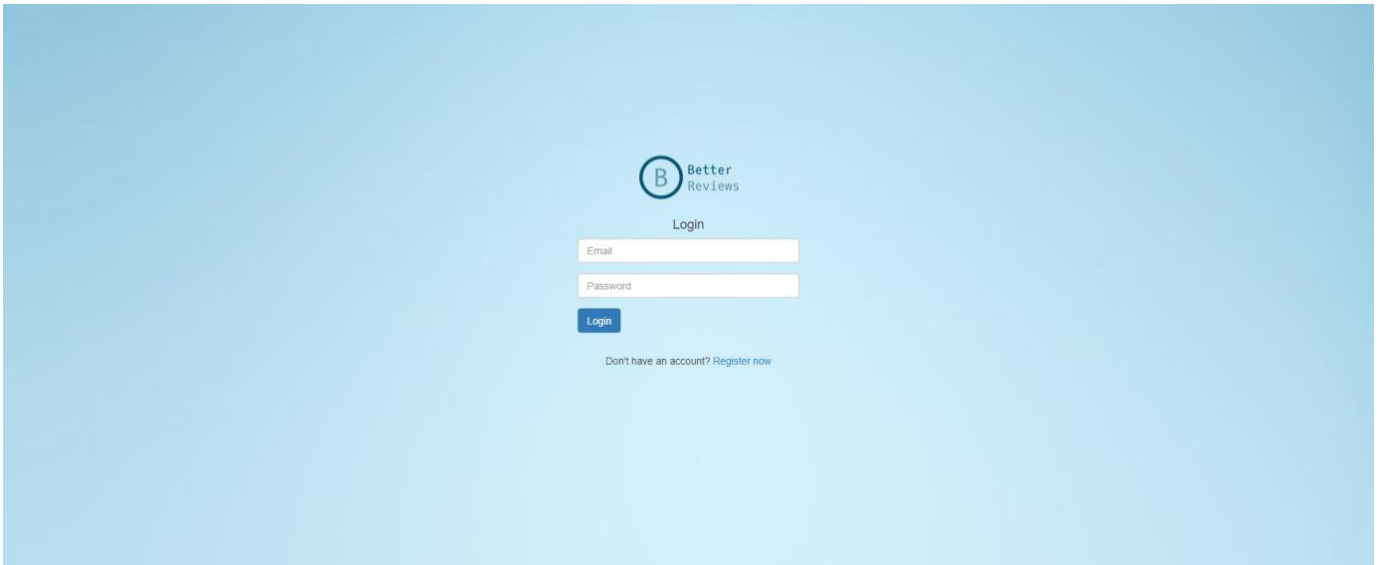Users can update their password or create a new password.

Figure 5.1.14 Change Password Page

Admin login page: This is for admin account only and here admin can login to their account.

Figure 5.1.15 Admin Login

Admin dashboard: It is also for admin uses only where admins can see the registered users and business owners' details. They can add, delete and edit their accounts as well as delete the reviews posts also.
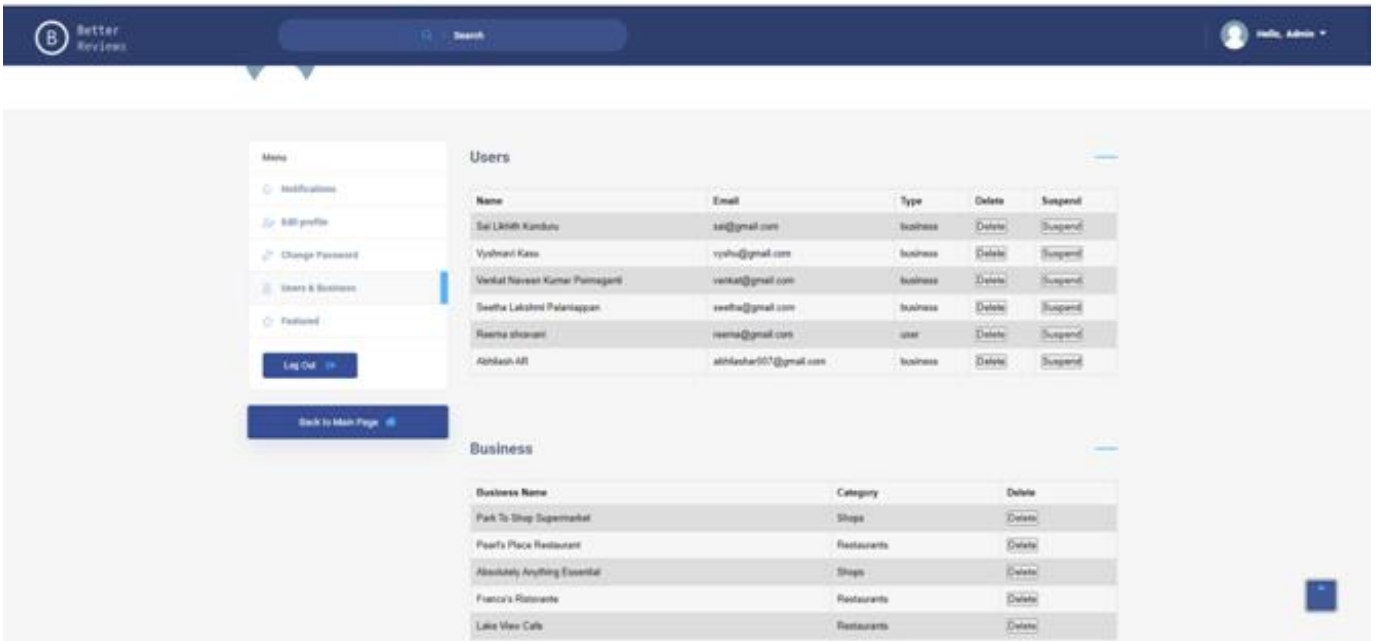
**Figure 5.1.16 Admin User/Business Dashboard**

Admin Featured business dashboard: In this section, admin can promote any particular business by making it as featured business, so that it will be displayed in the featured section on the home page.
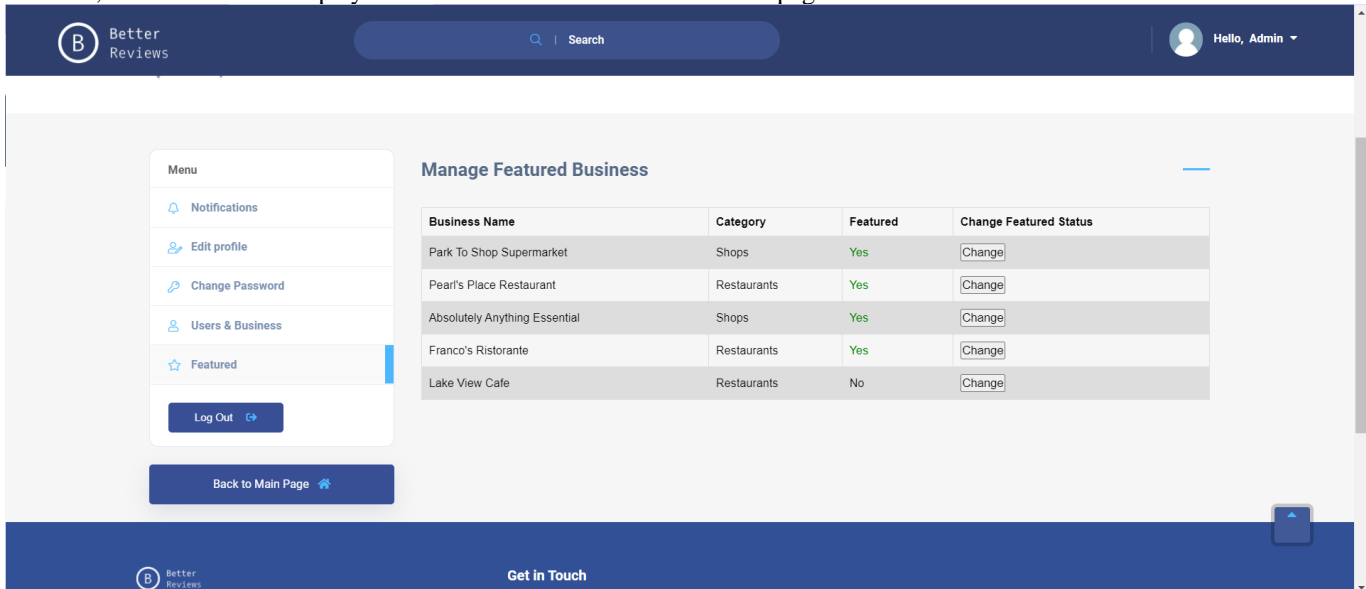
Figure 5.1.17 Featured Business Dashboard

Database:
Database contains five tables namely business, categories, notifications, reviews and users.
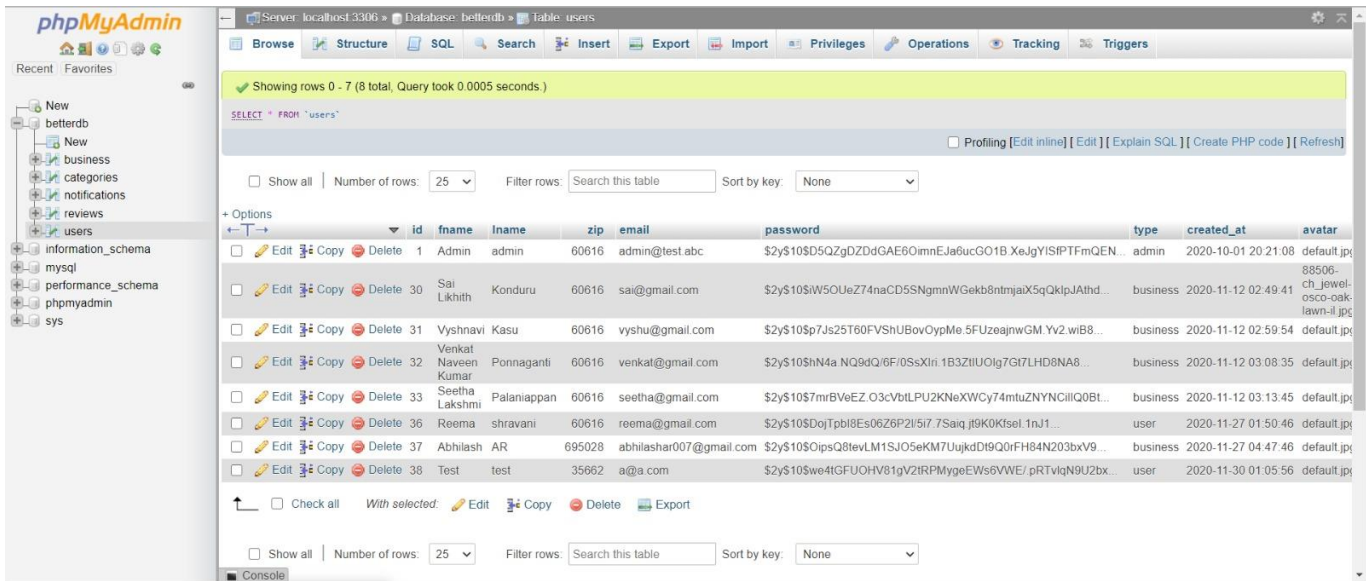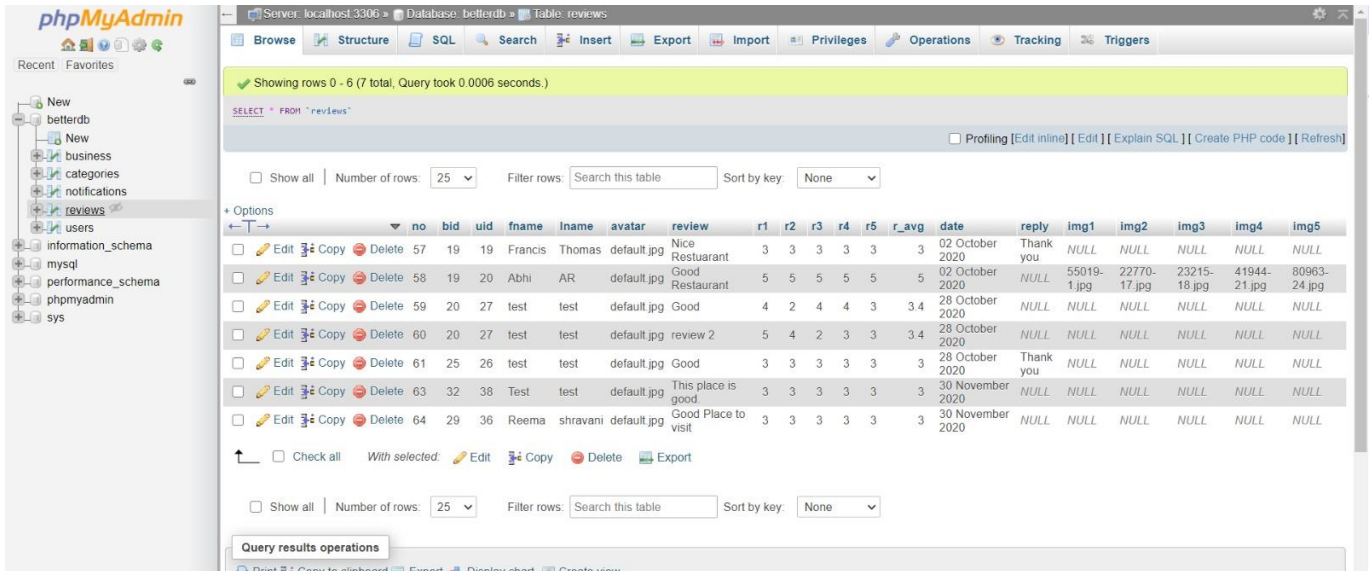

Figure 5.1.18 Database Dashboard(a)
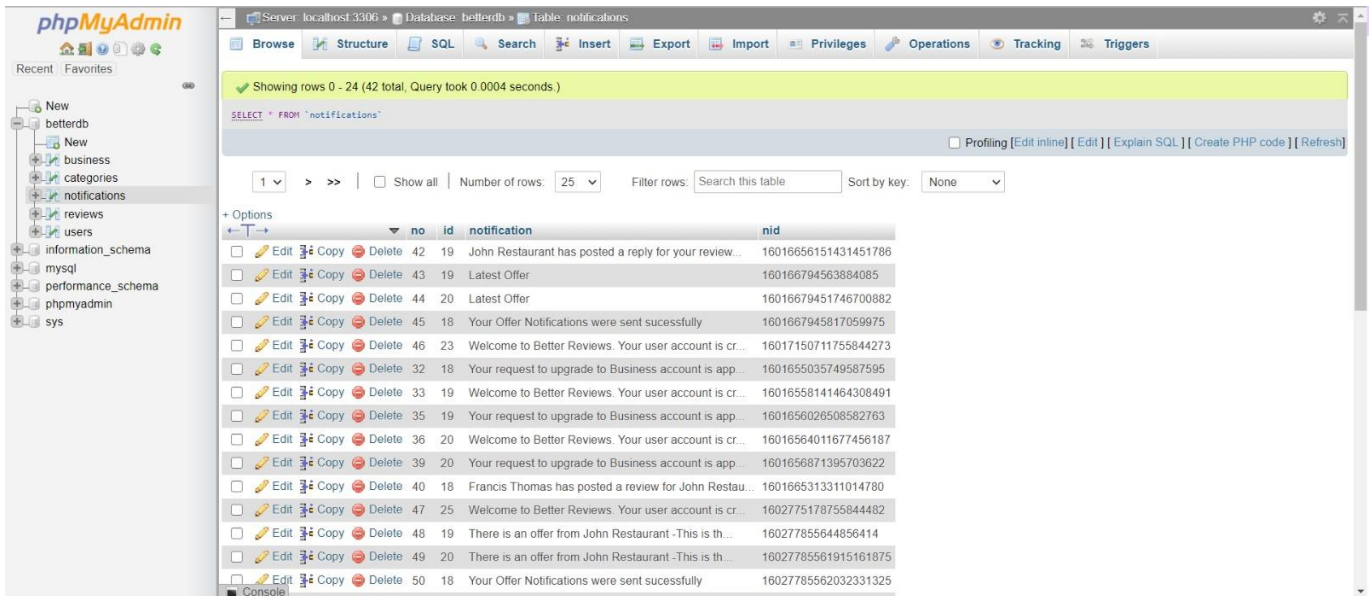
Figure 5.1.19 Database Dashboard(b)

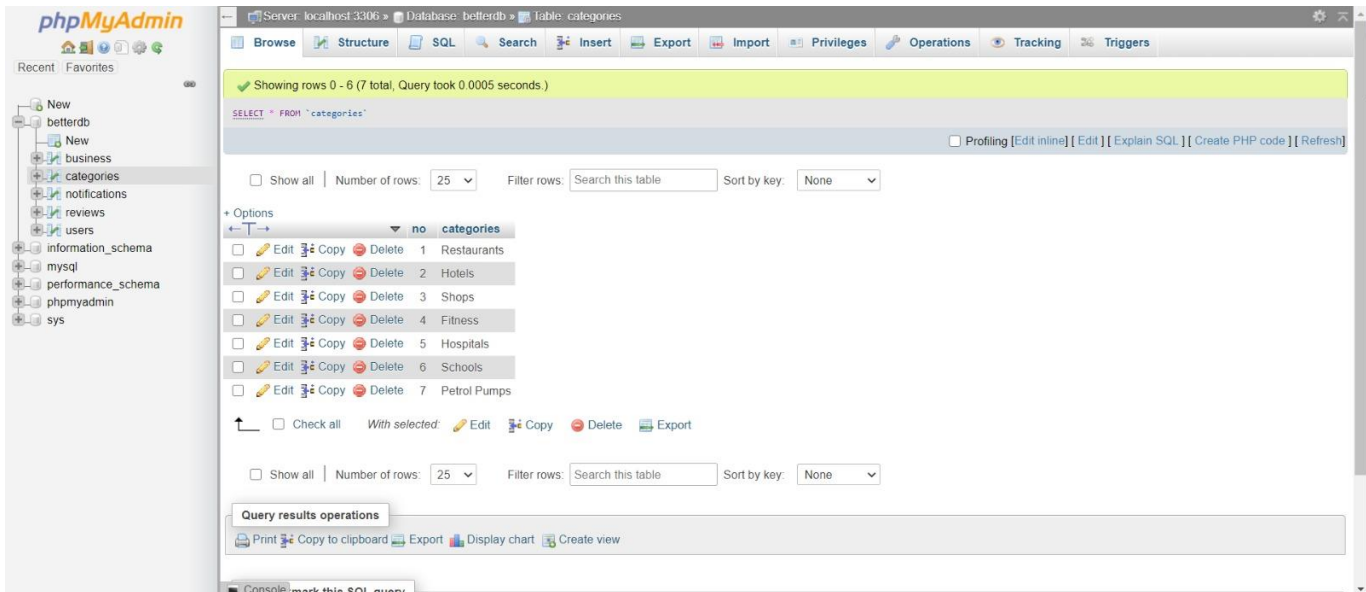**Figure 5.1.20 Database Dashboard(c)**
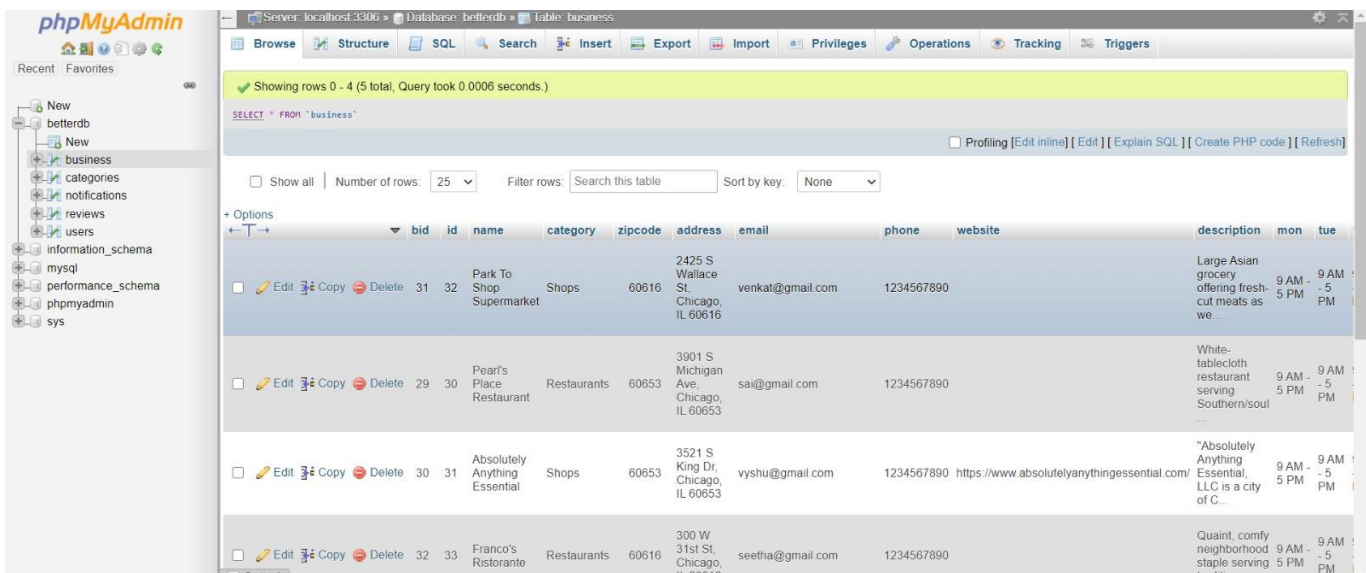
Figure 5.1.21 Database Dashboard(d)

Figure 5.1.22 Database Dashboard(e)

6   Design Units Impacts

The design unit of this better review project has functional areas such as website interfaces, the authentication process & the updating process. These include a large impact on the development and release of the website to the customers as customers need daily updates and exact authenticate information about any business as well as the interface process should be more reliable to the user. It increases the security of the website and helps the user to get good productive information through the website.

6.1   Functional Area A

6.1.1   Functional Overview

Website Interfaces is our first functional area where we include a good interface process among the backend and the front end of the website to deliver optimum information to the customer by just searching.

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6.1.2 Impacts

It has positive impacts on the users as they will get the optimum view of the website and can access all the possible options present on the website. It will redirect them to the selected page and will provide fast service to the user.

6.1.3 Requirements

- Daily maintenance
- Updated software
- Update the website daily
- High security and reliable storage

6.2 Functional Area B

6.2.1 Functional Overview

The authentication process & updating process is needed to provide the updated version of the business website. The user always wants to get updated and current ratings and reviews as they are searching for any business or place to have an idea before visiting. Hence the updating process should be added into the daily schedule with the authentication process to mitigate the fraud reviews.

6.2.2 Impacts

The daily updates and authentication also impact the website positively as it will provide the customer with high-quality service with optimum productivity, transparency, and reliability. It will enhance the users' trust in the website and increase the revenue from the website.

6.2.3 Requirements

- Daily website visit
- Daily contacts with business users
- Daily re-checking process of the reviews
- Reliable administration work for adding and deleting reviews
- Authenticate Approval system
- Make regular updates
- Transparent data providence

6.3 Functional Area C

6.3.1 Functional Overview

The technical support planning needs to be created by the admin to ensure continuous technical requirement support for the software. The admin needs to do technical analysis and find out the optimal solution for the technical issues of the software and ensure continuous technical support for team management.

6.3.2 Impacts

The continuous technical support will provide high-quality technical support. It ensures the positive updating of the current technologies for the software. The impact of the technical support plan includes good productivity of the software and the system becomes updated with the current emerging technological benefits to provide good customer service and maintain supply chain management for the application.

6.3.3 Requirements

- Capable to have logical thinking
- Members should have problem skills
- Members should engage in good team management
- Admins should have good communication and interaction skills
- Admins should have good questioning skills
- Admins should have quick decision-making skills

7 Open Issues

Some open issues to implement the whole project and website development for better review are listed below:

- User interface challenges: Making an appropriate user interface and provide the correct output can be an issue at the time of implementation.
- Scalability: It includes performance quality as well as the range of the performance at a time. Therefore maintain scalability is very much needed.
- Performance: The best performance maintenance can be another issue in the competitive market.
- Security: The throughout data security and maintain user's privacy can be also difficult in the presence of a large number of hackers. Therefore, precautionary backup and firewalls can be used to mitigate this risk.

8 Acknowledgments

We are very grateful as we completed our project within the mentioned time. We like to thank our lecture for supporting us every time and guide us for our better work. We cannot finish this work on time without the cooperation of our team members. The team effort is the key to success for this purpose. We like to communicate our gratitude to our teachers and friends for their support and encouragement.
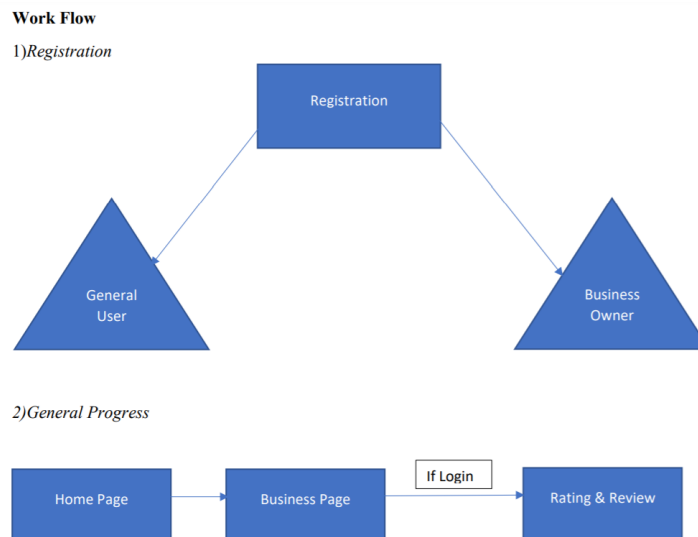
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10 Appendices

10.1 Application Information flows

Work Flow and General Process Flow of the website:

Figure 10.1.1 Work Flow