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Home Away From Home

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ABSTRACT

Home Away From Home (HAFH) is a web-based application provides a solution for owners of property and people seeking short-term accommodation. When the marketplace offers Services or Rentals it requires an availability management system so that providers can reliably specify their availability, and Customers can easily book on the dates that fit them.

In addition, it has single sign in feature available for customer to check history. Furthermore, it will have different functionality such as search engine to sort out the best deal for the customer. There are three types of user accounts admin, owner and renter. Each of these roles can manage its own profile and settingsand has its specific authority and restrictions.

The operating system that to use this Web-application is Windows 7 and the user interface of the application is JSP, CSS and we use JavaScript, jQuery as a client-side scripting. Our IDE is Visual Eclipse Neon and the database is MYSQL Database.

We will be including major functionalities in our project. A customer Registration and Login screen. Users can look for desired accommodation by filtering their travel like Dates, room type, price range etc. Payment Feature user can select desired payment method and alsothey can check history of the payment. User can share Experience by rate and review.

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1FeatureDescription

The website 'Home Away from Home' is developed mainly for two types of users. Firstly, the renter and the Property owner. There is another module, 'Admin' that controls the whole process of the website. This website saves a lot for the renter and the property owner can earn extra money by renting out the property. This is a win-win situation for both parties as the renter can rent the property in his budget and can interact with the local community and property owner can earn from his home rather than keeping the property empty.

1.1 CompetitiveInformation

There are various websites that provide similar service as our project 'Home Away from Home' website. The website has features that are highly needed to enhance the experience of the user which is registered as renter or property owner.The website is very useful for the people who travel to different places for short period of time and want to live in a limited budget or who wants to interact with local community.

1.2 Relationship to OtherApplications/Projects

Our website has many Functionality that is available in other online website that deals in view and subscribe features and uploading their details in-spite of this there are other features that are listed below:

- It allows the owner to upload theirproperties.
- Admin role is to analyze about theproperty
- Renter or user able to check the available dates and book theapartment
- Able to locate anywhere in world for apt orhome
- Users can make online payment once itbooked

1.3 Assumptions andDependencies

- With this website users can book based on availabledate
- Allow property owner to upload multipleproperties
- The user able to view once the owner of the property uploaded the propertydetails
- The user can be book by means of book start date and enddate
- Able to book by using online paymentmethod.

1.4 FutureEnhancements

Our project has been designed on Software Development Life Cycle (SDLC). As this is the first release of our website the enhancement will be monitored based on user accessing the website. The website can be enhancedon user requirements and user experience to access the website with more ease.

2 Project Technical Description

To implement the application, we have selected the java technology. Eclipse Neonis used as IDE and to store the data MySQL is used as the database. The following are some of the functional requirements which should be taken care while implementing the application. In this application, the main three roles are of owner, renter and admin

2.1 Application Architecture

Model-View-Controller (MVC) is a software architectural pattern for implementing user interfaces. It divides a given software application into three interconnected parts, So as to separate internal representations of information from the ways that information is presented to or accepted from the user.
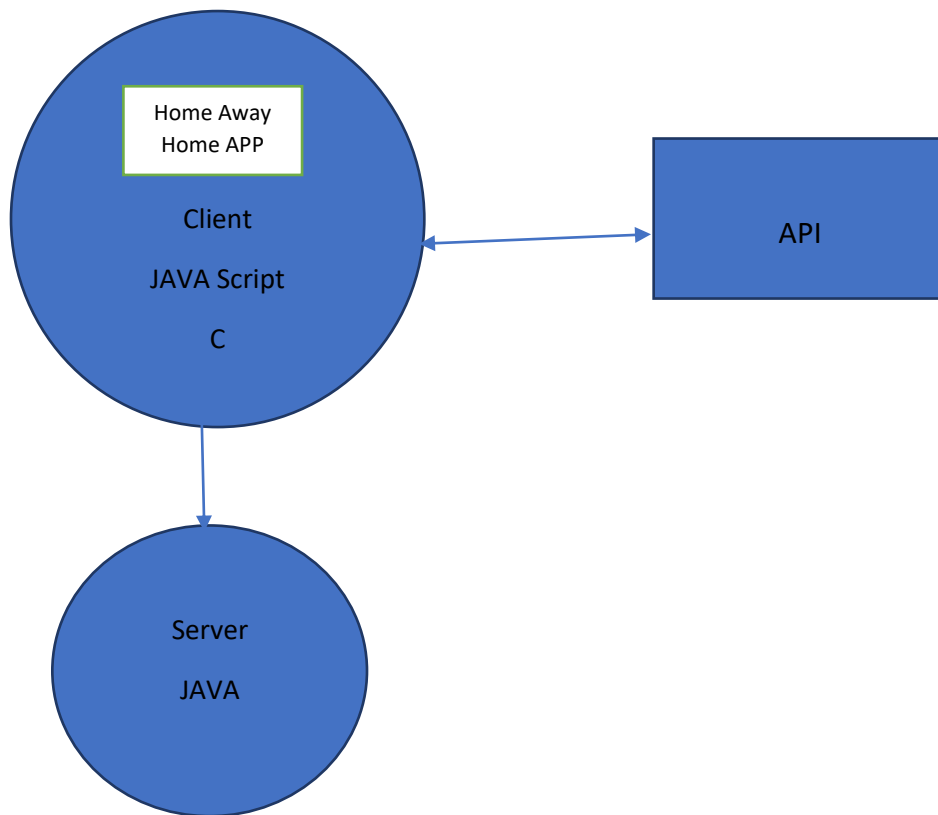

Figure 1: MVC Architecture Diagram

An application architecture diagram provides a high-level graphical view of the application architecture, and helps identify applications, sub-applications, components, databases, services, etc. and their interactions.
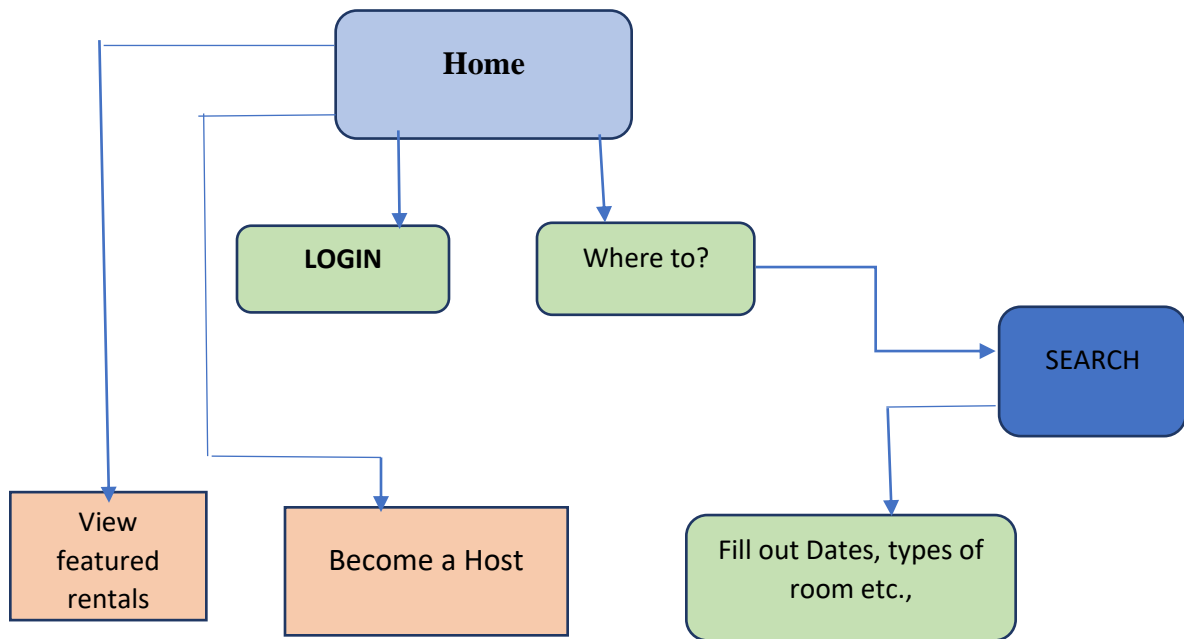
Figure 2: UML Diagram

2.2 Application Information flows

Depending on the user of the application information, flow of the application depends. In this application, there will be 3 different types of the users, i.e. Tenant, owner and the administrator. Every user will be logged into the application and the specifications which are presented above have been achieved in the implementation. Now it is the user turn to make use of those implementation and get their work done.

This work is totally implemented with very user friendly approach and by seeing the interfaces everyone can easily understand the flow of application.There is no sort of confusion in the implementation of the application or in the use of user. The operations which are performed by the user with the use of the application will be stored in the database. The same information can be viewed in the later stages whenever the user wants to know about their operations which has been previously done.

2.3 Capabilities

- Capabilities that can be done by this application:
- User Registration can be done.
- Users can add their home address through the help of google navigation which can back track all their details such as their postal code and state where they live.

- User can create their own login id and passwords in order to have access to our website.

- Users can also add properties to their user id.

- Users can edit their property information.

- The users can give feedbacks to the property they rented.

- Owner, Admin and Users are the three main people in this application.

- Admin can view all the activities that are going in the application.

- Admin can add or reject the property requested by a user.

- User can change their password if they forgot their previous one.

2.4 Risk Assessment and Management

Risks are involved in any project we take over. The risks that were involved in this project where: a. The inserting of multimedia content in the application. Creating the search location for the user to search specific location to view a property. Creation of a google API to locate exact home address of a user. Doing this project and managing the database by using MYSQL was a bit tough task to handle as it was the first time that we used JAVA for a Project. Building an Entity relationship model and giving right relations to all the tables with primary and foreign keys. No mistake can be done while doing this. As specialized and practical ideas were plainly broke down, it was anything but difficult to execute the prerequisites in the application. The application advancement was truly feverish however once we were done, it made us moresure and alright with usage of tasks.

3 Project Requirements

3.1 Identification of Requirements

- ***Registration/login feature-*** The Basic step is Registration so that user will be able to use the application and its features.

- ***User Profile*** –User profiles are two types Guests and owner of the property. Both Have to create their profiles with their personal information.
  Name
  Gender
  E-mail address
  Birth date
  Telephone number

  Permanent living address

- *Filters:*

  The listings of search filters used by owner and the users. A host can add information on the house type, room type, accommodation details, photos, pricing, etc. if user is looking for a place to stay in, they will require details about housing like location, check in and check out dates, house type, and size, amenities, photos of the home, price range, etc.,

- *Accommodation Description:*

  After the filters selected wide range of search results going to appear with various options for rooms to stay in.
  Photos
  Accommodation
  Host Profile
  Rating
  Price
  Terms and condition

- *Property Listing:*

  Once you sign up as a host, you need to fill in all the required details, the app will show you the approximate rent you can charge for your house/apartment/room

- *Dashboard*—The admin dashboard to view all the users registered (new and old), hosts (new and old) and the photographers.

- *Manage new listing*—All the new listing uploaded are surveyed and processed further. The admin panel provides the freedom to edit, add or delete listings, according to the need.

- *Booking History*—All the previous and new bookings can be checked here. There's also an update on the current status of each reservation. These can also be edited, updated or deleted.

- *Feedback and complaints*—All the feedback provided by the guest and hosts can be viewed here. Any complaints with regard to the hosts or guests can be processed here.

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

To provide the user interaction with the application, good user interfaces are providing. By using this interfaces Users can perform all the operations. To use this Interfaces no kind of training is needed as all these interfaces are user friendly and it provides clarity on the operations which the users will be doing. Registering all 3 entities Admin, Owner, and Customer, login / logout, forgot password function to recover the password, ability for the Owner to add a property, images, and facility details, ability for the admin to make changes for both Owner / Customer, ability for the customer to search property location wise as per availability, make reservations and help customer review and comment on the property about their facilities.
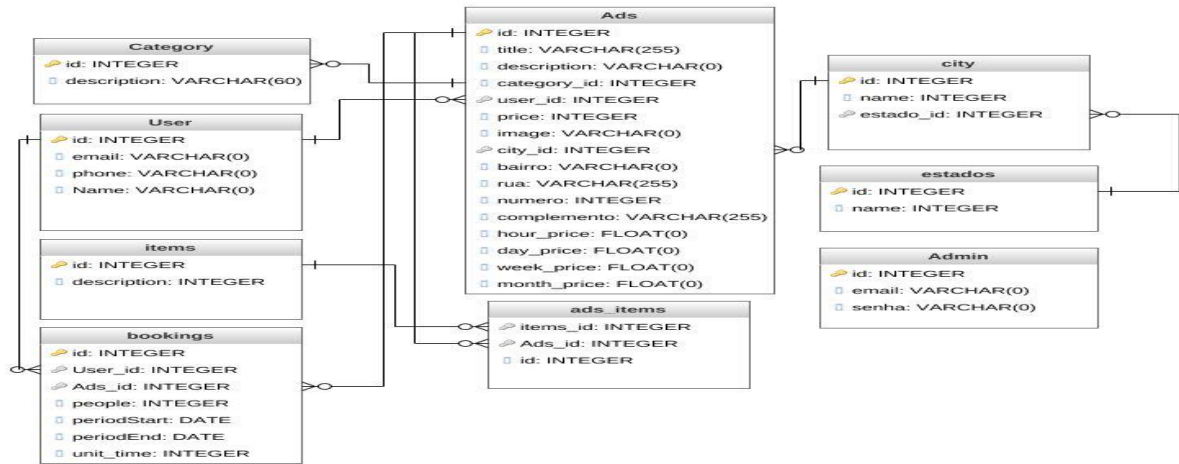
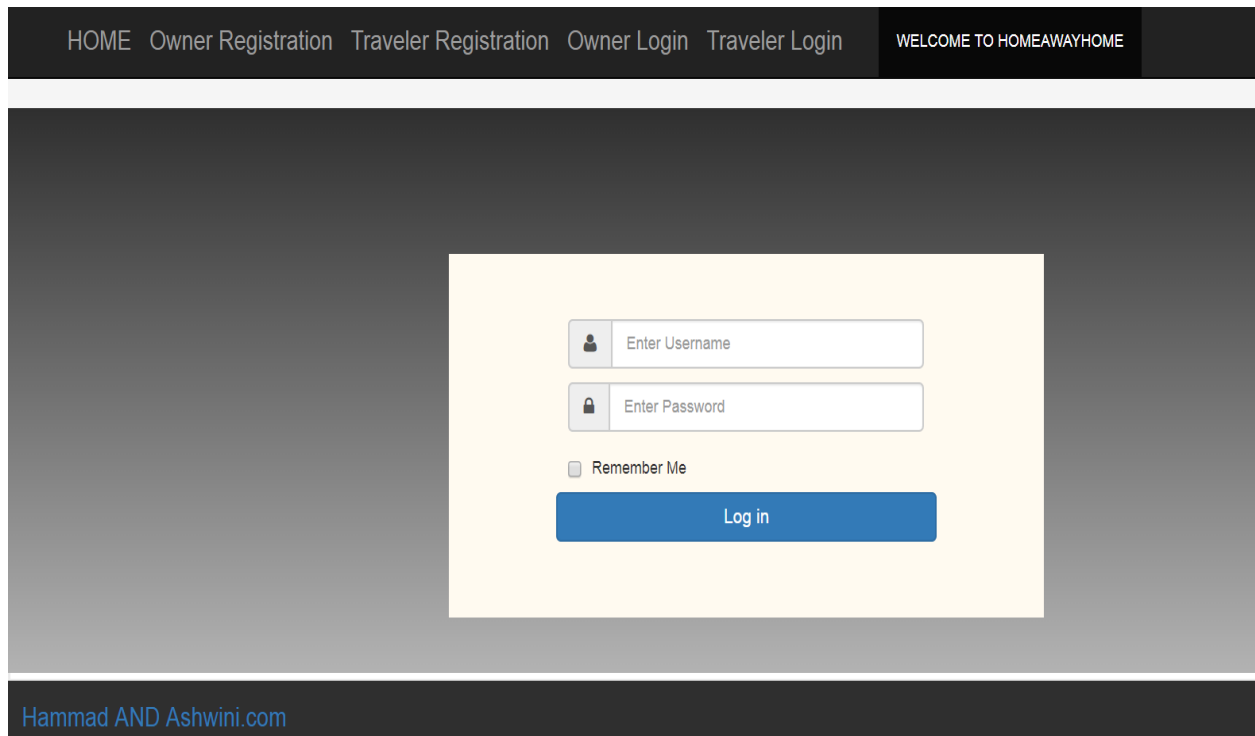Figure 3:Class Diagram

3.3 Screenshots:

Figure 4: Login Page

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Figure 5: User Registration Page
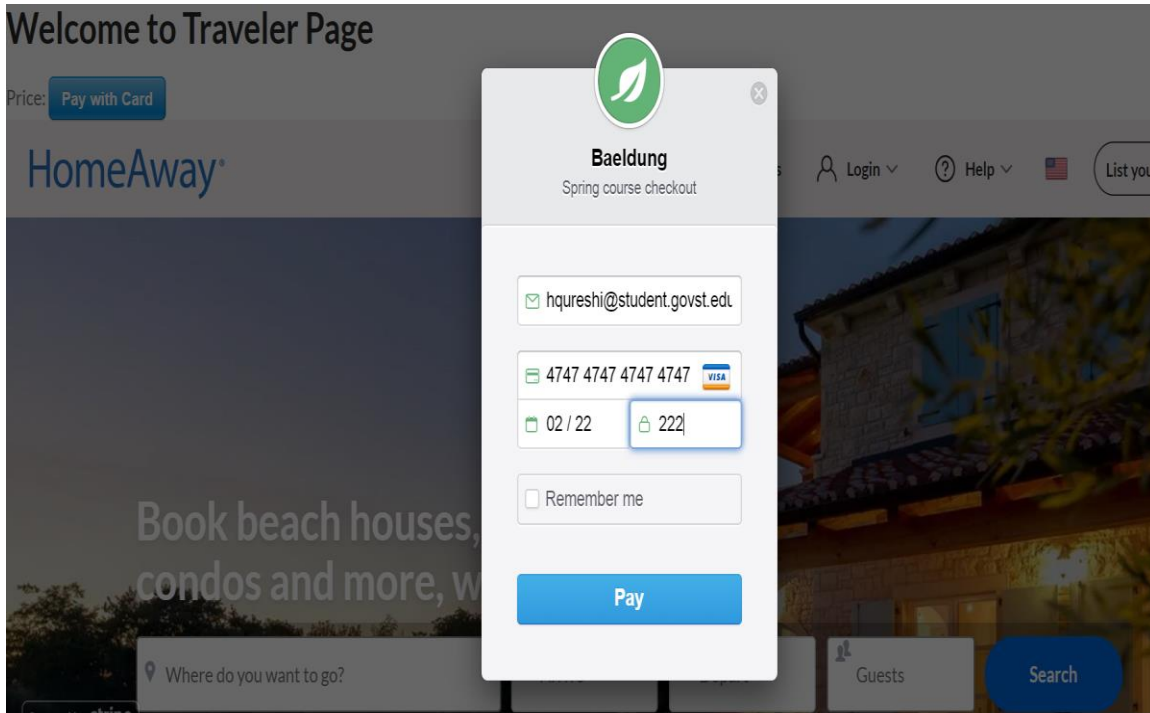

Figure 6: Data Base Page
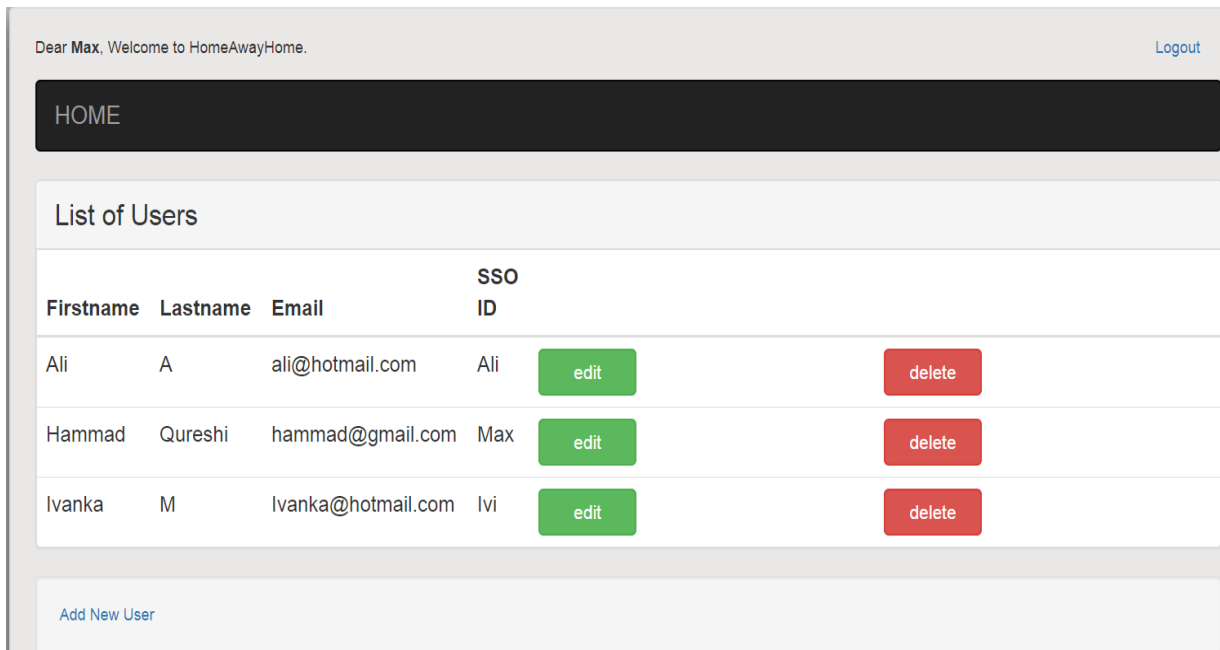
Figure 7:Payment page
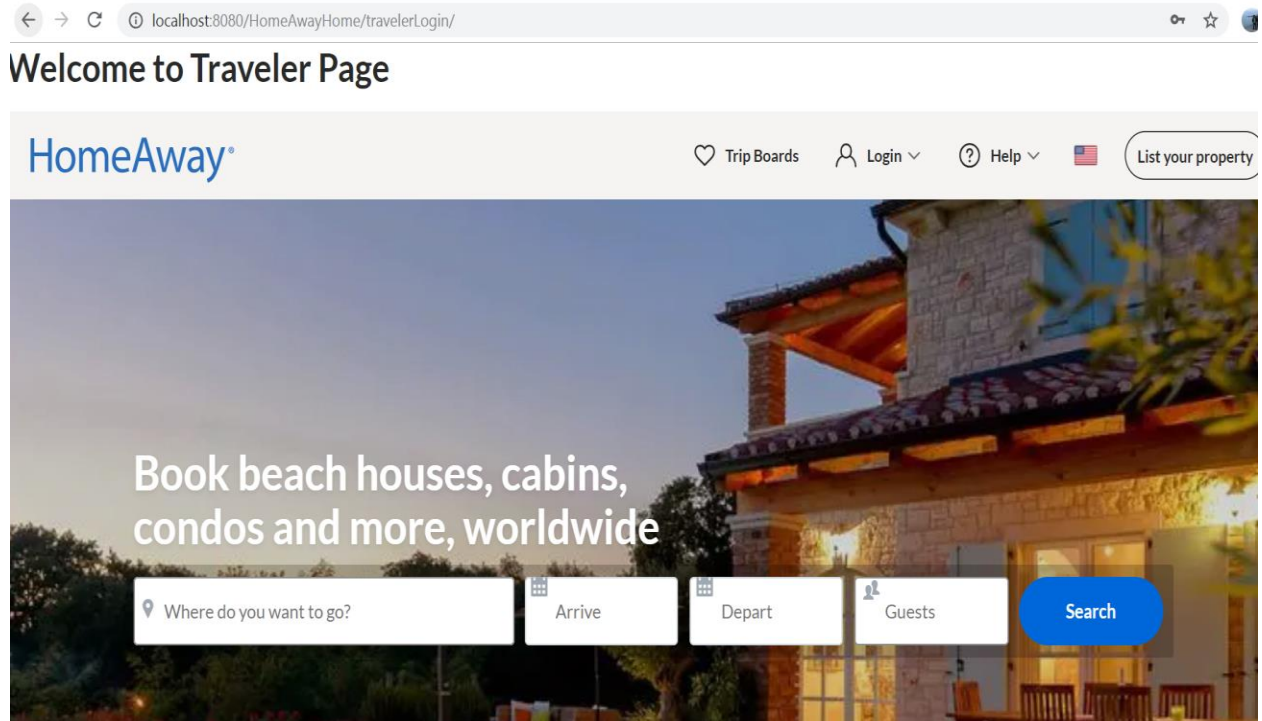

Figure 8:   Data History Page

Figure 9: Home Page

3.4Fraud Prevention

One of the main criteria which must be taken care by the developers or the service providers to secure the information and to prevent the frauds so that neither of the users like tenant and owner should face problems. To achieve this process, application provides the registration and login process where only the registered users will use this application services.

3.5 Release and Transition Plan

As said in the earlier stage that this application is developed using the Java language and the database used is MySQL. These Software is selected because they are known to our team and the application can be finished in the specified time. The following is the schedule which we had at the initial stage and as per the schedule we have completed the project. the requirements, we should implement the design. Here all the information flow is represented by using some of the design notations like class diagrams, sequence diagrams, activities etc.
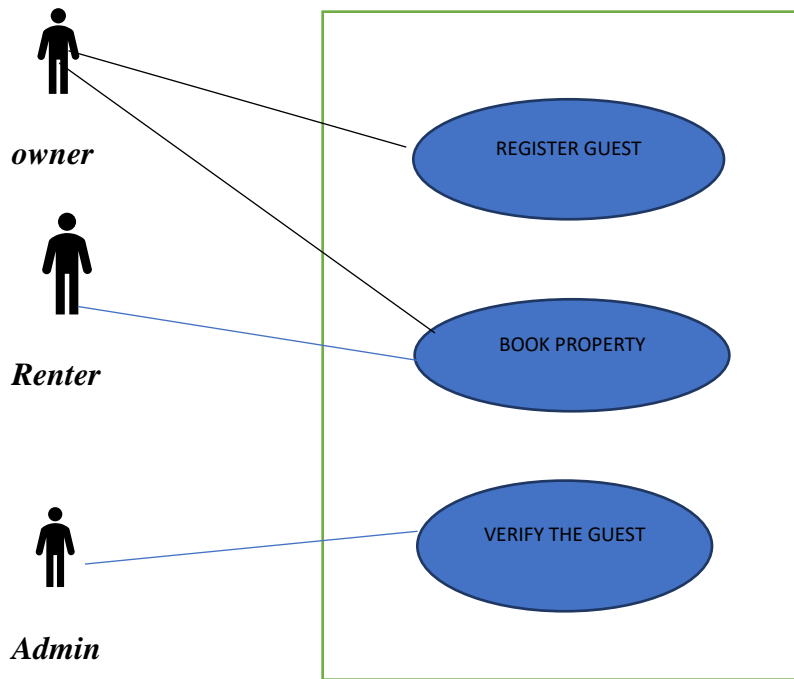
4   Project Design Description
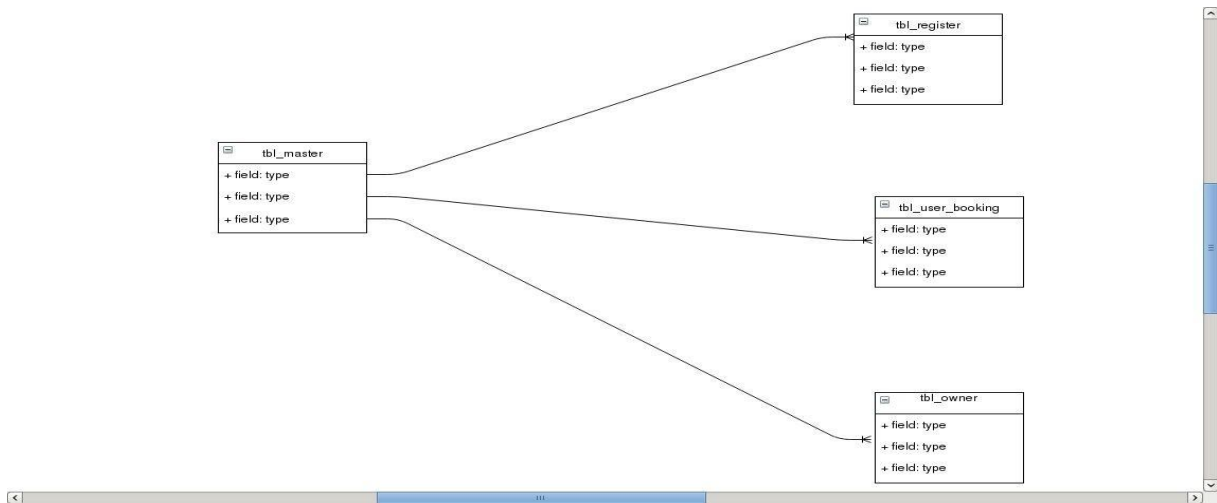

Figure 10: Use -Case Diagram
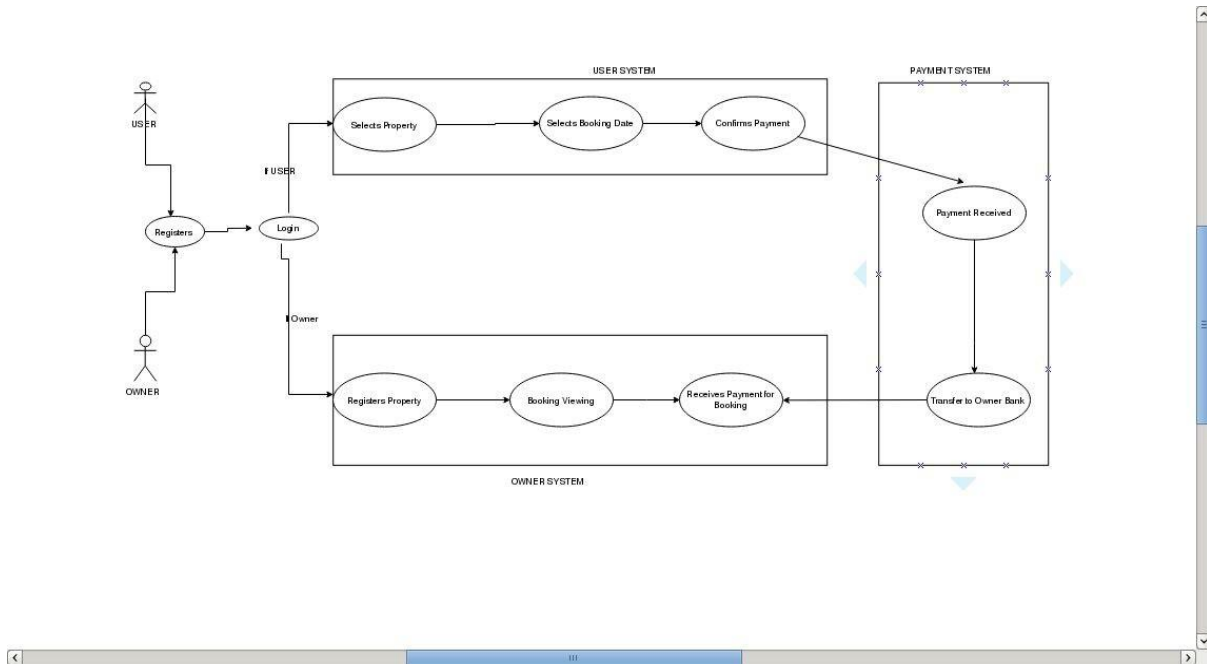

Figure 11: Class Diagram

Figure 12: Use case Diagram

5 Project Internal/external Interface Impacts and Specification

From this website an owner can post their properties details by registering himself in the website so that other users are able to see who want to relocate to that place can check the availability and book for them. Admin has the rights to examine the property and gave approval with this website if a user book a home or apartment so that we get interact with local community instead of spending more on expensive hotels to use this website need just basic knowledge of computers is Sufficient.

6 Project Design Units Impact

6.1 Functional Area/Design Unit A

The whole given application is considered as the whole single process which constitutes multiple functionalities.

6.1.1 Functional Overview

The main intention of developing this application is to provide a platform for both the tenants and owner to get their required services. These people are facing problems, to overcome all these problems and with the security features, this application is developed. Definitely both the tenants and owners will get benefitted by using this application.

6.1.2 Impacts This application

Shows greater impact on both the tenants and Owners life. Tenant problems like going around to search the properties for rent is a big difficult problem, and sometimes owners may not behave properly. To overcome all this Tenants are approaching brokers and brokers are making cash by seeing the situations of the tenants.

The traditional process is not fitting for the current generation approach that's the reason it shows greater impact on tenant's life. Similar for owners also, it is getting difficult for them to publish the information of their property for rent.

Even though people if come for rent they are asking different queries and all. For answering everyone it is getting difficult for owners. Like the tenants, this application made the owners life comfortable. The impact of this website is that the user can register itself as renter and can find an affordable home under budget rather than paying a hefty amount on hotels. Moreover, the property owner can earn few extra bucks by hosting the property rather than keeping it empty.

6.1.3 Requirements

At the initial stages, we have gathered the information by looking some of the similar applications on the internet. Based on that information and the requirements of the users of the application, information is gathered and the requirements are framed.

7 Open Issues

At the Beginning of the project, I have come across so many issues related to the connection of the database to the application andafter thorough understanding I have resolved these issues with the help of websites, attending some tutorials and referring textbooks. As of now our application is not much strong to implement all the technicalities in the application, but in the future if we implement all the technicalities we will applying more and more filters in retrieving data, where we can provide immediate communication between user and owner and resolve the issues ASAP.

8 Acknowledgements

In implementing this application, we are very thankful to all the people who are directly and indirectly supported to us in completing this application in time. I want to acknowledge our project guide Dr. Xin Chen in encouraging and guiding us throughout the development of whole project until it was completed.

9   References

- Spring boot tutorial learned from :https://spring.io/projects/spring-boot

- CSS Tutorial. (n.d.). Retrieved from w3schools.com: https://www.w3schools.com/css/

- JavaScript Tutorial. (n.d.). Retrieved from w3schools.com: https://www.w3schools.com/js/

- MVC Architecture
  https://www.tutorialspoint.com/mvc_framework/mvc_framework_introduction.htm