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Home Away from Home

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ABSTRACT

This e-commerce web application, Home Away From Home, offers the information for short-term rentals of homes or apartments based on the place of interest. As its name suggests, the rental properties are as comfortable as one’s own home.

The main idea behind this application is to make rentals more interactive, user friendly and dynamic. At website’s frontend, users can search results by selecting either locations, place type or both. This site also provides preferred features of selected home/apartment, dynamically displays top places based on user ratings. This application maintains centralized database which is populated both administrator and home owners. Owners can advertise their properties on website. The system provides facility to the renters who can make requests for properties that meet their requirements.

The website will be mobile friendly, with the same functionalities which includes account management, uploads, auditing, property listings, bookings, payment processing, post-rental ratings, surveys, and Web mapping.
# Table of Contents

1 Project Description ................................................................................................................... 1  
   1.1 Competitive Information ................................................................................................. 1  
   1.2 Relationship to Other Applications/Projects ................................................................. 1  
   1.3 Assumptions and Dependencies: ...................................................................................... 2  
   1.4 Future Enhancements ....................................................................................................... 2  
2 Project Technical Description: ................................................................................................. 2  
   2.1.1 Functionalities of Owner .............................................................................................. 2  
   2.1.2 Functionalities of Renter .............................................................................................. 2  
   2.1.3 Functionalities of Admin .............................................................................................. 3  
   2.2 Application Architecture .................................................................................................. 3  
   2.3 Application Information flows ......................................................................................... 4  
   2.4 Interactions with other Projects (if Any) ......................................................................... 4  
   2.5 Interactions with other Applications ................................................................................ 4  
   2.6 Capabilities ...................................................................................................................... 4  
   2.7 Risk Assessment and Management .................................................................................. 5  
3 Project Requirements. .............................................................................................................. 5  
   3.1 Identification of Requirements ......................................................................................... 6  
   3.2 Operations, Administration, Maintenance and Provisioning (OAM&P) ......................... 7  
   3.3 Fraud Prevention ............................................................................................................ 16  
   3.4 Release and Transition Plan ............................................................................................. 16  
4. Project Design Description: ..................................................................................................... 16  
5 Internal/external Interface Impacts and Specification:........................................................... 23  
6 Design Units Impacts ............................................................................................................. 23  
   6.1 Functional Area .............................................................................................................. 24  
   6.1.1 Functional Overview .................................................................................................. 24  
   6.1.2 Impacts ...................................................................................................................... 24  
   6.1.3 Requirements: ............................................................................................................. 24  
7 Open Issues ............................................................................................................................ 24  
8 Acknowledgements ................................................................................................................ 25  
9 References .............................................................................................................................. 25
1 Project Description

This project is created to provide the services for both the users like owners and tenants. Generally getting a house or any other shelter for rent over a period in a place is getting difficult to the tenants. To search a house in a place takes too much of time and moreover so much of physical stress will be incurred in that. Similarly, for owner also it is getting difficult to publish the information about their property to all the people who are in need. Because of these reasons, they are not getting tenants on time and their properties are vacant. To overcome all this situation an application is developed to provide the services for both, i.e., renter and owner.

1.1 Competitive Information

Before started working on this application, we have gone with different similar application and gathered information from them. Some of the applications are more generalized and not covering all the requirements of the user. To overcome from the competition giving from the existing application, then our application should look something different in providing services. Because of this reason, we have concentrated on small issues, which gives greater satisfaction for both the owner and the tenant. With these implementations, we can confidently say that even though there is a competition, our application will get huge reviews and gives the better satisfaction for the users.

1.2 Relationship to Other Applications/Projects

There are different similar applications that are available on the Internet. As it is already mentioned that those applications are not meeting the requirements of the users, but the application that we created are providing the logins for both the users and tenants to keep their data private. By this they can feel secure. Even for owner we are giving the features like uploading, modifying and other different basic operations that can be done from his side. These type of features makes this application something different from the existing similar applications.
1.3 Assumptions and Dependencies:

- Tenant should be registered to interact with the owner.
- Information can be shown as per the user filters.
- As per the information provided by the owner, it will be stored and the same information will be retrieved by the users when they want to know the information about the houses in different places.

1.4 Future Enhancements

As of now, we are not technically that much strong to implement all the technicalities in the application, but if needed we can implement this application by applying more filters in retrieving the data. We can provide immediate communication between the user and the owner while searching the information only.

2 Project Technical Description:

To implement the application, we have selected the java technology. This technology is selected because it is very well known to all our team mates and it is supporting all the requirements that are to be implemented. Net beans is 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.

2.1.1 Functionalities of Owner

- Registering into website
- posts a house or apartment if it is available for rent by logging into site
- accepts rent from renters

2.1.2 Functionalities of Renter

- registers into website
- searches for house or apartment
- if he found house / apartment based on his requirements he can contact to owner directly or indirect via admin
• after all the process required is completed he/she can take/lease that house or apartment for specified duration of days

2.1.3 Functionalities of Admin
• can able to see number of owners are registered and their posts
• can able to see number of users/renters registered with site
• solves the any issue related to rentersquires
• control over posts

2.2 Application Architecture

The following is the application architecture. Here, the application is a web application where it is having the graphical user interface as a front end which provides the facility for creating the projects and to have the other different operations. This application is also a secured application where the authorized user will be allowed into the application. All the projects which has been created will be stored in the database as documents or in the form of tables. Here, the whole process will be done by the application servers which will be taking care of all the operations of the application.
2.3 **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.

2.4 **Interactions with other Projects (if Any):**

This application is an individual application, currently it is not interacting with any other Projects.

2.5 **Interactions with other Applications**

No interactions with the external applications are allowed into this.

2.6 **Capabilities.**

- User can register into website
- He can login into the application for performing the operations.
- Users can search for house or apartment
- User communication is provided with the owner and the administrator.
- Agreement process is involved.
- Owner can communicate with the tenant.
- Owner can post his properties.
- He can modify the information but he can’t delete.
- Admin will keep track of information of both the users like owner and tenant.
- Admin can solve some of the issues which will be raised in between the tenant and owner.
2.7 Risk Assessment and Management

While implementing any of the application, there will be some of the complexities that may come in the implementation part. We are hereby projecting some of the risks which has been identified in the completion of the project.

a. Initially we don’t know how to port this application onto the webserver. As this is the client server application, we are not that much familiar with the server side process.
b. In achieving the implementation of the specification, we had little bit confusion in uploading multimedia content onto the web application.
c. Admin must maintain all the log details.

Apart from these, there are other small risks that came but all of them were sorted out without much distress. We are very happy to say that our guide was with us through the project implementation to solve all the issues and we are thankful for his wonderful cooperation.

3 Project Requirements.

This application is mainly developed for two different types of the users

a. Tenant.
b. Owner.

a. Tenant Functionalities: People who need knowing the vacant houses or properties are facing different problems in knowing the information regarding it. They are wasting their time, money and energy for locating the houses which suits their requirements. Even if they go all around still they are not getting clear information. Because of all these reasons and keeping in mind about the requirements of tenants, this application has finalized the requirements of the tenants and it is implemented per the tenant specifications.

b. Owner functionalities: Like the tenants, owners of the properties like house, apartments and villas are also facing problems like people are coming and going by simply seeing. Each time owner must show all the property and should explain the total facilities and all other details to every visitor. This makes a big burden to the tenants. To overcome all the difficulties of the owners, this application is developed. Implementation of this application also satisfies the owners requirements.
3.1 Identification of Requirements

In the following sections, some of the requirements has been projected based on the SMART guidelines.

The following are the different examples for the requirements.

<CT001-“Registration of the user - R01”>

User Registration.

If the user wants to use the features of the application, then he must get register with the application by giving his personal details.

<CT001-“Logging into the application - R02”>

With the user, Id and password, user will enter into the application. If he is valid user, then only he should be allowed to enter into the application.

<CT001-“Data Upload - R03”>

Based on the type of user, he will be having the features which will be used by him. For example, the user is the owner then he will be having the feature to upload the details of the property which he wants to give them for rent. This uploading may include images, videos, text etc.

<CT001-“Search option - R04”>

If the user is a tenant, then he can search the information which is available in the application. He can have the search option with multiple keywords, so that he can get good search results.
Here, if the tenants satisfied with the details of the properties which he wants to take it for rent, then he can communicate with the owner for the other details. Such communication is also offered by the application.

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.

Home Page:
Owner Registration Page:

Renter Registration Page:
Conformation Page after Owner Has Registered.

Owner Home Page:
### Uploading of Property Details Page:

<table>
<thead>
<tr>
<th>Property Name:</th>
<th>Apple's villa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (in Sq ft):</td>
<td>1029</td>
</tr>
<tr>
<td>Rent per day:</td>
<td>250</td>
</tr>
<tr>
<td>Features:</td>
<td>Slab Plank Brick foundation facade Wayne Dalton Steel Garage Door, one double or two singles, per plan Fiberglass Exterior</td>
</tr>
<tr>
<td>Location:</td>
<td>Chicago</td>
</tr>
<tr>
<td>Image:</td>
<td><img src="image" alt="v1.jpg" /></td>
</tr>
<tr>
<td>Image About:</td>
<td>Front view</td>
</tr>
</tbody>
</table>

### Owner Uploaded Property Page:

<table>
<thead>
<tr>
<th>Property Id</th>
<th>Name</th>
<th>Area</th>
<th>Rent</th>
<th>Features</th>
<th>Location</th>
<th>Edit</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>201767240240</td>
<td>Apple's villa</td>
<td>1029</td>
<td>250</td>
<td>Exterior Features Combination</td>
<td>Chicago</td>
<td>edit</td>
<td>view</td>
</tr>
</tbody>
</table>
Home Page after Property is Uploaded.

Renter Home Page:
**Renter Orders Page:**

![Renter Orders Page](image1)

**My Orders**

<table>
<thead>
<tr>
<th>Property Id</th>
<th>Owner</th>
<th>From</th>
<th>To</th>
<th>Days</th>
<th>Amount</th>
<th>Persons</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>20170724012150</td>
<td>3vikram</td>
<td>07/26/2017</td>
<td>07/28/2017</td>
<td>2</td>
<td>$ 200.0</td>
<td>1</td>
<td>waiting</td>
</tr>
<tr>
<td>20170724020452</td>
<td>sri</td>
<td>07/29/2017</td>
<td>07/31/2017</td>
<td>2</td>
<td>$ 900.0</td>
<td>1</td>
<td>waiting</td>
</tr>
<tr>
<td>20170722125237</td>
<td>trvikram</td>
<td>07/25/2017</td>
<td>07/27/2017</td>
<td>2</td>
<td>$ 708.0</td>
<td>1</td>
<td>waiting</td>
</tr>
</tbody>
</table>

---

**Renter Book a Home Page:**

![Renter Book a Home Page](image2)

**localHost:8084/HomeAway/Home/renterOrders.jsp**

**localHost:8084/HomeAway/Home/bookAHome.jsp**

**property one**

**sri villa**

Location: Miami
Admin Home Page:

Admin Property view Page:
Payment Page:

All these user interfaces give the information about the operations that will be done by using this application.
3.3 *Fraud 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.

3.4 *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.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Project Task</th>
<th>Start date</th>
<th>End date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Requirements gathering</td>
<td>05/17/2017</td>
<td>05/22/2017</td>
<td>6 days</td>
</tr>
<tr>
<td>2</td>
<td>Analysis of requirements and finalizing the requirements.</td>
<td>05/22/2017</td>
<td>06/05/2017</td>
<td>15 days</td>
</tr>
<tr>
<td>3</td>
<td>Design of the application</td>
<td>06/05/2017</td>
<td>06/26/2017</td>
<td>21 days</td>
</tr>
<tr>
<td>4</td>
<td>Coding of the project</td>
<td>06/26/2017</td>
<td>07/17/2017</td>
<td>41 days</td>
</tr>
<tr>
<td>5</td>
<td>Testing and debugging phase</td>
<td>07/17/2017</td>
<td>07/23/2017</td>
<td>6 days</td>
</tr>
<tr>
<td>6</td>
<td>Changes.</td>
<td>07/24/2017</td>
<td>07/28/2017</td>
<td>4 days</td>
</tr>
<tr>
<td>7</td>
<td>Preparing documentation.</td>
<td>07/20/2017</td>
<td>08/01/2017</td>
<td>12 days</td>
</tr>
</tbody>
</table>

4. *Project Design Description:*

To have the clear description of the application and to eliminate the ambiguity from 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.
Use case Diagram:
Sequence Diagram:

1. Admin:

2. Renter
Activity Diagram:

Admin:

- Login
- AdminHome

- view properties
- view owners
- view renters
- chat with Owner
- delete Properties

Logout
2. Renter:

- Register
- Login
- RenterHome

- see properties
- view details
- chat with owner
- confirm booking

- Logout

3. Owner:
5 **Internal/external Interface Impacts and Specification:**

Internal Interface: To use this application user should register with the application and these details will be stored in the database. Whenever he will be logging into the application by providing these details it will be clearly validated and if they are correct then only user will be allowed to enter the application. If the user is tenant then he will be having the search process which searches total database of the application, he can even communicate with the owner and the tenant. With the communication provided in between the users, data will be transferred from one interface to the other interfaces. All the operations which are done by both the users will be gets stored in the database and it can be used for the later references. There are no other external interfaces because this is an individual application and it is not running in conjunction with any other application.

6 **Design Units Impacts**

To design the application, one should know the requirements clearly then only with the clarity design will be performed. To design the applications, given requirements are used and as per the requirements design is done.

Here we are providing for two users like Tenant and the owner.

Tenant: For the tenant the following are the requirements.

a. Registration process.

b. Login process.

c. Search Process

d. Communication.

e. Agreement or confirmation.

f. Payment etc.

Owner:

a. Registration.

b. Login process.

c. To upload the details.

d. Communication.

e. Update/Modify etc.

For all these operations, interface design has completed and implemented successfully.
6.1 Functional Area

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.

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 initial stages, I have come across so many issues related to the connection of the database to the application and after some research I have resolved these issues with the help of websites 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 much thankful to all the people who are directly and indirectly supported to us in completing this application in time. We are very much thankful to our guide for constant and continuous encouragement and co-operation in successful completion of the project.

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