American International University – Bangladesh

Course Name: SOFTWARE DEVELOPMENT PROJECT

MANAGEMENT.

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Section: D

Semester: Summer 2018-2019

Project Name: A proposal to rent houses through online application.

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17-33168-1

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A proposal to rent houses through online application

Different types of people want to rent different types of houses in different price range. Looking for perfect houses physically is time consuming and also tiring. So we want to build a system that can help us find suitable houses that fulfills all our demands at a cheaper rate and can save us a lots of time.

Online house rent system can help people find perfect houses to rent. Owners of the houses can register their houses for rent and find perfect tenants. Sometimes owners do not want to rent out houses to certain types of people like bachelors. In this case while registering their houses for rent, they can put their conditions in a condition box. In this way when a bachelor will look for a house, he won't be able to rent that one. Tenants can give review marks to their landlords based on their behaviors and facilities they gave them. So that in future when someone else want to rent that house, they can already have an idea about their landlord.

Stakeholders:

1.Project Manager

2.Developer

3.Landlords

4.Tenants

Scope:

System User:

- Admin
- Landlord
- Tenant

Feature List:

Common Feature:

- Login for admin, landlord and tenant.
- Logout for admin, landlord and tenant.
- Password recovery.

For admin:

- Admin Can add admin in the system.
- Root admin can delete any admin.
- Admin can Check & Update his/her profile.
- Admin can approve or reject landlord post request.

- Admin can see landlord and tenant list.
- Admin can ban any landlord and tenant profile.
- Admin can insert, update or delete any information in the system.
- Admin can see landlord rating.
- Admin can see tenant rating.
- Admin can see and filter all post.
- Admin get notification when tenant send any request to landlord post.
- Admin get notification when landlord accept tenant request.

For landlord:

- Landlord can sign up in the system.
- Landlord can update or delete his profile.
- Landlord can post picture and details of the house/apartment which was approved by admin.
- Landlord can see the tenant profile.
- Landlord can rate tenant.
- Landlord get notification when tenant send any request to him/her.
- Landlord can accept or reject tenant request.

For tenant:

- Tenant can sign up in the system.
- Tenant can update or delete his profile.
- Tenant can see the rental post in the system.
- Tenant can see all the post and filter it.
- Tenant can see the landlord rating.
- Tenant can rate landlord.
- Tenant get notification of new rental post.
- Tenant can request landlord for booking.
- Tenant get notification when landlord accept his/her request.

Benefits:

By using this system, the clients are getting profitable by different sector. It reduces the hassle to find renting a house. It actually helps to find a perfect house in a better range without any trouble. In this system the user can also search the area. This system consists with two types of user.
- Tenant
- Landlord

Benefits for Tenant:

Tenants are the person who actually rent the house through the renting system.
- Trust ability is a major issue for tenant:

   Example: It actually depends on renting payment. The payment system is done by two systems. Hand to hand or through the system. Hand to hand is more preferable when the landlord get the money he will send a notification through the system.

- Tenant will get refund:

   Example: Suppose the landlord engage in a problem with you which is not fare enough. In this moment you can complain against the owner through the system. An investigation will be done. If the complaint is found to be true, then the admin panel will take action, and provide refund if necessary. After that the system remind the landlord about the whole matter.
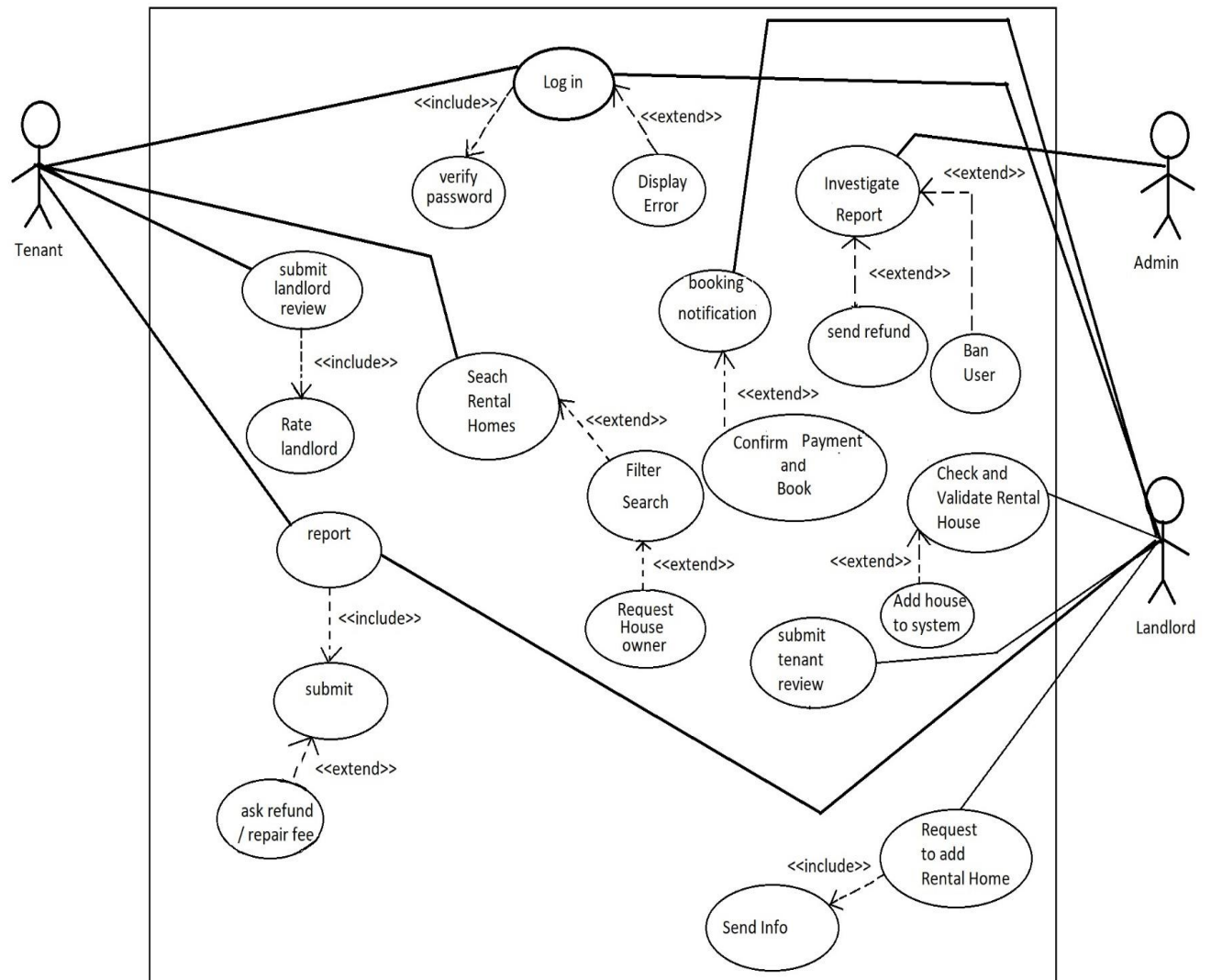
- The tenant will give the review and rating of a landlord. This review & rating system helps the other tenants to find a better landlord, as they will know better About the landlord through the ratting/review panel.
- Tenants can give complain (Specially for the big issue):

   Example: Suppose the washroom line needs to be repaired and you already notified the landlord but he/she didn't care about this issue. This time you can give complain and the system will take this complain strictly.

Benefits for Landlord:

- Trust ability is also give positive impact for the landlords. If the tenant will give better review the landlords will always get the tenants quickly. So here the landlord's behavior and support are a major point.

- If one renter leaves a house and shift to another house throughout the system. Here the landlord has an ability to give a review about that renter. By his review others landlords can see and check the review about him. If the review is good the renter will get a better service.

Use Case:

User Story:

Number	Actor	User Request	Reason	Functional Requirements	Acceptance Criteria
Rq1	Admin	As a admin-I want to approve or delete any landlord's request.	For approval.	1.Admin should see landlord's request. 2.Option for approve or delete any request.	Admin should be able to approve or delete any request.
Rq2	Admin	As a admin-I want to check or update my information.	For updating information.	1.Admin should have the option to check his information. 2.Admin should have the option to update his information.	Admin should be able to check or update his information.
Rq3	Admin	As a admin-I want to insert, update or delete any information.	For updating the app information.	1.Admin should have the option to insert any information to the system. 2.Admin should have the option to delete any information from the system. 3.Admin should have the option to update any information.	Admin should be able to insert, update or delete any information.
Rq4	Landlord	As a landlord-I want to post pictures and details of my house.	For rent.	1.Landlord should have the option to post pictures of the house.	Landlord should be able to post pictures and details of the house.

				2.Landlord should have the option to post details of the house.	
Rq5	Landlord	As a landlord-I want to rate my tenants.	For rating tenants.	1.Landlords should have the option to rate the tenants.	Landlords should be able to rent the tenants.
Rq6	Landlord	As a landlord-I want to accept or delete any tenant's request.	For renting.	1.Landlords should have the option to accept any tenant's request. 2. Landlords should have the option to delete any tenant's request.	Landlords should be able to accept or delete any tenant's request.
Rq7	Tenant	As a tenant-I want to look for houses.	For renting.	1.Tenants should have the option to search for houses.	Tenants should be able to search for houses.
Rq8	Tenant	As a tenant-I want to see the landlord rating.	For seeing the rating.	1.Tenants should be able to see the landlords' rating.	Tenants should be able to see the landlords' rating.
Rq9	Tenant	As a tenant – I want to send request to book a house.	For booking the house.	1.Tenants should have the option to send request to book a house.	Tenants should be able to send request to book a house.

Process Model:

We want to use Scrum process model for this system.

SCRUM is a feedback driven Agile process model. We may want to change our system with time. As per feedback we will add new features and sometimes delete some old features. So for this types of changes SCRUM process model is perfect. In this model there are three to nine members who will break down their into multiple time boxed iteration called sprints. The system will be developed through sprints.

Effort Estimation:

We will be using COCOMO (Constructive Cost Model) to estimate effort for our project.

- ❖ Software project type: **Semi-detached**
- ❖ Coefficient**: 3.0**
- ❖ Project complexity**, P: 1.12**
- ❖ SLOC dependent coefficient**, T: 0.35**
- ❖ Source line of code (guessed), **SLOC: 3000**

Effort Estimation Formulas:

Effort = PM = Coefficient * (SLOC/1000) ^P

Development Time = DM = 2.50 * (PM) ^T

Required number of people = ST = PM/DM

Using these formulas, we get,

Effort = PM = 3.0 * (3000/1000) ^1.12 = **10.2682648** person-months needed for the project (labor working hours)

Development Time = DM = 2.50 * (10.2682648) ^0.35 = **5.648901209** months (week days)

Required number of people = ST = 10.2682648/5.648901209 = **1.817745511** ≡ **2**

Budgeting:

We will be using the "Make-Buy Decision Tree" to estimate the budget of our project We chose system building path for this estimation.
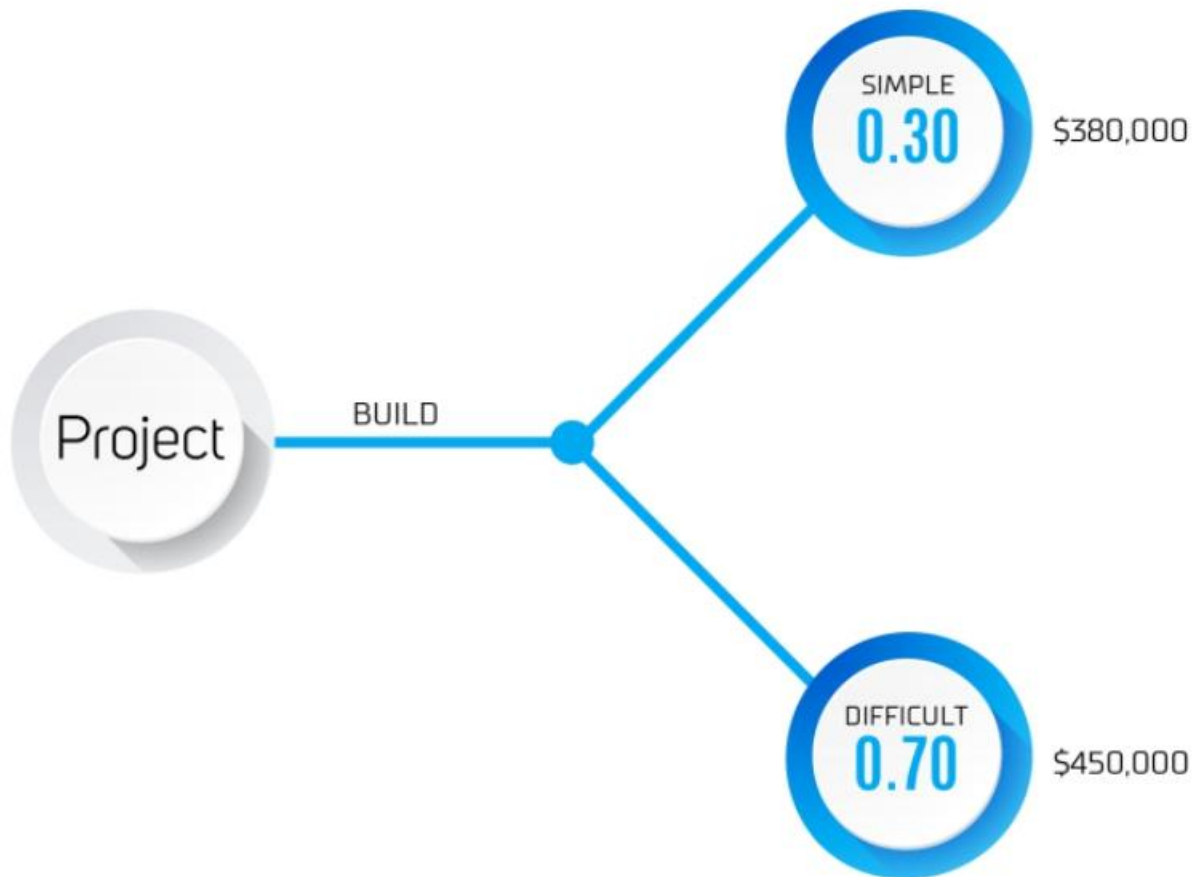
Equation for expected cost estimation,

Expected cost = (path probability) I * (path cost) i

From this equation we get,

Expected cost = (0.30) * $380,000 + (0.70) * $450,000 = **$429,000**

Conclusion: It is difficult and time consuming to look for houses manually. By using this system, users can easily find houses and can rent them. It is beneficial for both house owners and tenants. And that is why we are building this system.