CSC 581 [PROJECT REPORT – 1]

I. PROJECT TOPIC:

Handyman Service Request Application

II. GROUP DETAILS:

Group Number: Group – 1

Group Members:

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III. PROJECT DESCRIPTION:

A handyman can sign up for the app and advertise their skills. Depending on the service needed, a customer may decide to hire a handyman. A repair estimate can be sent to the customer when they provide images of the assignment. The client has the choice to take use of the service and make an appointment. The service, cost, and appointment for the repair will all be communicated to the client. Credit cards will be used to make the payment.

IV. IDENTIFYING ACTORS:

A. PRIMARY ACTORS:

A user or system component that interacts with the system primarily to accomplish a particular objective is considered the primary actor. In this project the primary actors are:

1. Handyman
   - Signs up to offer services
   - Provides details about the services offered
   - Receives service requests and provides repair quotations
   - Confirms and completes repair appointments

2. Customer
    - Signs up to request handyman services
    - Provides details about the task and upload photos
    - Receives repair quotations
    - Accepts the service and schedules an appointment
    - Makes payments for the services using a credit card

3. Admin
    - Manages and monitors the platform
    - Ensures smooth functioning of the app
    - Resolves disputes or issues if needed

4. External Database
    - Holds user information, service requests, quotes, messages, images, etc

5. Third Party Payment Handler
    - Processes payment/deposit requests and returns confirmation/denial and receipt information

B. SECONDARY ACTORS:

A user or system that helps the primary actor to achieve their objectives or is impacted by the use case but is not a direct beneficiary is referred to as a secondary actor. For this project the secondary actors are:

- Building Manager/Inhabitant
    - May request service but not actually use app since they do not own the property
    - Will be involved in showing handyman where problem is
    - Will be involved in confirming handyman's work was acceptable
- Security Guard/Clerk/Desk Attendant
    - May be involved in directing handyman to proper apartment
    - May be involved in letting handyman into building or complex

V. FUNCTIONAL REQUIREMENTS:

The specific functionality and features that the handyman service request app must have to satisfy the needs of its consumers are outlined in the functional requirements.
For this project the functional requirements are as follows:

A. User Registration and Authentication:

- Customers and handymen who provide the required information can create accounts.
- Email verification for account activation should be supported by the app.
- Users ought to be able to securely log in with their credentials.

B. Handyman Profile:

- The ability to create and administer an account should be available to handymen.
- The ability to list the services provided, the hourly prices, the service locations, and the availability.
- Upload your profile photo and any necessary credentials.

C. Service Request Creation:

- Customers can create service requests, detailing the task and, if necessary, adding images.
- Indicate the appointment's desired time and date.
- Choose the required service type from a list that has been predetermined.

D. Service Quotation

- A handyman can browse work information and images and accept service requests.
- Based on the information given, provide a repair estimate.
- Provide the customer with the quotation for evaluation.

E. Appointment Management

- Customers can evaluate repair quotes they have received and select a handyman based on the quotes they have received.
- Verify the service and arrange a time to meet with the chosen handyman.
- Appointments should be confirmed and alerts sent to the handyman.

F. Payment Processing

- Customers should be able to safely use their credit card information to pay for the service.
- Manage payment confirmation and offer receipts for payments.

G. Notification System

- Establish a system of alerts to inform users of service requests, estimates, appointment confirmations, and reminders.

H. Feedback and Ratings

- Encourage clients to comment and rate the work that has been done.
- Show the average ratings given to each handyman based on client comments.

I. Search and Filters

- Make it possible for customers to look for handymen based on the services they offer, their location, and their ratings.
- Use filters to enhance search results.

J. Messaging System

- Establish a messaging system that enables handymen and clients to communicate about service specifics, appointment scheduling, etc.

K. Profile Management

- Users should have the opportunity to amend their profiles, change availability, and update contact information as well as service specifics.

L. Admin Dashboard

- Offer a dashboard for administrators to manage users, resolve conflicts, keep an eye on activity, and produce reports.

M. Appointments History

- Keep a record of all handymen and client appointments, including past and future appointments.

VI. USE CASES

- Create Account
  - This use case describes the process of the ***customer*** creating an account to be able to request services and the ***handyman*** creating an account to be able to accept and provide services to the ***customer***. The ***customer*** and ***handyman*** must have a valid email address and password in order for their account to be successfully created.
- Sign in
  - This use case describes the process of the ***customer***, ***handyman***, or ***admin*** logging into an existing account. The ***customer***, ***handyman***, or ***admin*** must enter a valid email address and password, which then goes through the ***external database*** to ensure the correct user is signing into the account.
- Sign out
  - This use case describes the process of the ***customer***, ***handyman***, or ***admin*** logging out of their account.

- Edit Profile
    - This use case describes the process of the ***customer*** or ***handyman*** editing their user profile. The ***customer*** or ***handyman*** must first be logged into their account, and once they edit their profile, their profile gets updated in the ***external database***.
- Create Service Request
    - This use case describes the process of the ***customer*** creating a service request and sending it to a selected ***handyman*** for further review. The ***customer*** can provide a description of the task, upload photos, and indicate the desired appointment time and date. All service requests are stored in the ***external database***.
- View Handymen
    - This use case describes the process of a ***customer*** viewing one or more ***handymen*** from the ***external database***.
- Filter Handymen
    - This use case describes the process of a ***customer*** filtering the ***external database*** for specific ***handymen*** based on certain criteria, extending the View Handymen use case.
- View Service Request
    - This use case describes the process of a ***customer*** or ***handyman*** viewing a service request sent from the ***customer***. The ***customer*** can view the details of the request and delete it if necessary. The ***handyman*** can view the details of the request and submit a service quote. This use case always includes the use case of Viewing Handymen.
- Send Quote
    - This use case describes the process of the ***handyman*** sending the ***customer*** a quote based on the service request sent by the ***customer***. The ***handyman*** can provide a price estimate and a timeline for completing the work. This use case always includes the use case of Viewing Service Request.
- Accept Service Quote
    - This use case describes the process of the ***customer*** accepting the quote sent by the ***handyman*** for the service(s) requested. Once the ***customer*** accepts the quote, the appointment is confirmed.
- Edit Payment Info
    - This use case describes the process of the ***customer*** editing their payment information for current or future purchases of services, and the ***handyman*** editing their payment information for future payment of services. After payment information is successfully updated, it gets updated in the ***external database***. This use case always includes the use case of Editing Profile Information.

- Message User
    - This use case allows a ***customer*** or ***handyman*** to send a message to another user. Messages can be used to communicate about service requests, appointments, or other topics. The ***external database*** also holds these messages.

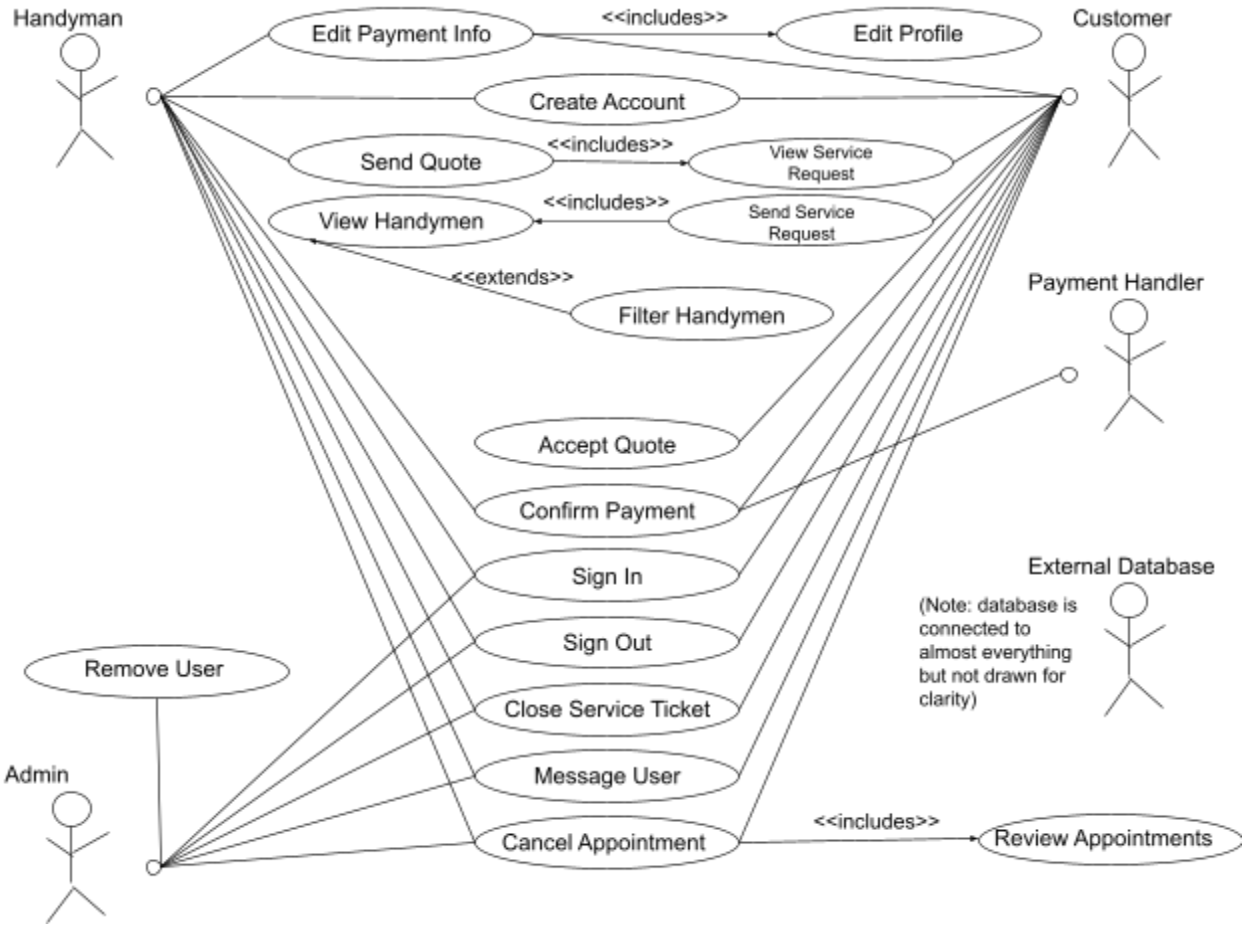
- Edit Profile
    - This use case allows a ***customer*** or ***handyman*** to update their profile information (stored on the ***external database***), such as their name, email address, contact information, and service details (for ***handymen***).

- Remove User
    - This use case allows an ***admin*** to remove a user (***handyman*** or ***customer***) from the app. This may be necessary if a user violates the app's terms of service or is found to be engaged in fraudulent activity.

- Confirm Payment
    - This use case describes the process of a ***customer***, a ***handyman***, and the ***third-party payment handler*** confirming payment. Under certain circumstances, payment may be denied or reported missing. The ***external database*** stores receipts from the transaction.
- Close Service Ticket
    - This use case allows an ***admin***, ***handyman***, or ***customer*** to close a service ticket once the work has been completed. ***Admins*** will normally only need to do this if there is a problem, as confirming payment should automatically perform this.

- Cancel Appointment
    - This use case describes the process of a ***customer***, ***handyman***, or ***admin*** canceling an appointment. This use case always includes the use case of Reviewing Appointments.
- Review Appointments
    - This use case describes the process of a ***customer***, ***handyman***, or ***admin*** viewing an appointment. Filtering appointments by multiple criteria should be possible, including handyman, customer, date, time, and location.

A. USE CASE DIAGRAM



B. USE CASE DIAGRAM NOTES

The external database is connected to almost every use case due to the quantity of information that must be saved to it; accordingly, its associations are not explicitly drawn out so as not to needlessly clutter the use case diagram.

Similarly, while the Sign In use case is included in all of the other use cases, as all users must be signed in to the app in order to use any of its features, all the relevant <<includes>> are not shown for sake of clarity.