

ELECTRONIC ASSIGNMENT COVERSHEET



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Q1. Stakeholders

Stakeholders	Interests
Artie	Uses the system to view summary reports to monitor the health of the business.
Customer	Uses the system to find painters that meets their painting and decoration needs. They use the system to submit job requests and receive quotes from different painters that are interested.
Painter	Uses the system to advertise their services and receive notifications on job requests and send their quotes to the customer, this potentially allows them to gain more customers through using the system.

Q2. Requirements

Q2.a. Functional Requirements

Allow painters to register, create, update their own profiles.

Allow painters to send quotes to customers.

Allow customers to submit paint job requests and receive quotes.

Match a customer and painter based on the customer's requests.

Notify painters of suitable job requests.

Notify customers of suitable painters.

Rating system for completed jobs.

Generate end of the month reports to monitor business health.

Q2.b. Non-Functional Requirements

Usability – Easy to navigate interface, available in various platforms that can access the web such as tablets, phones, pc.

Reliability – All user data should be backed up, in case of any hardware failure, malware attacks, human errors. And the system should ensure a high uptime of services.

Performance – The system should be able to process a lot of users at the same time without failure. The system should be scalable in case of sudden popularity or more demand to ensure performance will not be degraded.

Security – The system must be able to confirm painter's licenses and registration to avoid scams, and customers must give out personal information to ensure the customer is legitimate. Because of sensitive data, the data should be encrypted to protect people's privacy and to adhere to the data protection laws.

+ Design Constraints – None in this case study

+ Implementation Constraints – System must be scalable to ensure no degradation of performance, and personal data should be encrypted.

+ Interface Constraints – Integration with paypal for payments.

+ Physical Constraints – None for this case study.

+ Support Constraints – Helpdesk and online support.

Q3. Use Case Modelling

Q3.a. User Goal Technique

Use Case	Description	Actor
Submit Online form	The use case describes the event of a customer submitting a Job request form, a list of requirements for the job.	Customer
Purchase Credits	The use case describes the event where the painter purchases credits in order to be able send a quote to a customer.	Painter
Send quote	The use case describes the event where the painter sends a quote to the job that he is eligible for.	Painter
View Painter Profile	The use case describes the event where the customer views the painter's profile where the customer can see the ratings, feedback of the painter's previous completed jobs.	Customer
Register Painter	The use case describes the event where the painter registers an account. To register, the painter must submit all relevant information and importantly, the painter's license and registration, to be checked by the system	Painter
Print Credit Payment Reports	The use case describes the event where the painters print out the credit payment report	Painter
Give feedback	The use case describes the event where the customer can send a review, feedback, and rating to a painter, and this review will be shown in their profile.	Customer

Manage account	The use case describes the event where either a customer or a painter can view their account details to edit any information they want to change.	Customer, Painter
Accept quote	The use case describes the event where the customer accepts a quote from a painter	Customer
View summary reports	The use case describes the event where Artie can view the generated monthly summary reports.	Artie
View Quote	The use case describes the event where the customer accepts a quote	Customer
Edit Quote	The use case describes the event where the painter wants to edit a quote	Painter
View Credits	The use case describes the event where the painter wants to view their remaining credit balance	Painter
Manage Feedback	The use case describes the event where the customer wants to edit or delete a feedback to a painter	Customer
Cancel transactions	The use case describes the event where the painter wants to cancel the occurring credit purchase transaction	Painter
Delete Summary Reports	The use case describes the event where Artie deletes the summary reports generated by the system	Artie

Q3.b. Event Decomposition Technique

Event	Type of Event	Use Case	Description	Actor
After customer submits online form	State	Notify painter of a customer Job.	The use case describes the event where the system finds and notify 2 suitable painters that fits the requirement of the job.	FCP System
After the painter submits the registration form	State	Verify Painter information	The use case describes the event where the FCP system checks if the painter's License and Registration is legitimate. If It is not, the system will notify the painter that their account cannot be made.	FCP System
End of the Month	Temporal	Generate monthly summary reports	The use case describes the event where the FCP System generates the monthly report for Artie to view.	FCP System
Once the customer accepts a quote	State	Notify Painters of quote status	The use case describes the event where the FCP System notify the painter whose quote has been accepted and notify the other painter that their	FCP System

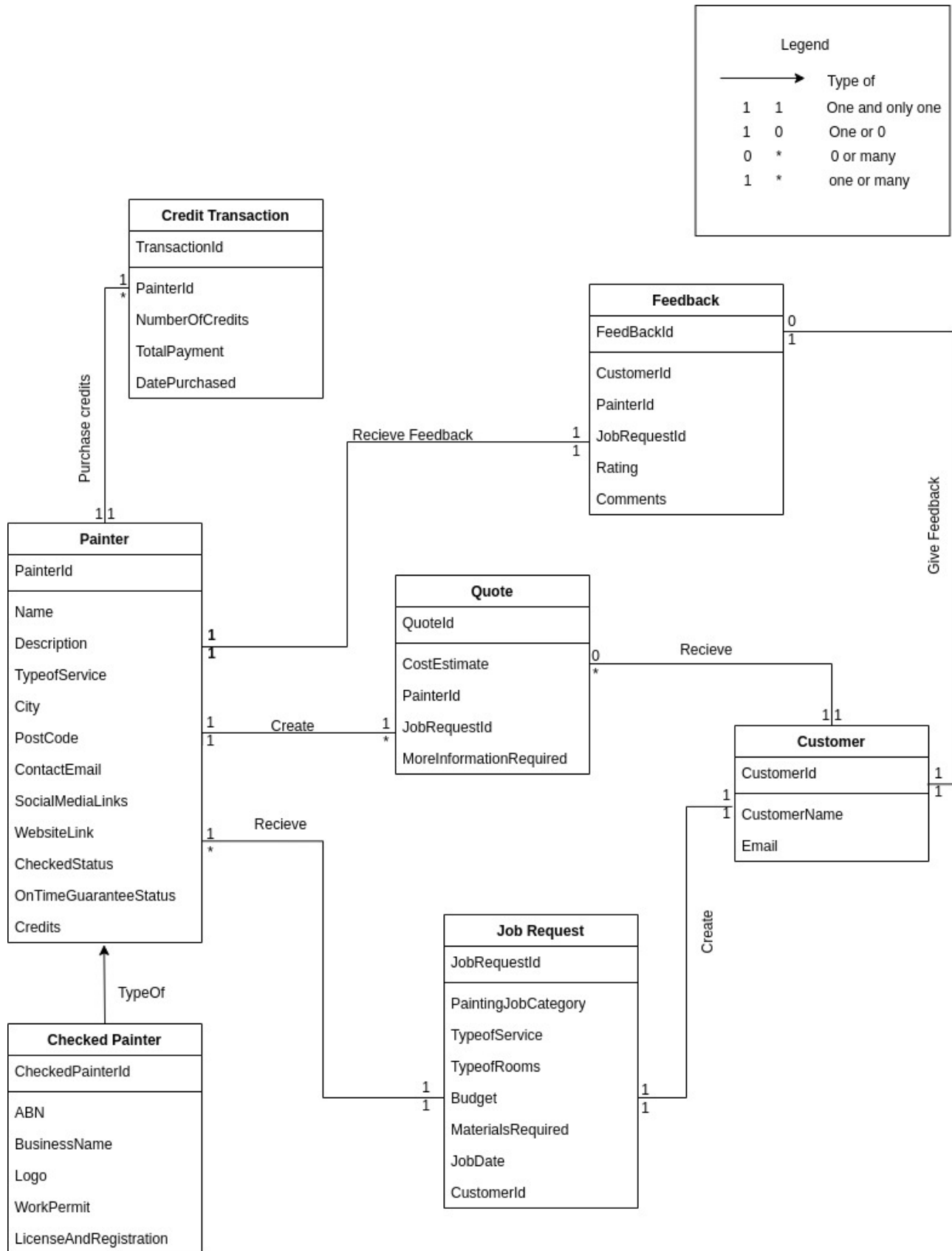
			quote is unsuccessful	
24 hours if customer does not receive any quotes.	Temporal	Close the request	The use case describes the event where no quotes are received, so the request that the customer made is closed and the customer is notified.	Customer
When customer submits the Job request form	State	Create Customer Account	The use case describes the event where a Customer Account is created when the customer submits a job request.	Customer

Q4. Domain model class diagram

Assumptions:

- A customer can create many job requests they want
- Checked painter is a type of Painter
- Each Job request is unique
- Feedback is optional
- Customer can receive 0 or many quotes
- A quote can determine if a painter requires more information
- Payment between the customer and painter is outside the FCP System

Fresh Colour Painting System



Q5. Crud Matrix

Domain Class Use Case	Custo mer	Painter	JobReq uest	Quot e	Feedba ck	Credit Transact ion	Summa ryRepo rt
Submit Online form	C		C				
Edit Quote				U			
Purchase Credits		C				CU	
View Credits						R	
Send quote			R	C			
Cancel Transaction						D	
View quote				R			
View Painter Profile	R						
Register Painter		C					
Print Credit Payment Reports		R					
Give feedback	C	R			C		
View feedback					R		
Manage Feedback					UD		
Manage account	UD	UD					
Accept quote	R		U	UD			
View summary reports							R

Notify painter of a customer Job	U						
Verify Painter information		U					
Generate monthly summary reports							CU
Notify Painters of quote status							
Delete Summary reports							D
Close the request			D				
Create Customer Account	C						

Q6 Fully Developed Use Case Description

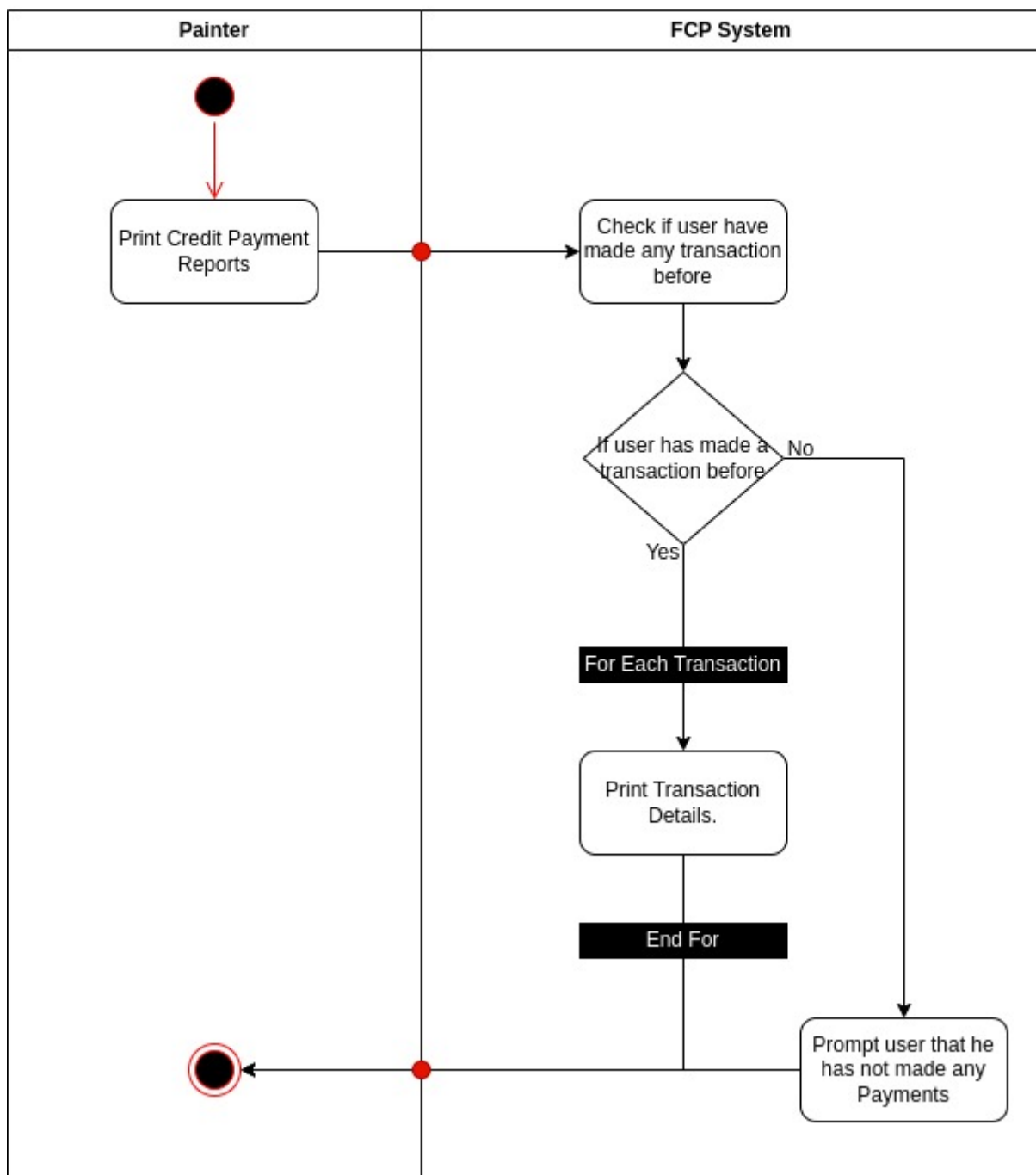
Use Case Name:	Submit Online Form	
Scenario:	Customer is looking for a painter for a paint job.	
Triggering Event:	Customer accesses the website and fills up and submits the form	
Brief Description	The Customer will fill up details about the job in the job request form in the website, and once the form is submitted, the system will find the 2 most suitable painters and notify them.	
Actors	Customer, FCP System, Painter	
Stakeholders	Customer, Painter, Artie	
Preconditions	<p>The customer needs a paint job.</p> <p>The customer can access the FCP System's website.</p>	
Postconditions	<p>A job request is created.</p> <p>The system will find suitable painters and will be notified.</p> <p>A customer account will be created if it does not already exists in the system.</p>	
Flow of Activities:	Actor	System
	<p>1. Customer fills up the necessary information in the form</p> <p>2. Customer submits the form</p>	<p>1.1 System will check if values entered are valid.</p> <p>2.1 Customer account will be create if doesnt exist yet.</p> <p>2.2 Job request will be created and will find painters most suitable for</p>

		<p>the job.</p> <p>2.3 The best two painters will be notified to send in a quote for the customer</p>
Exception/ conditions:	<p>1.1 The customer enters invalid values for specific fields or left them blank.</p> <p>2.1 The customer submits the form with invalid values</p>	

Q7. Activity Diagram

Activity Diagram

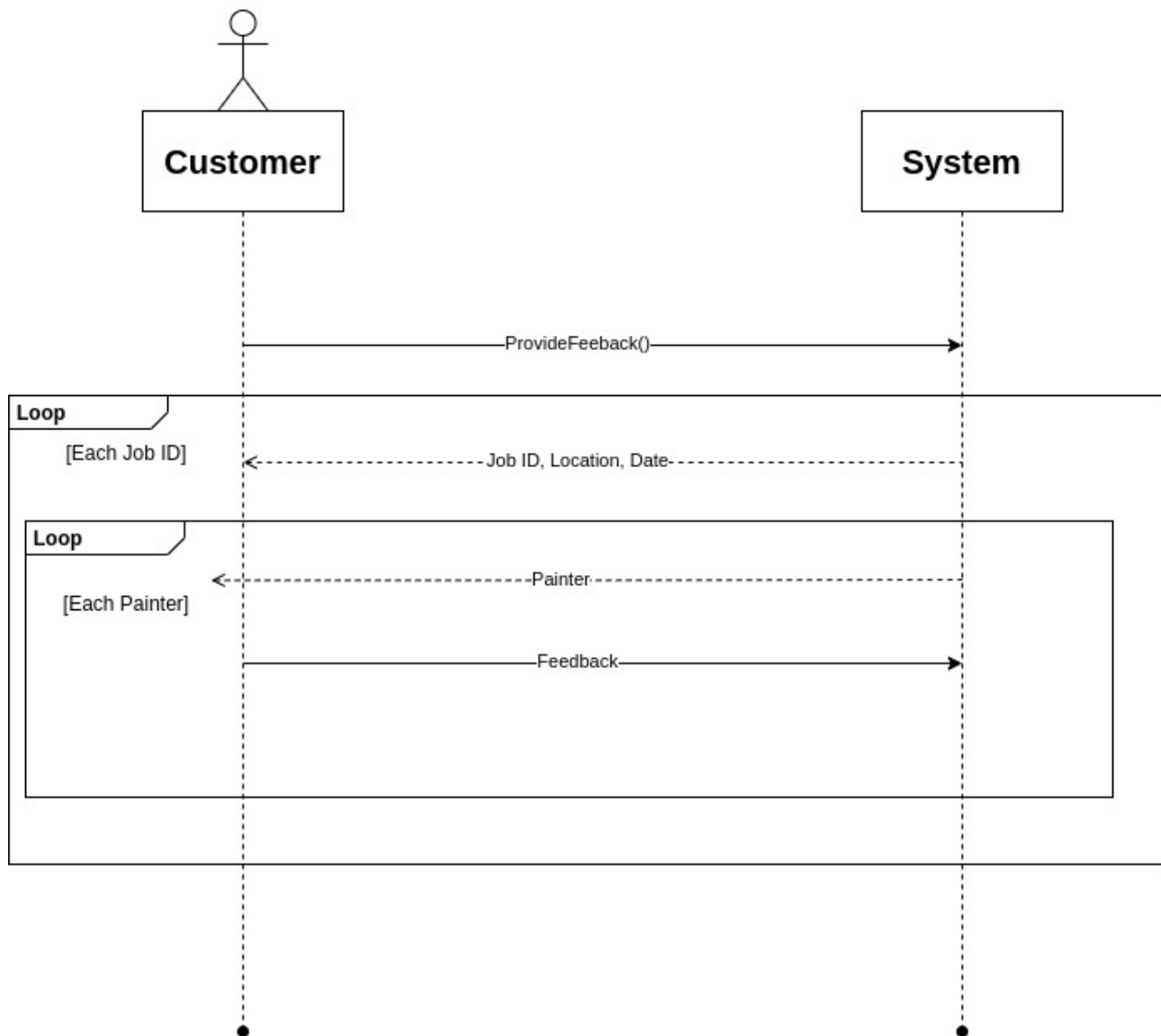
For the use case: Print Credit Payments Reports



Q8. System Sequence Diagram

System Sequence Diagram

For the use case: Provide Feedback



Q9. State Machine Diagram

State Machine Diagram

For a painting job object



Q10. User Acceptance Plan

Use Case Name	Test Conditions	Expected Outcomes
Submit Online Form	Customer fully filled out all required fields, Submit Form	Job Request will be made, A new account will be created and inserted into the database if not yet exists,
View Quote	Customer receive Quote from painter. Customer view Quote from painter	Quotes should properly display cost estimates, comments, and any other necessary information.
Give Feedback	Customer can access previous completed Jobs, Customer selects, and give comment, rating to that painter from that job.	Feedback should appear at painter's profile.
Manage Feedback	Customer can update, delete any feedbacks of existing feedback.	Feedback is updated or deleted successfully,
Close the Request	Customer decides to cancel a job request.	Job request is successfully deleted.
Close the Request	Customer does not reply to a quote within 24 hours	Job request is successfully deleted.

View Painter	Customer can view a painter's profile.	Accurate data from the painter's profile should be shown.
Manage Account	Customer can update personal information	Account is updated
Manage Account	Customer can delete account	Account is deleted
Accept Quote	Customer can view and accept a quote from painters.	Job Request is updated and painters should be notified.