Baruch COLLEGE | ZICKLIN SCHOOL OF BUSINESS

Course:

Systems Analysis and Design

CIS 9490 – Spring 2021

Final Project Report
"Creating a new online system for Home Watching Services (HWS)"

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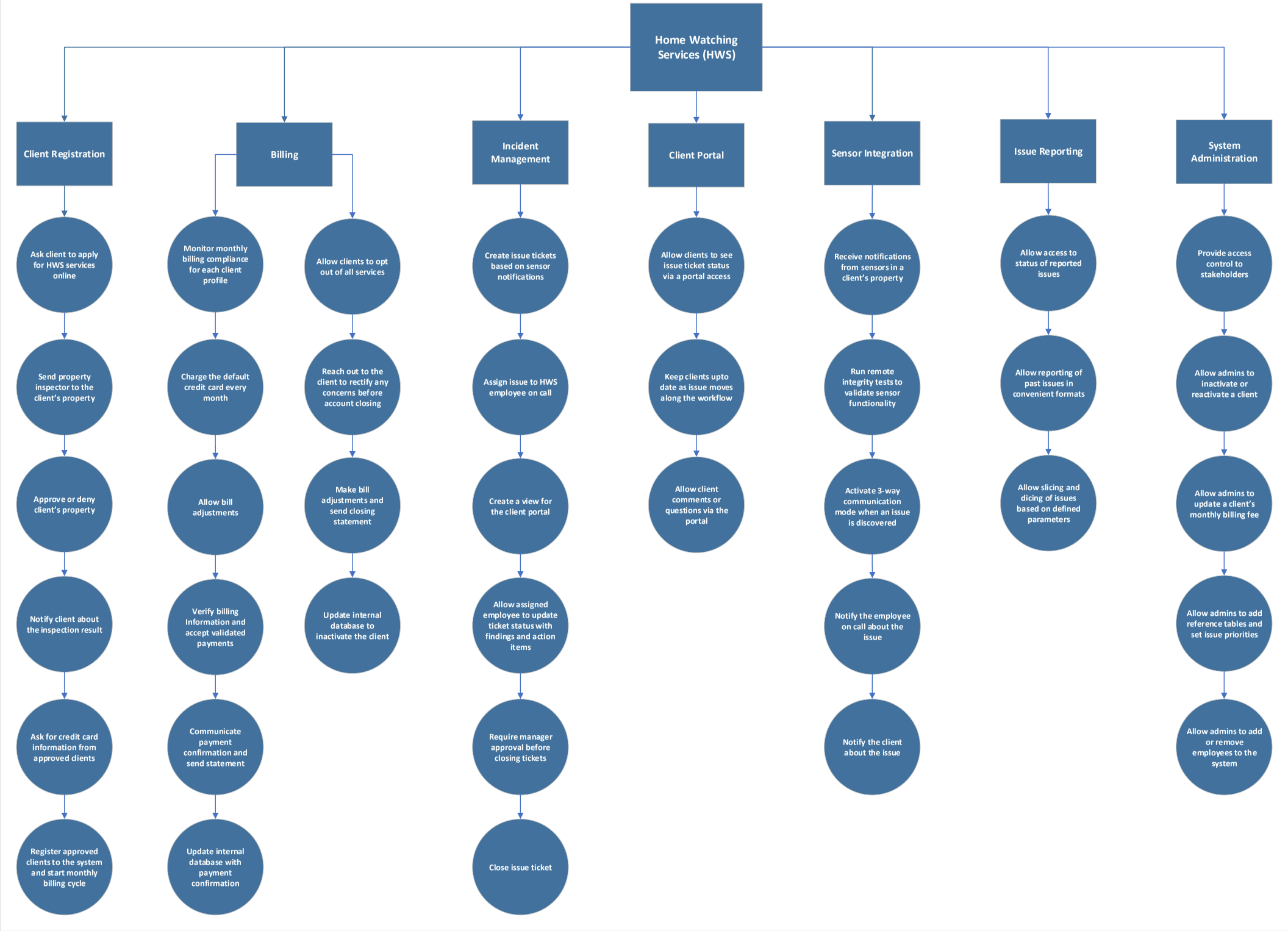
Section A: Decomposition Diagram

The following page will display the decomposition Diagram for HWS's new online system.


Home Watching Services (HWS)
Client Registration
Billing
Incident Management
Client Portal
Sensor Integration
Issue Reporting
System Administration
Ask client to apply for HWS services online
Send property inspector to the client's property
Approve or deny client's property
Notify client about the inspection result
Ask for credit card information from approved clients
Register approved clients to the system and start monthly billing cycle
Monitor monthly billing compliance for each client profile
Charge the default credit card every month
Allow bill adjustments
Verify billing Information and accept validated payments
Communicate payment confirmation and send statement
Update internal database with payment confirmation
Allow clients to opt out of all services
Reach out to the client to rectify any concerns before account closing
Make bill adjustments and send closing statement
Update internal database to inactivate the client
Create issue tickets based on sensor notifications
Assign issue to HWS employee on call
Create a view for the client portal
Allow assigned employee to update ticket status with findings and action items
Require manager approval before closing tickets
Close issue ticket
Allow clients to see issue ticket status via a portal access
Keep clients upto date as issue moves along the workflow
Allow client comments or questions via the portal
Receive notifications from sensors in a client's property
Run remote integrity tests to validate sensor functionality
Activate 3-way communication mode when an issue is discovered
Notify the employee on call about the issue
Notify the client about the issue
Allow access to status of reported issues
Allow reporting of past issues in convenient formats
Allow slicing and dicing of issues based on defined parameters
Provide access control to stakeholders
Allow admins to inactivate or reactivate a client
Allow admins to update a client's monthly billing fee
Allow admins to add reference tables and set issue priorities
Allow admins to add or remove employees to the system

Section B: Business Requirements Document (BRD)

The following pages will display the BRD for HWS's new online system.

Requirements document for Home Watching Services (HWS)

Date: 05/03/2021
By: Aarif Munwar Jahan

Revision History

Revision number	Date	Reason for revision	Revised by
1	03/25/2021	Initial Draft	A. Jahan
2	04/02/2021	Added section 8.1.6	M. Rashford
3	04/17/2021	Updated titles under section 8.4.2	P. Foden
4	05/03/2021	Released Draft rev1	A. Jahan

1. Scope statement

    1.1. The scope of this project includes a system that allows:
        1.1.1. Ability for clients to sign up and request services online
        1.1.2. Ability to automatically bill clients on a monthly basis with adjustments as needed
        1.1.3. Ability to automatically notify HWS employees and clients after receiving issue notifications from sensors in a client's property
        1.1.4. Ability to create, track and manage tickets for each issue at a client's property
        1.1.5. Ability to keep clients abreast of all issues at their property and its status
        1.1.6. Ability to slice, dice and report on current and past issues based on defined database parameters
        1.1.7. Ability to provide system administration to manage client status and other referential information

2. Out of scope

    2.1. There will be no ability to apply data analytics on the reported issue data
    2.2. There will be no ability to accept any other payment methods apart from credit cards
    2.3. There will be no ability to accept any credit cards that do not belong to the four major companies
    2.4. There will be no ability to automatically report technical issues with the sensors
    2.5. There will be no ability to integrate with marketing tools to profile the clients
    2.6. There will be no ability to setup individual permission scheme to access the system
    2.7. There will be no ability to import reported data into the company's ThinQ platform

3. Goals

    3.1. Build a system for Home Watching Services (HWS) that expands its business and gains the business more clients in its home and neighboring towns.

4. Objectives

    4.1. Build an online system to allow potential clients to sign up and request service
    4.2. Integrate existing business processes with the new online system to efficiently respond to any issues at a client's property
    4.3. Improve incident management at any client's property by integrating visibility, responsibility, reporting and billing within the new online system
    4.4. System must respond quickly and must be easy to use, especially for a broad array of clients

5. Risks

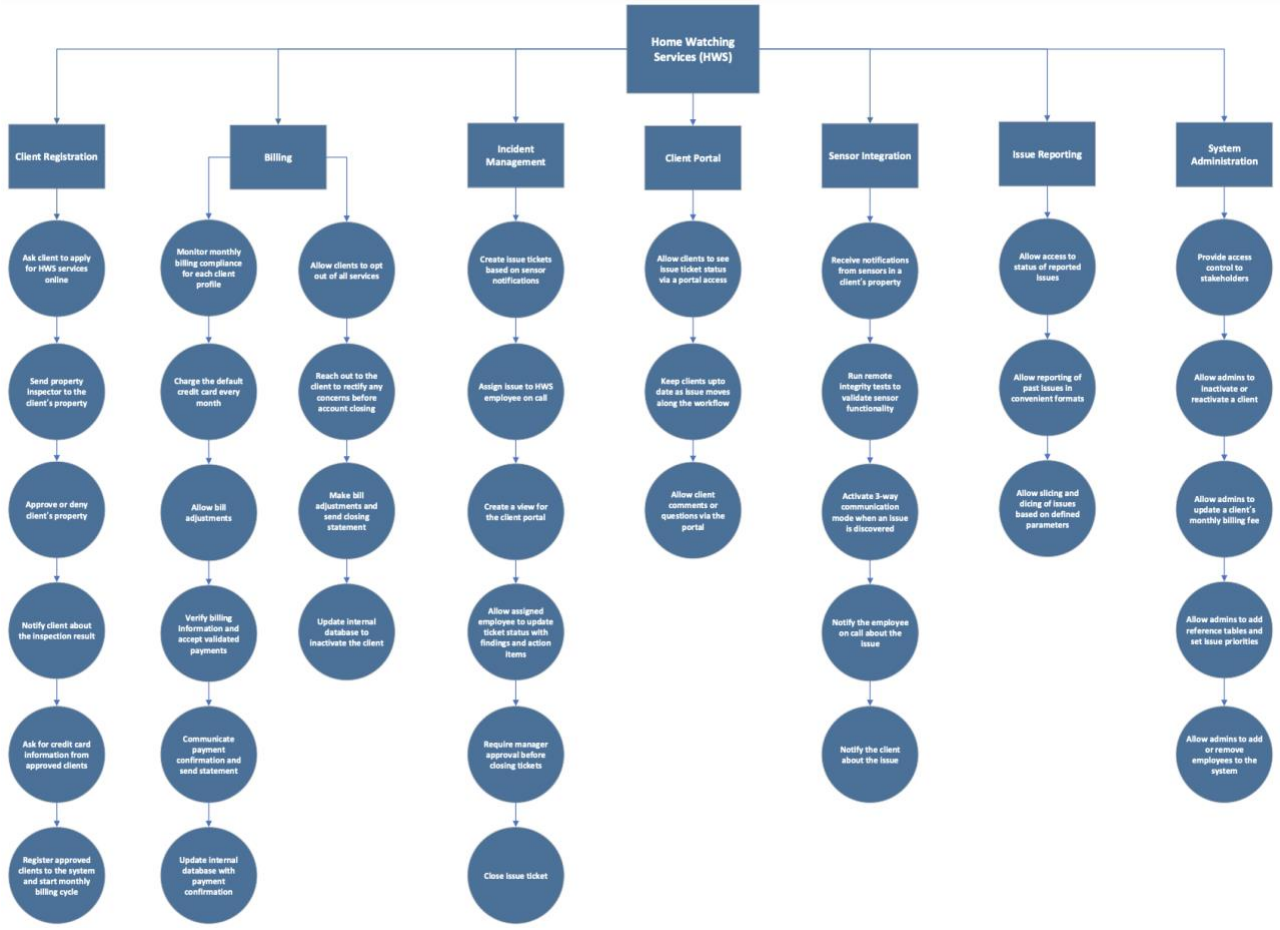
    5.1. The technology to integrate sensors with the new application has not been proven yet fueled by the technical staff's admitted concerns regarding this integration. This may affect the timeline and budget of the project.
    5.2. The owner of the business, JP Lyons, might not be readily available for meetings due to his client engagements. This may affect the timeline of the project.

6. Constraints

   6.1. The online and logistics system must go live in 8 months to maximize the competitive advantage with the new integrated system.
   6.2. The budget is limited to the $250,000 paid in capital by the business.
   6.3. The scope has been reduced to the basic necessities of the system and cannot be cut further.

7. Decomposition diagram

   7.1.



8. Functional requirements

8.1. Client Registration

8.1.1. Ask client to apply for HWS services online

8.1.1.1. The system shall require the client to enter personal and property information for registration

8.1.1.1.1. The system shall allow the client to enter multiple properties during the same registration session

8.1.1.2. The system shall require the client to register with a unique email address that is not in the system already

8.1.1.2.1. The system must verify the provided email address against the existing database

8.1.1.3. The system shall require passwords to be at least eight characters long with a mix of alphanumerical characters

8.1.1.4. The system shall create the client profile in the system

8.1.2. Send property inspector to the client's property

8.1.2.1. The system shall automatically send notifications to the HWS management team about a client sign up so that the team can send an inspector to the client's property

8.1.3. Approve or deny the client's property

8.1.3.1. The system shall allow the inspector to approve or deny the client's property based on the inspection being successful or unsuccessful

8.1.4. Notify client about the inspection result

8.1.4.1. The system shall automatically send notifications to the client regarding the inspection result

8.1.4.1.1. The system shall detail the next steps in the correspondence to the client

8.1.5. Ask for credit card information from approved clients

8.1.5.1. The system shall send a portal to the client to collect credit card information

8.1.5.2. The system shall require the clients to enter their credit card information to continue with the registration post property approval

8.1.5.3. The system must verify the credit card information and billing address via a secure payment server and rely on ISO/IEC standards

8.1.5.3.1. The system shall ask the client to fix necessary information if the verification fails. For example, credit card number more than 19 digits or CVV more than 3 digits

8.1.5.3.2. The system shall only accept major credit card vendors. Namely – VISA, MasterCard, AmericanExpress and Discover

8.1.5.4. The system shall display payment processing confirmation and communicate registration confirmation to the client

8.1.6. Register approved clients to the system and start monthly billing cycle

8.1.6.1. The system shall add the approved client to the internal database and create a billing profile with all payment information

8.1.6.2. The system shall start the billing cycle at the current date on a monthly basis

8.2. Billing

8.2.1. Monitor monthly billing compliance for each client profile

8.2.1.1. The system shall monitor and ensure all bills are paid monthly for each client profile

8.2.1.2. The system shall look for bill adjustments from an approved list of services

8.2.1.3. The system must report any discrepancies in bills to the system administrators

8.2.2. Charge the default credit card every month

8.2.2.1. The system shall charge the client's default credit card at the start of each monthly billing period

8.2.3. Allow bill adjustments

8.2.3.1. The system shall allow HWS employees to adjust bills if the client received additional services or the client needs to be credited

8.2.3.2. The system must verify employee access permission before allowing bill adjustments

8.2.4. Verify billing information and accept validated payments

8.2.4.1. The system must verify the payment information and billing address via a secure payment server

8.2.4.2. The system must accept only validated payments

8.2.4.2.1. The system shall notify the client to update credit card information if a payment is not accepted

8.2.5. Communicate payment confirmation and send a statement

8.2.5.1. The system shall create a transaction statement for each monthly period

8.2.5.2. The system shall notify the client with the statement after each billing period is charged

8.2.6. Update internal database with payment confirmation

8.2.6.1. The system must update the internal database with any payment confirmations in the client profile

8.2.7. Allow clients to opt-out of all services

8.2.7.1. The system shall allow the clients to opt-out of all services at any time during the billing cycle

8.2.7.2. The system shall allow the client to opt-out using the client portal or via phone

8.2.8. Reach out to the client to rectify any concerns before account closing

8.2.8.1. The system shall automatically send correspondence to the client providing information about the HWS account manager

8.2.8.2. The system shall allow the client to respond to the automated correspondence if they wish to get in touch with an account manager

8.2.9. Make bill adjustments and send closing statement

8.2.9.1. The system shall make adjustments to ongoing monthly bill and

8.2.9.2. The system shall prepare a collective account closing statement

8.2.9.3. The system shall notify the client confirming the account closing with the statement

8.2.10. Update internal database to inactivate the client

8.2.10.1. The system shall update the internal HWS database to inactivate the client

8.2.10.2. The system shall notify the account manager about the account closing

8.3. Incident Management

8.3.1. Create issue tickets based on sensor notifications

8.3.1.1. The system shall receive notifications from sensors in client properties

8.3.1.2. The system shall verify the notification has an error code with the cloud database

8.3.1.3. The system shall automatically create issue tickets in the internal HWS portal

8.3.1.3.1. The system must record the sensor ID, sensorType and EventTime while creating a new issue ticket with a unique issue key

8.3.2. Assign the issue to the HWS employee on-call

8.3.2.1. The system shall identify the employee on-call based on the schedule reference table

8.3.2.2. The system shall assign the issue ticket to the appropriate assignee

8.3.3. Create a view for the client portal

8.3.3.1. The system shall automatically create a view for the issue ticket in the client portal

8.3.3.1.1. The system must provide assignee, property and sensor timing information in the client view

8.3.4. Allow assigned employee to update ticket status with findings and action items

8.3.4.1. The system shall require the assignee to update the status of the ticket with findings and action items

8.3.4.2. The system shall notify all watchers of the issue and the client with any updates

8.3.5. Require manager approval before closing tickets

8.3.5.1. The system shall identify the assigned manager for the issue using the manager reference table

8.3.5.2. The system must require an approval by the assigned manager before a ticket is closed in the portal

8.3.6. Close issue ticket

8.3.6.1. The system shall close the issue ticket in the internal HWS portal

8.3.6.2. The system shall notify all watches and the client accordingly

8.4. Client Portal

8.4.1. Allow clients to see issue ticket status via a portal access

8.4.1.1. The system shall allow clients to access a portal where they can access the status of the issues at their property

8.4.1.2. The system shall ensure the portal is easy to access and clients can access it with the same email they provided during account registration

8.4.2. Keep the clients up to date via the portal as the issue moves along the HWS issue workflow

8.4.2.1. The system shall keep the clients in the loop via the portal as the issue moves along the HWS issue workflow

8.4.2.1.1. The system shall notify clients of status changes, new findings and new action items

8.4.3. Allow client comments or questions via the portal

8.4.3.1. The system shall allow clients to use the portal provide comments or ask questions at any status of the issue

8.4.3.2. The system shall allow employees to respond to client's concerns via the portal

8.5. Sensor Integration

8.5.1. Receive notifications from sensors in a client's property

8.5.1.1. The system shall automatically receive notifications from sensors installed in a client's property

8.5.1.2. The system must capture Sensor ID, Sensor Type and Event Time in addition to other important data

8.5.2. Run remote integrity tests to validate sensor functionality

8.5.2.1. The system shall remotely run the company standardized "integrity tool" twice a week to validate proper functionality of the sensors

8.5.2.2. The system shall report any integrity issues to the management team as soon as the integrity tool test fails

8.5.3. Activate 3-way communication mode when an issue is reported

8.5.3.1. The system shall activate the company standard 3-way (System – Management – Client) communication mode as soon as an issue notification is received from sensors in a client's property

8.5.4. Notify the employee on-call about the issue

8.5.4.1. The system shall identify the employee on-call from the schedule reference table

8.5.4.2. The system shall notify the employee on-call about the issue as a part of the 3-way communication protocol

8.5.5. Notify the client about the issue

8.5.5.1. The system shall identify the appropriate client from the client reference table

8.5.5.2. The system shall notify the client about the issue as a part of the 3-way communication protocol

8.6. Issue Reporting

8.6.1. Allow access to status of reported issues

8.6.1.1. The system shall allow HWS employees to access the status of all active or open issues

8.6.2. Allow reporting of past issues in convenient formats

8.6.2.1. The system shall allow reporting on past/historical issues within the portal

8.6.2.2. The system shall allow exporting of historical reports in standard formats such as excel, pdf, etc.

8.6.3. Allow slicing and dicing of issues based on defined parameters

8.6.3.1. The system shall allow slicing and dicing of issues based on defined database parameters

8.6.3.2. The system shall allow nested sorts and filters to be stored as fixed queries

8.7. System Administration

8.7.1. Provide access control to stakeholders

8.7.1.1. The system shall provide an access control management tool where stakeholders can assign system administrators

8.7.1.2. The system shall allow the creation of groups that share the same permission scheme

8.7.2. Allow admins to inactivate or reactivate a client

8.7.2.1. The system shall allow the system admins to make a client profile inactive after the account is closed or reactivate a client profile if they come back

8.7.2.1.1. The system must verify the admin credentials before allowing the action in 8.7.2.1

8.7.3. Allow admins to update a client's monthly billing fee

8.7.3.1. The system shall allow the system admins to update monthly billing fee for a particular client

8.7.3.2. The system shall allow applying credits to a client profile

8.7.3.3. The system must verify the admin credentials before allowing the action in 8.7.3.1 and 8.7.3.2

8.7.4. Allow admins to add reference tables and set issue priorities

8.7.4.1. The system shall allow admins to add a system-level schema by defining reference tables

8.7.4.2. The system shall allow admins to priorities issues into customized views

8.7.5. Allow admins to add or remove employees from the system

8.7.5.1. The system shall allow admins to add or remove employees from the system

8.7.5.2. The system shall provide a user management portal with details about all the active and inactive employees

9. Nonfunctional requirements

9.1. Response time

9.1.1. The system shall have the standard industry response time of less than 5 seconds

9.1.2. The system shall recognize and allow 2.5 times faster performance during off peak hours

9.2. Security

9.2.1. The system shall encrypt all personal and payment information

9.2.2. The system shall deploy SSL for credit card processing

9.3. Storage

9.3.1. The system shall require 500TB of data storage

9.3.2. The system shall allow up to 1 million client accounts

9.4. Backup

9.4.1. The system shall backup client, property and employee catalogs once every 12 hours

10. Stakeholders

10.1. JP Lyons – Business Owner

10.2. Jack Lyons – Assistant to the Business Owner

10.3. Lee Scott – Operations Manager

10.4. Phil Foden – Director, Client Relationships

10.5. Marcus Rashford – Senior Client Executive

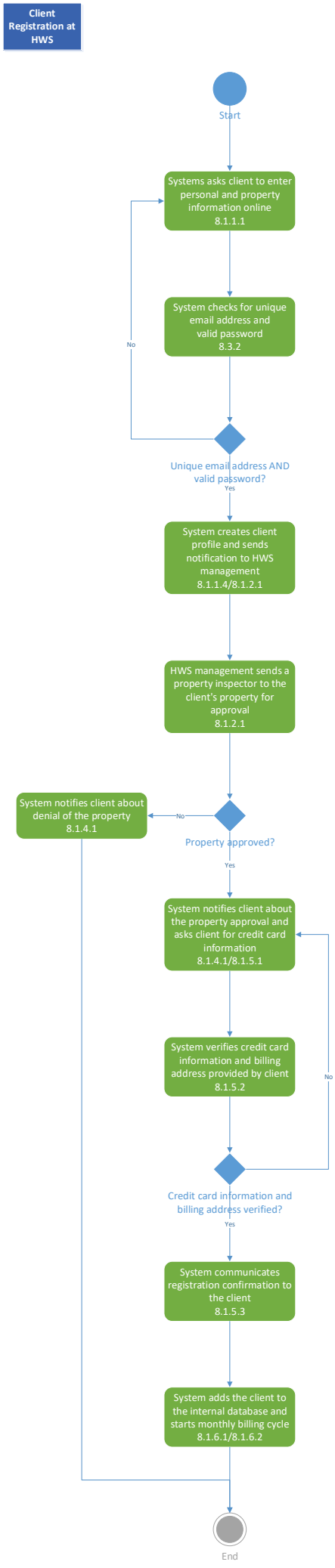
10.6. Aarif Jahan – Team Lead, Web Development

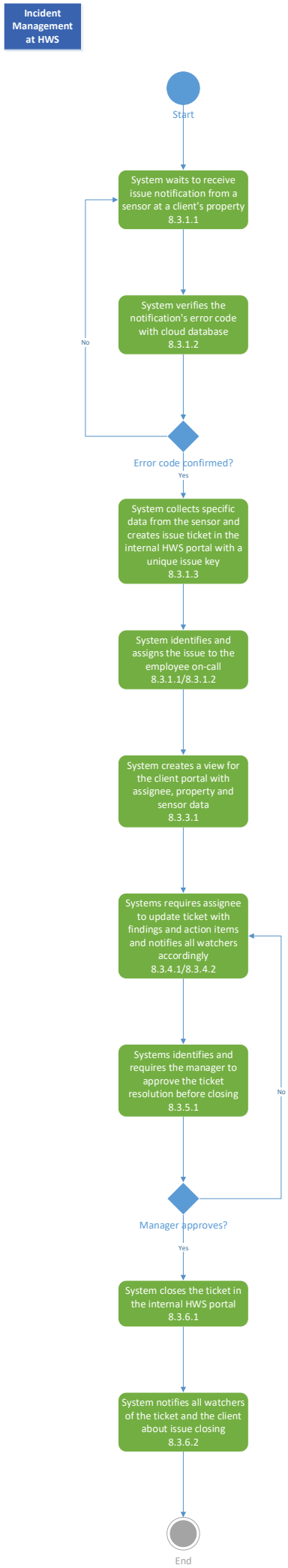
Section C: Activity Diagrams

For continuing with the chain of analysis, these two functional areas were chosen:

1. Client Registration
2. Incident Management

The following pages will display the activity diagrams for the two functional areas in the order of the list above.


Client Registration at HWS
Start
Systems asks client to enter personal and property information online 8.1.1.1
System checks for unique email address and valid password 8.3.2
No
Unique email address AND valid password?
Yes
System creates client profile and sends notification to HWS management 8.1.1.4/8.1.2.1
HWS management sends a property inspector to the client's property for approval 8.1.2.1
System notifies client about denial of the property 8.1.4.1
No
Property approved?
Yes
System notifies client about the property approval and asks client for credit card information 8.1.4.1/8.1.5.1
System verifies credit card information and billing address provided by client 8.1.5.2
No
Credit card information and billing address verified?
Yes
System communicates registration confirmation to the client 8.1.5.3
System adds the client to the internal database and starts monthly billing cycle 8.1.6.1/8.1.6.2
End


Incident Management at HWS
Start
System waits to receive issue notification from a sensor at a client's property 8.3.1.1
System verifies the notification's error code with cloud database 8.3.1.2
No
Error code confirmed?
Yes
System collects specific data from the sensor and creates issue ticket in the internal HWS portal with a unique issue key 8.3.1.3
System identifies and assigns the issue to the employee on-call 8.3.1.1/8.3.1.2
System creates a view for the client portal with assignee, property and sensor data 8.3.3.1
Systems requires assignee to update ticket with findings and action items and notifies all watchers accordingly 8.3.4.1/8.3.4.2
Systems identifies and requires the manager to approve the ticket resolution before closing 8.3.5.1
No
Manager approves?
Yes
System closes the ticket in the internal HWS portal 8.3.6.1
System notifies all watchers of the ticket and the client about issue closing 8.3.6.2
End

Section D: Data Mapping and Modeling (Crow's Feet Diagram)

For the two functional areas, Client Registration and Incident Management, the following pages will contain the Data Mapping for all entities associated with these two functional areas.

This data mapping will be followed by a data model using a Crow's Feet Diagram for all entities associated with these two functional areas.

Data Mapping for Client Registration and Incident Management

Client

ClientID PK seq

FirstName

LastName

DateOfBirth

EmailAddress

PhoneNo

Property

PropertyID PK seq

ClientID FK Client

PropertyTypeID FK PropertyType

AddressID FK Address

PropertyType

PropertyTypeID PK seq

PropertyTypeCode

Address

Address ID PK seq

AddressLine

Apt_SuiteLine

StateID FK State

ZipCode

State

StateID PK seq

StateCode

StateDescription

CreditCard

CreditCardID PK seq

ClientID FK Client

CreditCardTypeID FK CreditCardType

CreditCardNumber

NameOnCard

ExpirationDate

BillingAddressID FK Address

IssueTicket

IssueKey PK seq

ClientID FK Client

PropertyID FK Property

AssignedEmployeeID FK Employee

AssignedManagerID FK Manager

IssueStatusID FK IssueStatus

VisitDate

IssueFindings

IssueActionItems

DueDate

SensorID

SensorType

EventTime

Employee

EmployeeID PK seq

FirstName

LastName

DateOfBirth

EmailAddress

PhoneNo

DepartmentID FK Department

Manager

ManagerID PK seq

FirstName

LastName

DateOfBirth

EmailAddress

PhoneNo

DepartmentID FK Department

Department

DepartmentID PK seq

DepartmentName

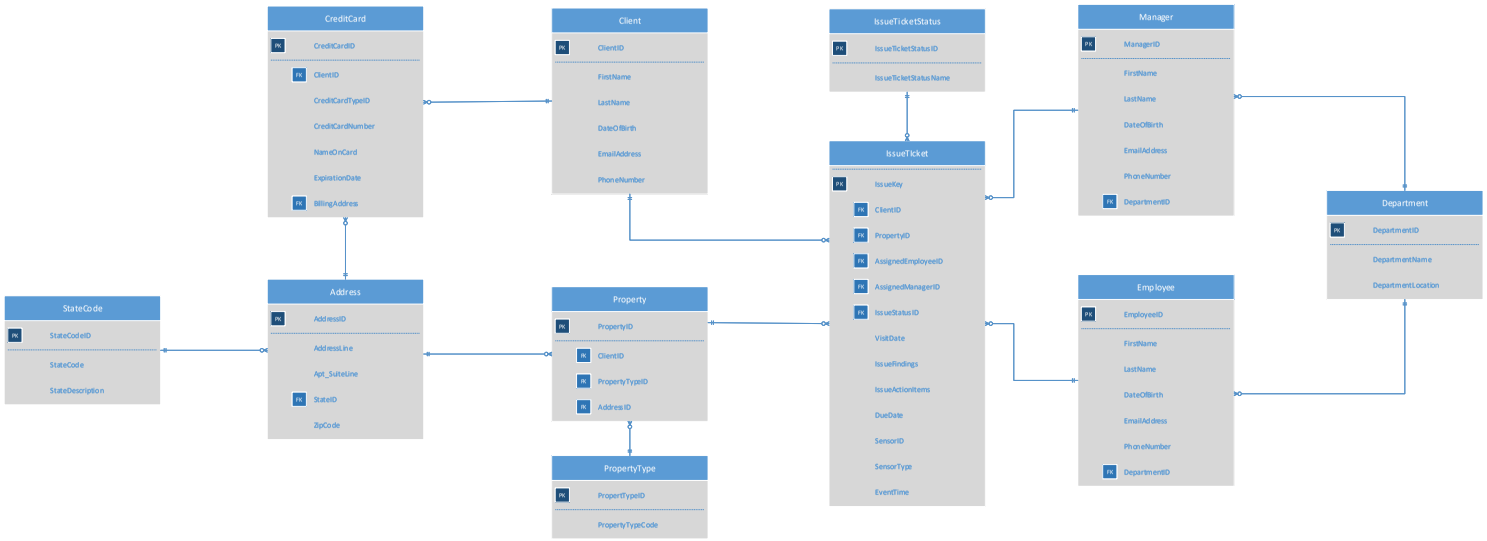
DepartmentLocation

IssueTicketStatus

IssueTicketStatusID PK seq

IssueTicketStatusName

Data Modeling - Crow's Feet Diagram
House Watching Services (HWS)
Client Registration – Incident Management
Aarif Munwar Jahan
05-04-2021



Data Modeling Statements

Syntax
<Entity Relationship>
One **Entity1** <optionality(may(0)/must(1)> <action> <cardinality(one or more(*)/one and only one(1)> **Entity2**
One **Entity2** <optionality(may(0)/must(1)> <action> <cardinality(one or more(*)/one and only one(1)> **Entity1**

IssueTicket – Client (Many to One)
One **IssueTicket** must (1) belong to one and only one (1) **Client**
One **Client** may (0) be part of one or many (M) **IssueTickets**

IssueTicket – Property (Many to One)
One **IssueTicket** must (1) be located at one and only one (1) **Property**
One **Property** may (0) have reported one or many (M) **IssueTickets**

IssueTicket – Employee (Many to One)
One **IssueTicket** must (1) be assigned to one and only one (1) **Employee**
One **Employee** may (0) be assignee for one or many (M) **IssueTickets**

IssueTicket – Manager (Many to One)
One **IssueTicket** must (1) be under supervision of one and only one (1) **Manager**
One **Manager** may (0) supervise one or many (M) **IssueTickets**

IssueTicket – IssueTicketStatus (Many to One)
One **IssueTicket** must (1) have one and only one (1) **IssueTicketStatus**
One **IssueTicketStatus** may (0) belong to one or many (M) **IssueTickets**

Employee – Department (Many to One)
One **Employee** must (1) work for one and only one (1) **Department**
One **Department** must (1) employ one or many (M) **Employees**

Manager – Department (Many to One)
One **Manager** must (1) work for one and only one (1) **Department**
One **Department** may (0) employ one or many (M) **Managers**

Client – Property (One to Many)
One **Client** must (1) own one or many (M) **Properties**
One **Property** must (1) be owned by one and only one (1) **Client**

Property – PropertyType (Many to One)
One **Property** must (1) be categorized by one and only one (1) **PropertyType**
One **PropertyType** may (0) categorize one or many (M) **Properties**

Property – Address (Many to One)
One **Property** must (1) have one and only one (1) **Address**
One **Address** may (0) belong to one or many (M) **Properties**

Address – State (Many to One)
One **Address** must (1) be located in one and only one (M) **State**
One **State** may (0) contain one or many (1) **Addresses**

Client – CreditCard (One to Many)
One **Client** must (1) have one or many (M) **CreditCards**
One **CreditCard** must (1) belong to one and only one (1) **Client**

CreditCard – Address(Billing) (Many to One)
One **CreditCard** must (1) be processed through one and only one (1) **Address**
One **Address** may (0) process one or many (M) **CreditCards**

Section E: Wireframes (User Interfaces)

Finally, the following pages will display the wireframes related to the data model provided in previous sections.

The following wireframes were created for the model and will be displayed in the order of the list below:

1. Client Registration
    a. HWS Client Registration Portal
    b. HWS Credit Card Information Portal
2. Incident Management
    a. HWS Incident Management Employee Portal
    b. HWS Incident Management Client Portal

HWS Client Registration Portal

<error text>

Client Information:

Last Name: Musk

First Name: Elon

Date of Birth: 06/28/1971

Email Address: elon.musk@tesla.com

Phone Number: (123)-456-7890

Client Property Information:

No.	Property Name	Property Type	Property Address
1	Hampton House	House	123 E Cedar Ct Apt/Suite West Hampton NY 11999
2	Islip Apartment	Apartment	456 Main St Apt. 3E Central Islip NY 11404

+

1 2 3

Submit Cancel

Use Case Statements – HWS Client Registration Portal

Seq	User action	System action
1	Client enters First Name, Last Name	---
2	Client clicks on Date of Birth date picker	System displays calendar view and allows date picking
3	Client enters Email Address	---
4	Client clicks on country code for Phone Number field	System displays a list of country codes for all 195 countries
5	Client enters Phone Number	System adjusts the number length based on the country code and limits the field accordingly
6	Client enters Property Name	System starts counting properties by putting 1 in the No. field only for the first property
7	Client selects Property Type	System displays list of available property types from the reference table
8	Client enters Property Address	---
9	Client clicks Submit	System saves data and notifies HWS management
10	End use case	
9.1a	Client clicks +	System adds a new row for entering property information and increments No. field by 1
9.2a	Action returns to line 6	
9.3b	Email already in the system	System displays error message and asks client to enter a unique email address
9.4b	Client re-enters Email Address	---
9.5b	Action returns to line 9	
9.6c	Client selects different Page Number	System displays the properties in the corresponding page number
9.7d	Client clicks Cancel	System returns to Main Menu

HWS Client Credit Card Information Portal

Please provide credit card information below to complete registration:

Last Name: Musk

First Name: Elon

Email Address: elon.musk@tesla.com

No.	Card Number	Expiration Date	CVV (3 Digits)	Zip Code
1	1234 5678 9101 <error text>	12 / 24 <error text>	••• <error text>	12345 <error text>
	Default			
2	4321 8765 9102 <error text>	12 / 22 <error text>	••• <error text>	67891 <error text>
	Set as Default			

\+

1 2 3

Submit Cancel

Use Case Statements – HWS Client Credit Card Information Portal

Seq	User action	System action
1	Client enters Credit Card Number	System starts counting credits cards by putting 1 in the No. field (for the first card only). System limits the length of the number at 19 digits as per ISO/IEC 7812 for payment card numbers.
2	Client selects Month in Expiration Date	System displays a list of months ranging from 1-12
3	Client selects Year in Expiration Date	System displays a list of years from 21 to 99 (last two digits for years in 20xx)
4	Client enters CVV	System masks the input and limits the length at 3 digits
5	Client enters Zip Code	---
6	Client clicks on Set as Default	System makes the corresponding credit card as the primary payment method
7	Client clicks Submit	System saves data and notifies HWS
8	End use case	
7.1a	Client clicks +	System adds a new row for entering another credit card information and increments No. field by 1
7.2a	Action returns to line 1	
7.3b	Invalid Credit Card Number	System displays error message under Credit Card Number Field
7.4b	Client re-enters Credit Card Number	---
7.5b	Action returns to line 7	
7.6c	Invalid Expiration Date	System displays error message under Expiration Date field
7.8c	Client re-selects Expiration Date	---
7.9c	Action returns to line 7	
7.10d	Invalid CVV	System displays error message under CVV field
7.11d	Client re-enters CVV	---
7.12d	Action returns to line 7	
7.13e	Invalid Zip Code	System displays error message under Zip Code field
7.14e	Client re-enters CVV	---
7.15e	Action returns to line 7	
7.16f	Client selects different Page Number	System displays the credit card information in the corresponding page number
7.17g	Client clicks Cancel	System returns to Main Menu

HWS INCIDENT MANAGEMENT EMPLOYEE PORTAL

<error text>

Issue Details:

Issue Key	R0130-55
Sensor ID	1122334455
Sensor Type	Water Leak Sensor
Event Time	05/02/2021 14:50:23
Status	Open

View Workflow

Property:

Property Name	Property Type	Property Address
Hampton House	House	123 E Cedar Ct
		West Hampton
		NY 11999

Finding Details:

Visit Date	Finding Details
05/03/2021	Initial Finding: Kitchen flooded; leak from kitchen sink
05/04/2021	Leak is more extensive reaching upstairs bathroom

+

1 2 3

People:

Client:	Elon Musk
Assigned Employee:	Scott McTominay
Assigned Manager:	Daniel James
Department:	Flood Management

Recommended Action Items:

Action Item	Due Date	Status
Get quote from flood restoration services	05/04/2021	Done
Remove flood water from the property	05/07/2021	In Progress

+

1 2 3

Comments (8)

E. Musk added a new comment – May 03, 2021 9:56 PM

Please ensure the Van Gogh painting next to the dining table is safe

You added a new comment – Just Now

Don't worry Mr. Musk, our team cleared out all the valuables from the property this morning and our flood operations team is carefully drying them out. I will keep you posted.

+

1 2 3

Submit Cancel

Use Case Statements – HWS INCIDENT MANAGEMENT EMPLOYEE PORTAL

Seq	User action	System action
1	Employee selects overall issue Status	System displays a list of available issue status from the reference table
2	Employee selects date picker for Visit Date under Findings	System displays calendar view and allows date picking
3	Employee enters Finding Details under Findings	---
4	Employee enters Action Item under Recommended Action Items	---
5	Employee selects date picker for Due Date under Recommended Action Items	System displays calendar view and allows date picking
6	Employee selects Status under Recommended Action Items	System displays a list of available issue status from the reference table
7	Employee enters or replies to comments	System displays the timestamp and the name of the comment issuer
8	Employee clicks Submit	System saves data and notifies HWS
9	End use case	
8.1a	Employee clicks + under Findings	System adds a new row for entering a new finding information
8.2a	Action returns to line 2	
8.3b	Employee clicks + under Recommended Action Items	System adds a new row for entering a new action item information
8.4b	Action returns to line 4	
8.5c	Employee clicks + under Comments	System adds a new row for entering a new comment
8.6c	Action returns to line 7	
8.7d	Employee selects different Page Number under Findings	System displays the findings information in the corresponding page number
8.8e	Employee selects different Page Number under Recommended Action Items	System displays the action items information in the corresponding page number
8.9f	Employee selects different Page Number under Comments	System displays the comments in the corresponding page number
8.10g	Employee clicks on View Workflow under Issue Details	System displays the appropriate workflow assigned to this task from the reference table
8.11h	Employee clicks on Issue Key	System displays the location of this issue ticket within the HWS database
8.12i	Employee clicks Cancel	System returns to Main Menu

HWS INCIDENT MANAGEMENT CLIENT PORTAL

<error text>

Issue Details:

SensorType: Water Leak Sensor

Event Time: 05/02/2021 14:50:23

Status: Open View Workflow

Property:

Property Name	Property Type	Property Address
Hampton House	House	123 E Cedar Ct
		West Hampton
		NY 11999

Finding Details:

Visit Date	Finding Details
05/03/2021	Initial Finding: Kitchen flooded; leak from kitchen sink
05/04/2021	Leak is more extensive reaching upstairs bathroom

1 2 3

People:

Client: Elon Musk

Assigned Employee: Scott McTominay

Assigned Manager: Daniel James

Department: Flood Management

Recommended Action Items:

Action Item	Due Date	Status
Get quote from flood restoration services	05/04/2021	Done
Remove flood water from the property	05/07/2021	In Progress

1 2 3

Comments (8)

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S. McTominay added a new comment – Just Now

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+

Submit Cancel

1 2 3

Use Case Statements – HWS INCIDENT MANAGEMENT CLIENT PORTAL

Seq	User action	System action
1	Client reads all information regarding the issue	---
2	Client enters a comment	---
3	Client clicks Submit	System saves the comment and displays the timestamp and the name of the comment issuer
4	End use case	
3.1a	Client clicks + under Comments	System adds a new row for entering a new comment
3.2a	Action returns to line 2	
3.3b	Client selects different Page Number under Findings	System displays the findings information in the corresponding page number
3.4c	Client selects different Page Number under Recommended Action Items	System displays the action items information in the corresponding page number
3.5c	Client selects different Page Number under Comments	System displays the comments in the corresponding page number
3.6d	Client clicks on View Workflow under Issue Details	System displays the appropriate workflow assigned to this task from the reference table
3.7e	Client clicks Cancel	System returns to Main Menu