

Professional and Scientific Staff Management (PSSM) System Proposal

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Table of contents

Cover Page	1
Executive Summary	4
Functional Requirements	5
Functional User Stories	6
Activity Diagrams w/ Swim Lanes	9
Process Incoming Staffing Requests	10
Check Staffing Qualifications	11
Make Arrangements with Employees and Clients	12
Bill Clients	13
Use Case Descriptions	14
Process Staffing Requests	14
Check Staffing Qualifications	15
Make Arrangements with Employees and Clients	16
Bill Clients	17
CRC Cards	18
Class Name: Client	18
Class Name: Contract	19
Class Name: Employee	20
Class Name: Staffing Request	21
Class Name: Unable-to-Fill Memo	22
Class Name: Placement Fee Bill	23
Class Diagram	24
Package Diagram	25
Sequence Diagrams	26
Process staffing requests 1	26
Process staffing requests 2	26
Check staffing qualifications 1	27
Check staffing qualifications 2	27
Manage arrangements with Employees and Clients 1	28
Manage arrangements with Employees and Clients 2	28
Bill Clients	29
CRUDE Matrix	30
Behavior State Machine Diagrams	31
Client	31
Contract	31
Employee	31
Staffing Request	31

Unable-to-Fill Memo	31
Placement Fee Bill	32
Assumptions	33
Meeting Agenda/Reporting Form	34

Executive Summary

We have created a unique system proposal to help PSSM and their clients' needs for temporary staffing. PSSM's system will aid in managing system requests for their clients and maintaining client data within a database. This system successfully allows PSSM to keep track of their client and agency requests while also increasing the company's overall productivity by decreasing the time it takes to accept new temporary workers.

While PSSM's system is efficient, it is also tedious and complex to ensure that all the processes in the system work together effectively. This system allows different client companies to efficiently reach out to the PSSM agency. Once the company realizes they need a temporary employee, they send out a request to PSSM's contract manager where he or she reviews the validity of the request. The request is then reviewed by the placement department at PSSM. If the contract is valid, it gets sent to PSSM's placement department. If not, a letter of denial is sent back to the company. When a staffing request gets approved, the placement department attempts to match the company's desired qualifications against the professionals they have available, should there be a match that professional is marked in the system as reserved. In cases where there is not a match, a memo is attached. All of the placement departments' staffing requests are sent to PSSM's arrangements department. Within this department, they try to contact the potential employer so they can agree upon placement details. If details are successfully worked out, the employee is marked "placed," the client is billed and sent the filled staffing request.

Overall, PSSM's multifunctional system integrates all activities and actions into a system that ensures that the agency is managing its clients' requests effectively and within a timely manner. PSSM is in good standing due to the increased ease of communication, information, and accuracy through this system.

Functional Requirements

1. Process staffing Requests
 - a. Client creates a Staffing Request in the system
 - b. Client asks Contract Manager to assign employees
 - c. Contract Manager gets contract number reference of staffing request
 - d. Contract Manager gets contract expiration
 - e. Contract Manager gets employees requested on contract
 - f. Contract Manager gets fee range on contract
 - g. Contract Manager gets requested qualifications on staffing request
 - h. Contract Manager gets requested fee on staffing request
 - i. Contract Manager gets requested employee type on staffing request
 - j. Contract Manager marks staffing request as "valid"
 - k. Contract Manager marks staffing request as "invalid"
 - l. Contract Manager closes open staffing request
 - m. Staffing Request (with unable to fill memo attached, if any) is sent back to client
2. Check Staffing Qualifications
 - a. Placement Department Member gets an Employee's type
 - b. Placement Department Member gets Employee qualifications (including experience)
 - c. Placement Department Member gets Employee availability
 - d. Placement Department Member marks Employee "reserved"
 - e. Placement Department Member creates unable-to-fill memo
 - f. Unable-to-fill memo is attached to staffing request
3. Make Arrangements with Employees and Clients
 - a. Arrangements Department Member marks Employee "placed"
4. Bill Clients
 - a. Arrangements Department Member creates Placement Fee Bill
 - b. Arrangements Department Member sets client of the Placement Fee Bill
 - c. Arrangements Department Member sets fee of Placement Fee Bill
 - d. Arrangements Department Member requests payment from Client

Non Functional Requirements:

1. Operational requirements
 - a. The system will be able to operate on any web browser
 - b. The system will integrate with the staffing databases and contract database
 - c. The system automatically reboots and backs up data daily
2. Performance requirements
 - a. The system is readily available 24/7
 - b. Response time is dependent on the contract manager
 - c. The system will store data into memory instantaneously

3. Security requirements
 - a. Access to initial staffing requests information is limited to PSSM's contract managers and existing clients
 - b. PSSM's staffing database information can only be viewed by their contract managers, placement departments and arrangement departments
4. Cultural and political requirements
 - a. The system will comply with all regulatory requirements. All information and client data will be stored securely

Functional User Stories

As a Client, I would like to be able to create a Staffing Request in the system so that I can receive employees.

As a Client, I would like to be able to ask the Contract Manager to assign employees so that my staffing request is filled.

As a Contract Manager, I would like to be able to get the contract number reference of staffing requests so that I can know the existing contract with which it is associated.

As a Contract Manager, I would like to be able to get the expiration of a contract so that I know if a staffing request is valid.

As a Contract Manager, I would like to be able to get the employees requested on a contract so that I know if a staffing request is valid.

As a Contract Manager, I would like to be able to get the negotiated fee range on a contract so that I know if a staffing request is valid.

As a Contract Manager, I would like to be able to get the requested qualifications on a staffing request so I know if a staffing request is valid.

As a Contract Manager, I would like to be able to get the requested fee on a staffing request so I know if a staffing request is valid.

As a Contract Manager, I would like to be able to get the requested employee type on a staffing request so I know if a staffing request is valid.

As a Contract Manager, I would like to be able to mark a staffing request as "valid" so that it may continue to be filled by PSSM.

As a Contract Manager, I would like to be able to mark a staffing request as “invalid” so that it can be closed and returned to the client.

As a Contract Manager, I would like to be able to close an open staffing request so that it is shown in the system to be done processing.

As a Contract Manager, I would like to be able to send a staffing request (with unable-to-fill memo attached, if any) back to the client so that they know its status.

As a Placement Department Member, I would like to be able to get an Employee’s type so that I can check it against the client’s staffing request.

As a Placement Department Member, I would like to be able to get an employee’s qualifications (including experience) so that I can check it against the client’s staffing request.

As a Placement Department Member, I would like to be able to get an employee’s availability so that I can check it against the client’s staffing request.

As a Placement Department Member, I would like to be able to mark an employee as “reserved” so that it can go on to be placed.

As a Placement Department Member, I would like to be able to create an unable-to-fill memo to signify that a staffing request could not be filled.

As a Placement Department Member, I would like to be able to attach an unable-to-fill memo to associate it with an unfillable staffing request.

As an Arrangements Department Member, I would like to be able to mark an Employee “placed” so that they can do a job for a client.

As an Arrangements Department Member, I would like to be able to create a Placement Fee Bill so that a client can be billed.

As an Arrangements Department Member, I would like to be able to set the client of a Placement Fee Bill so that the right client can be billed.

As an Arrangements Department Member, I would like to be able to set the fee of Placement Fee Bill so that the right amount can be paid and received.

As an Arrangements Department Member, I would like to be able to request payment from a client so that they may pay PSSM for its services.

Non Functional User Stories

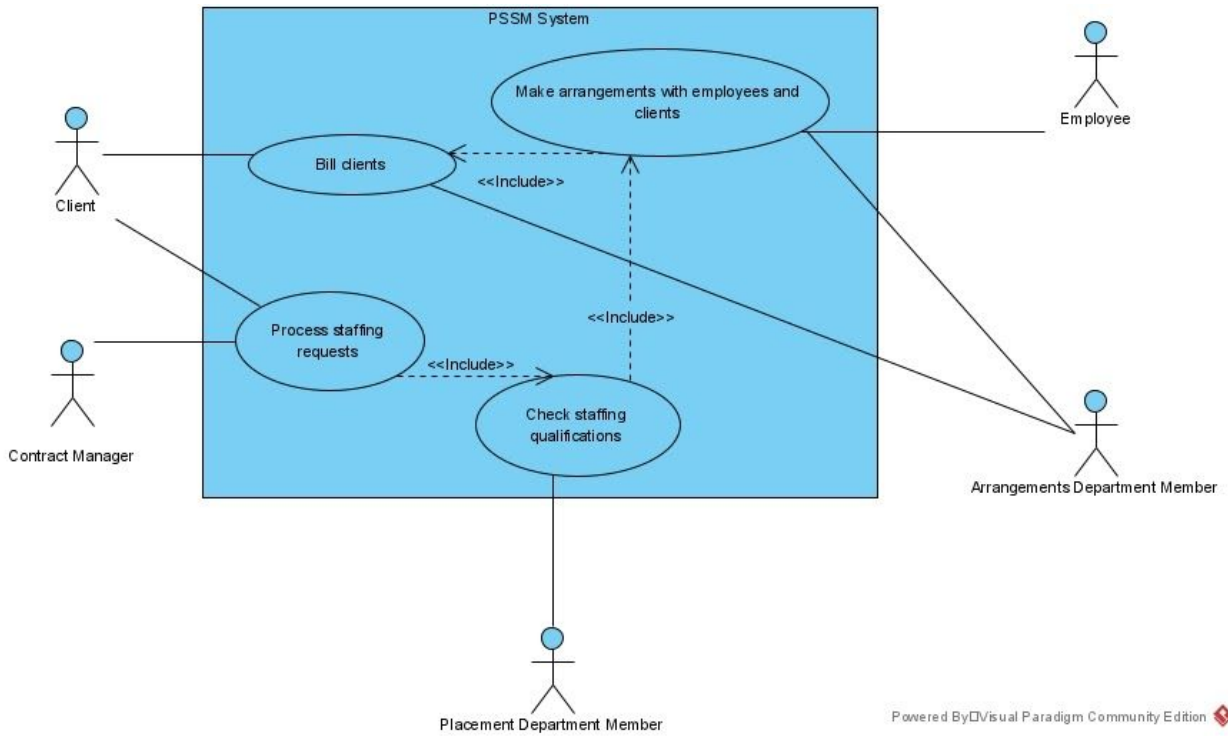
As an employee of PSSM, I want to ensure that our operating system works efficiently on every company computer and that the data reboots and updates daily to avoid delays.

As an employee of PSSM, I want to ensure that the system performance is up to date and working efficiently and effectively at all times so that we don't experience delays with clients.

As an employee of PSSM, I want to ensure the integrity and confidentiality of all our contracts and client information so that we can maintain credibility .

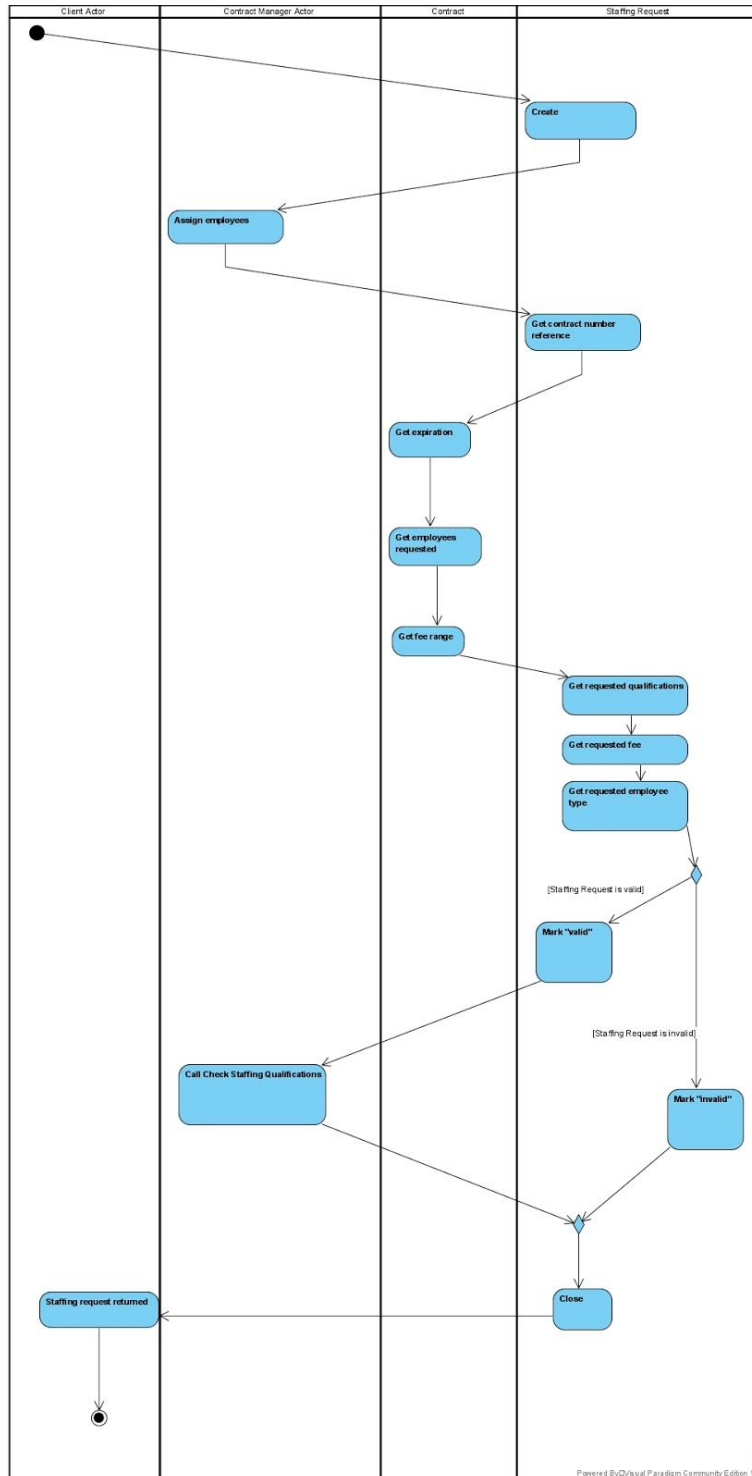
As an employee of PSSM, I want to ensure that we follow all regulations so that we can comply with all requirements of the law.

Use Case Diagram

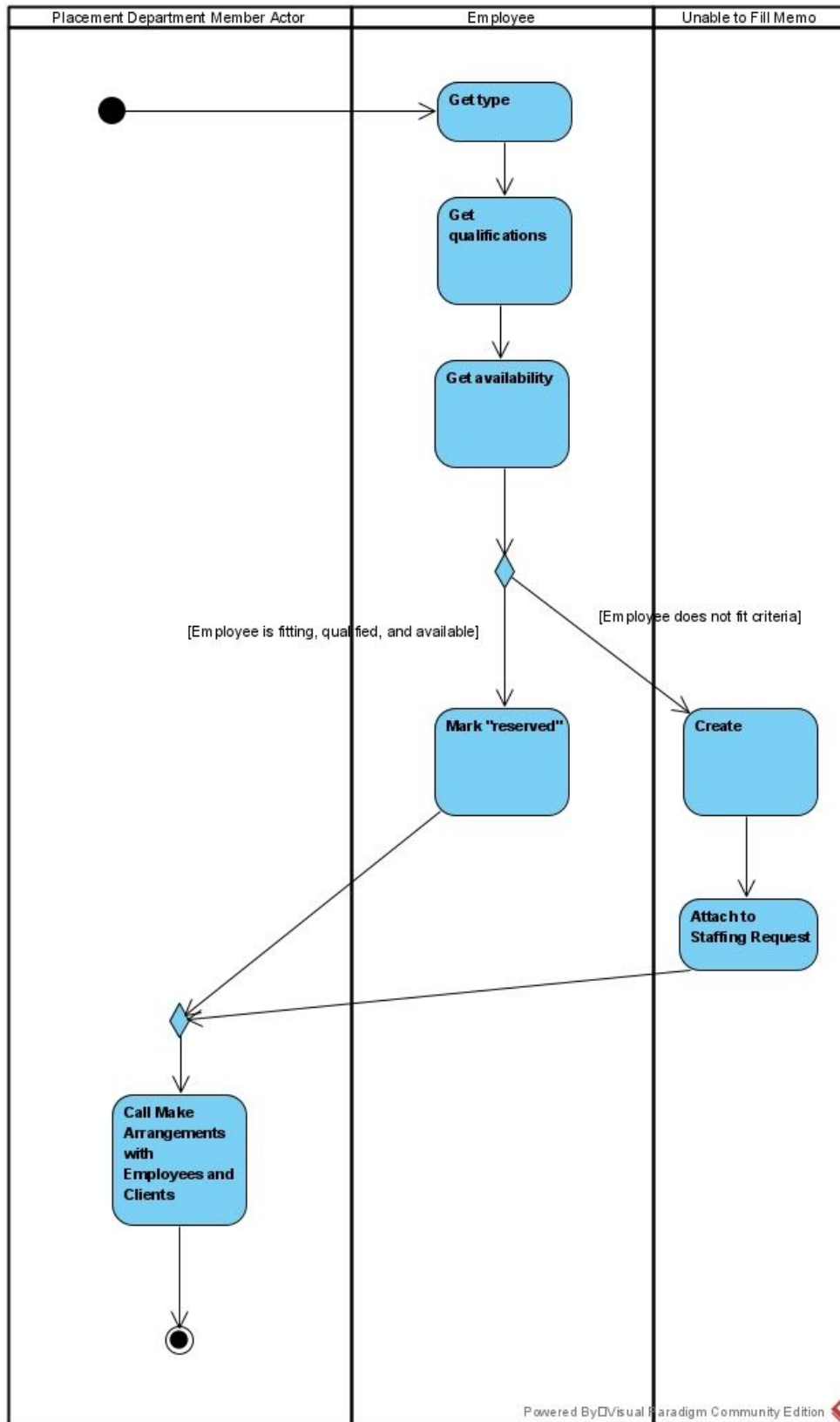


Activity Diagrams w/ Swim Lanes

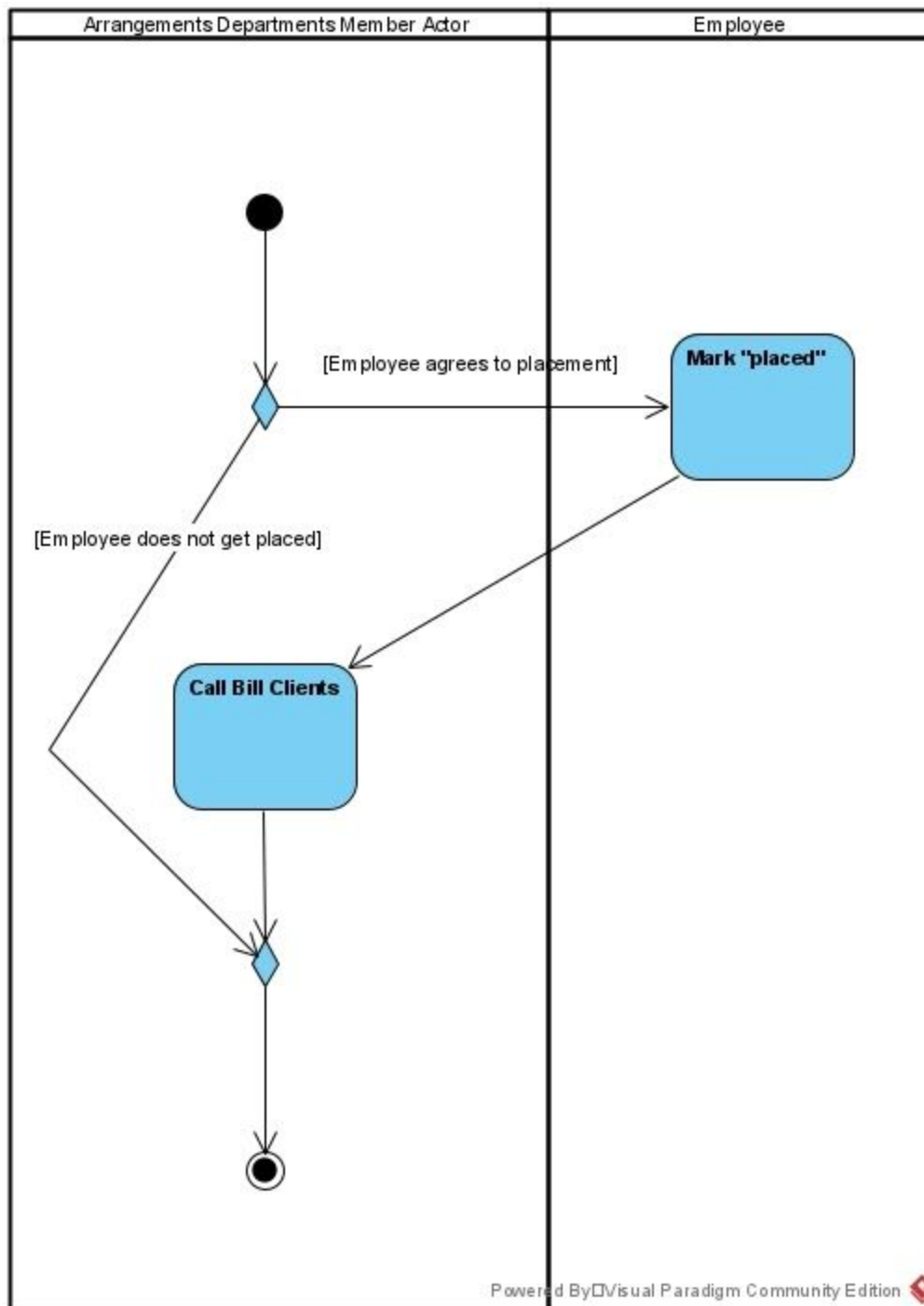
1. Process Incoming Staffing Requests



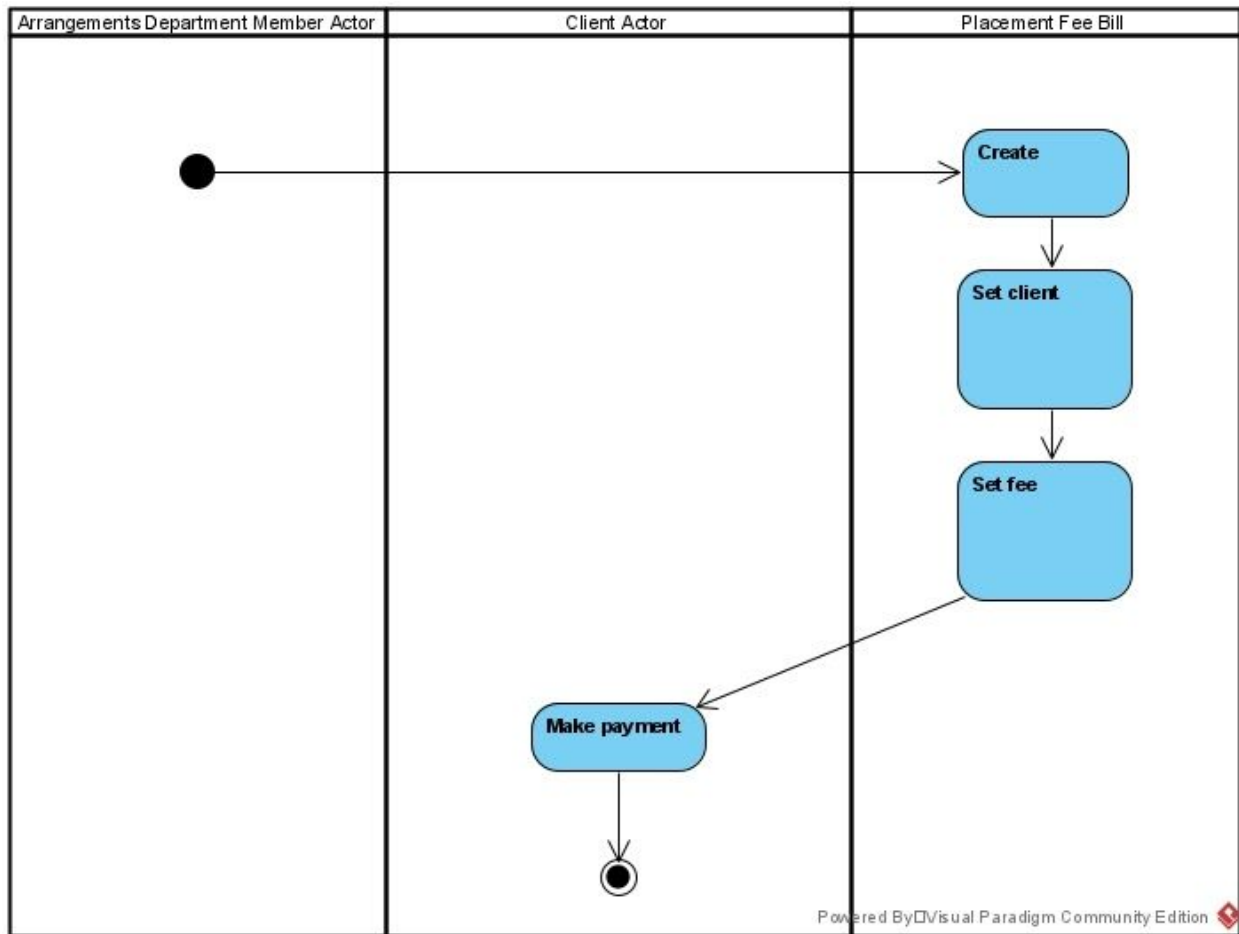
2. Check Staffing Qualifications



3. Make Arrangements with Employees and Clients



4. Bill Clients



Use Case Descriptions

Use Case Name: Process Staffing Requests		ID: 1	Importance Level: High
Primary Actor: Contract Manager		Use Case Type: Detailed, Essential	
Stakeholders and Interests: 1) Contract Manager 2) Client 3) Placement Department Member			
Brief Description: Client sends staffing request to Contract Manager who validates contracts.			
Trigger: Client creates staffing request Type: External			
Relationships: Association: Client, Contract Manager, Contract Include: Check staffing qualifications Extend: Generalization:			
Normal Flow of Events: 1. Client creates a Staffing Request in the system 2. Client asks Contract Manager to assign employees 3. Contract Manager gets contract number reference of staffing request 4. Contract Manager gets contract expiration 5. Contract Manager gets employees requested on contract 6. Contract Manager gets fee range on contract 7. Contract Manager gets requested qualifications on staffing request 8. Contract Manager gets requested fee on staffing request 9. Contract Manager gets requested employee type on staffing request 10. Contract Manager marks staffing request as "valid" 11. Call Check Staffing Qualifications 12. Contract Manager closes open staffing request 13. Staffing Request (with unable to fill memo attached, if any) is sent back to client			
SubFlows:			
Alternate/Exceptional Flows: 10a1: Contract Manager marks staffing request as "invalid" 10a2: Contract Manager closes open staffing request Return to normal flow at Step 13			

Use Case Name: Check Staffing Qualifications		ID: 2	Importance Level: High
Primary Actor: Placement Department Member		Use Case Type: Detailed, Essential	
Stakeholders and Interests: 1) Placement Department Member 2) Arrangements Department Member			
Brief Description: Placement Department Member receives staffing request, and checks for qualified employees			
Trigger: Contract manager calls Check Staffing Qualifications Type: External			
Relationships: Association: Placement Department Member, Arrangements Department Member Include: Make arrangements with employees and clients Extend: Generalization:			
Normal Flow of Events: 1. Placement Department Member gets an Employee's type 2. Placement Department Member gets Employee qualifications (including experience) 3. Placement Department Member gets Employee availability 4. Placement Department Member marks Employee "reserved" 5. Call Make Arrangements with Employees and Clients			
SubFlows:			
Alternate/Exceptional Flows: 4a1: Placement Department Member creates unable-to-fill memo 4a2: Unable-to-fill memo is attached to staffing request			

Use Case Name: Make Arrangements with Employees and Clients	ID: 3	Importance Level: High
Primary Actor: Arrangements Department Member	Use Case Type: Detailed, Essential	
Stakeholders and Interests: 1. Arrangements Department Member 2. Employee 3. Client 4. Contract Manager		
Brief Description: Arrangement Department Member receives staffing request and finalizes details with the client		
Trigger: Placement Department Member calls Make Arrangements with Employees and Clients Type: External		
Relationships: Association: Arrangements Department Member, Employee, Client, Contract Manager Include: Bill Clients Extend: Generalization:		
Normal Flow of Events: 1. Arrangements Department Member marks Employee "placed" 2. Call Bill Clients Use Case		
SubFlows:		
Alternate/Exceptional Flows: 1a1: Exit use case (return to Process Staffing Requests at Step 13)		

Use Case Name: Bill Clients	ID: 4	Importance Level: High
Primary Actor: Arrangements Department	Use Case Type: Detailed Essential	
Stakeholders and Interests: 1. Arrangements Department Member 2. Client 3. Contract Manager		
Brief Description: Arrangements sends bill for placement fee to client		
Trigger: Arrangements department member calls Bill Clients Type: External		
Relationships: Association: Arrangements Department Member, Client, Contract Manager Include: Extend: Generalization:		
Normal Flow of Events: 1. Arrangements Department Member creates Placement Fee Bill 2. Arrangements Department Member sets client of the Placement Fee Bill 3. Arrangements Department Member sets fee of Placement Fee Bill 4. Arrangements Department Member requests payment from Client		
SubFlows:		
Alternate/Exceptional Flows:		

CRC Cards

Front:

Class Name: Client	ID: 1	Type: Domain, concrete
Description: A business partner of PSSM looking for temporary employees		Associated Use Cases: Bill Clients
<u>Responsibilities</u>		<u>Collaborators</u>

Back:

Attributes: <u>Name (string)</u> <u>Contact information (string)</u> <u>Contract (string)</u>	
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <u>Staffing Request, Placement Fee Bill, Contract</u>	

Front:

Class Name: Contract	ID: 2	Type: Domain, concrete
Description: Negotiated agreement between client company and PSSM		Associated Use Cases: Process Staffing Requests
<u>Responsibilities</u> <u>Get expiration status</u> <u>Get employees requested</u> <u>Get fee range</u>		<u>Collaborators</u> <u>Contract Manager</u> <u>Contract Manager</u> <u>Contract Manager</u>

Back:

Attributes: <u>Client (string)</u> <u>Expiration Date (date)</u> <u>Type of Employees Requested (string)</u> <u>Fee Range (float)</u> <u>Reference Number (integer)</u> <u>Expired y/n (boolean)</u>	
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <u>Client, Staffing Request</u>	

Front:

Class Name: Employee	ID: 3	Type: Domain, concrete
Description: An employee who can possibly be staffed by PSSM for a client		Associated Use Cases: Make arrangements with employees and clients
<u>Responsibilities</u> <u>Marked "reserved"</u> <u>Marked "placed"</u> <u>Get type</u> <u>Get qualifications</u> <u>Get availability</u>		<u>Collaborators</u> <u>Placement Department Member</u> <u>Arrangements Department Member</u> <u>Placement Department Member</u> <u>Placement Department Member</u> <u>Placement Department Member</u>

Back:

Attributes: <u>Name (string)</u> <u>Type (string)</u> <u>Qualifications (string)</u> <u>Reserved y/n (boolean)</u> <u>Placed y/n (boolean)</u> <u>Considerable y/n (boolean)</u> <u>Availability (string)</u>	
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <u>Staffing Request</u>	

Front:

Class Name: Staffing Request	ID: 4	Type: Domain, concrete
Description: A document that represents a request by a client for staff		Associated Use Cases: Process staffing requests
<u>Responsibilities</u> <u>Create</u> <u>Get contract number reference</u> <u>Mark validity</u> <u>Close</u> <u>Get Requested qualifications</u> <u>Get Requested fee</u> <u>Get Requested employee type</u>		<u>Collaborators</u> <u>Client</u> <u>Contract Manager</u> <u>Contract Manager</u> <u>Contract Manager</u> <u>Contract Manager</u> <u>Contract Manager</u> <u>Contract Manager</u>

Back:

Attributes: <u>Contract reference number (integer)</u> <u>Client (string)</u> <u>Valid y/n (boolean)</u> <u>Unable-to-Fill Memo attached y/n (boolean)</u> <u>Open y/n (boolean)</u> <u>Requested qualifications (string)</u> <u>Requested fee (float)</u> <u>Requested employee type (string)</u>	
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <u>Client, Unable-to-Fill Memo, Employee, Contract</u>	

Front:

Class Name: Unable-to-Fill Memo	ID: 5	Type: Domain, concrete
Description: A document that signifies a staffing request is unable to be filled by PSSM		Associated Use Cases: Check staffing qualifications
Responsibilities <u>Create</u> <u>Attach to staffing request</u>		Collaborators <u>Placement Department Member</u> <u>Placement Department Member</u>

Back:

Attributes: <u>Attached to Staffing Request (boolean)</u>	
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <div> <u>Staffing Request, Placement Department Member,</u> <u>Arrangements Department Member, Contract Manager</u> </div>	

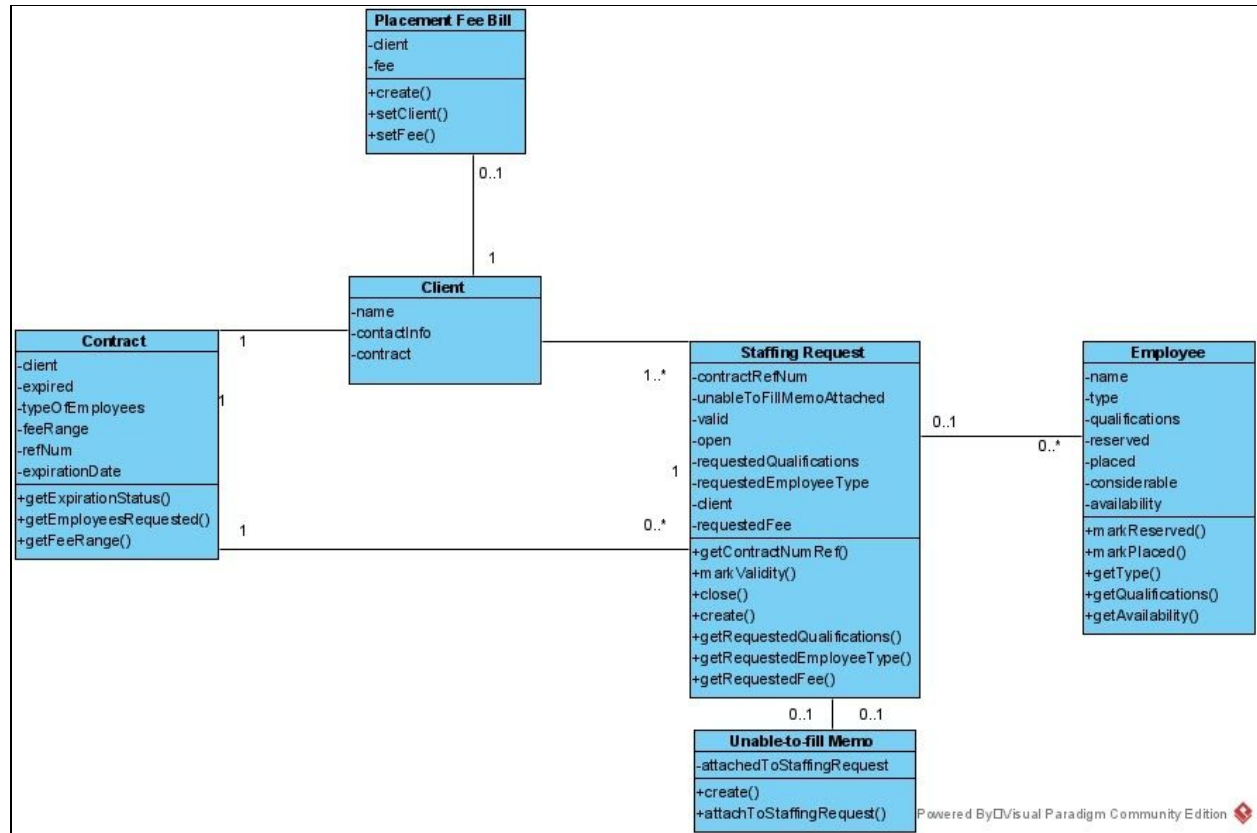
Front:

Class Name: Placement Fee Bill	ID: 6	Type: Domain, concrete
Description: Bill for placement		Associated Use Cases: Bill clients
Responsibilities <u>Create</u> <u>Set client</u> <u>Set fee</u>		Collaborators <u>Arrangements Department Member</u> <u>Arrangements Department Member</u> <u>Arrangements Department Member</u>

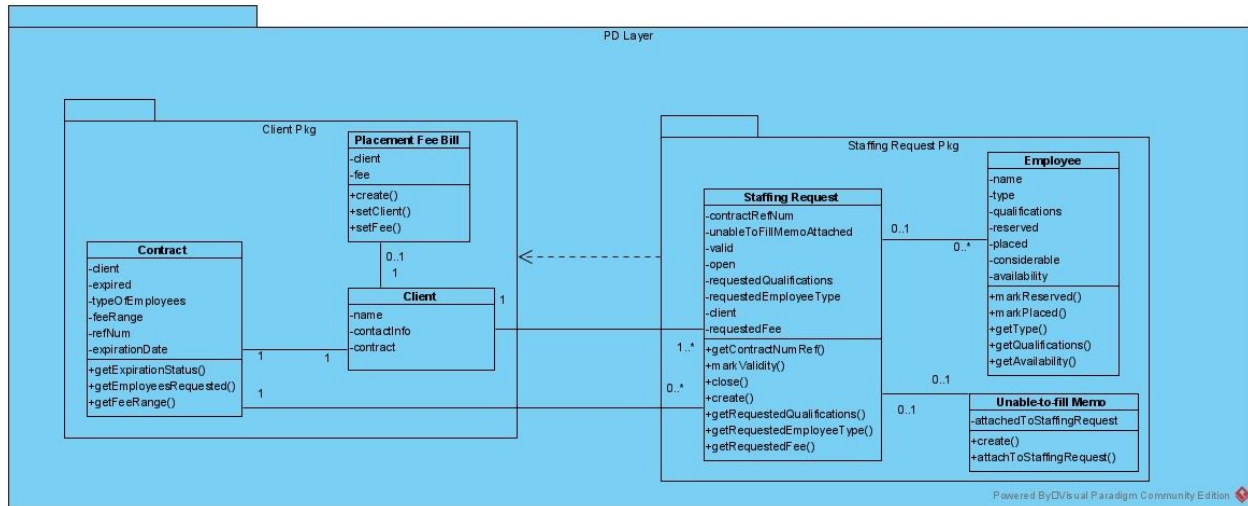
Back:

Attributes: <u>Client (string)</u> <u>Fee (float)</u>
Relationships: Generalization (a-kind-of): Aggregation (has-parts): Other Associations: <u>Client</u>

Class Diagram

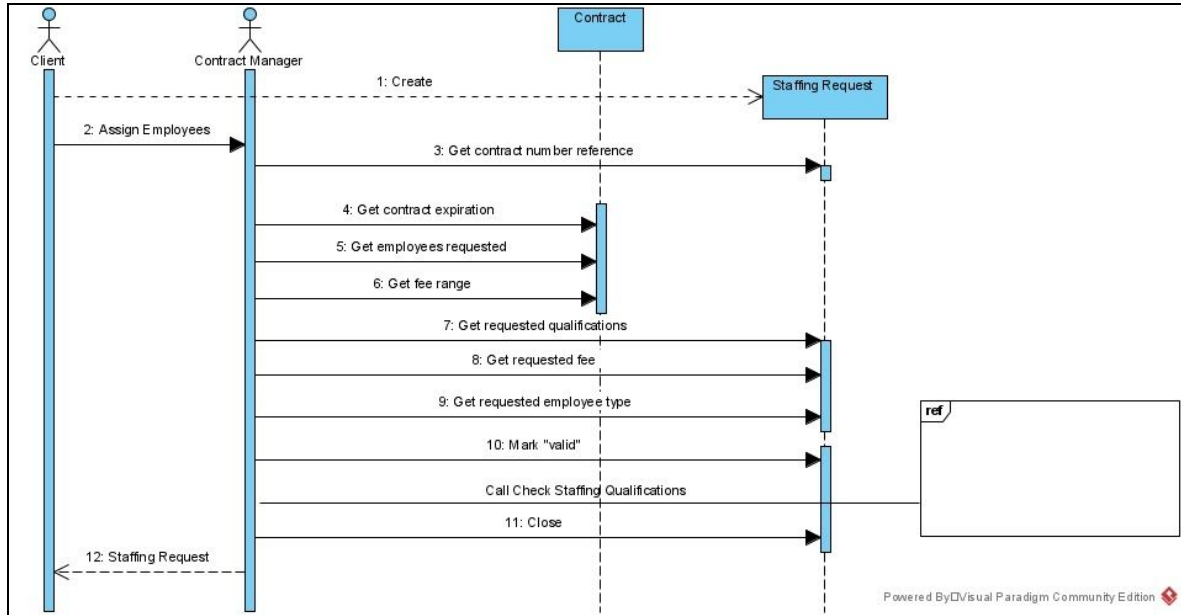


Package Diagram

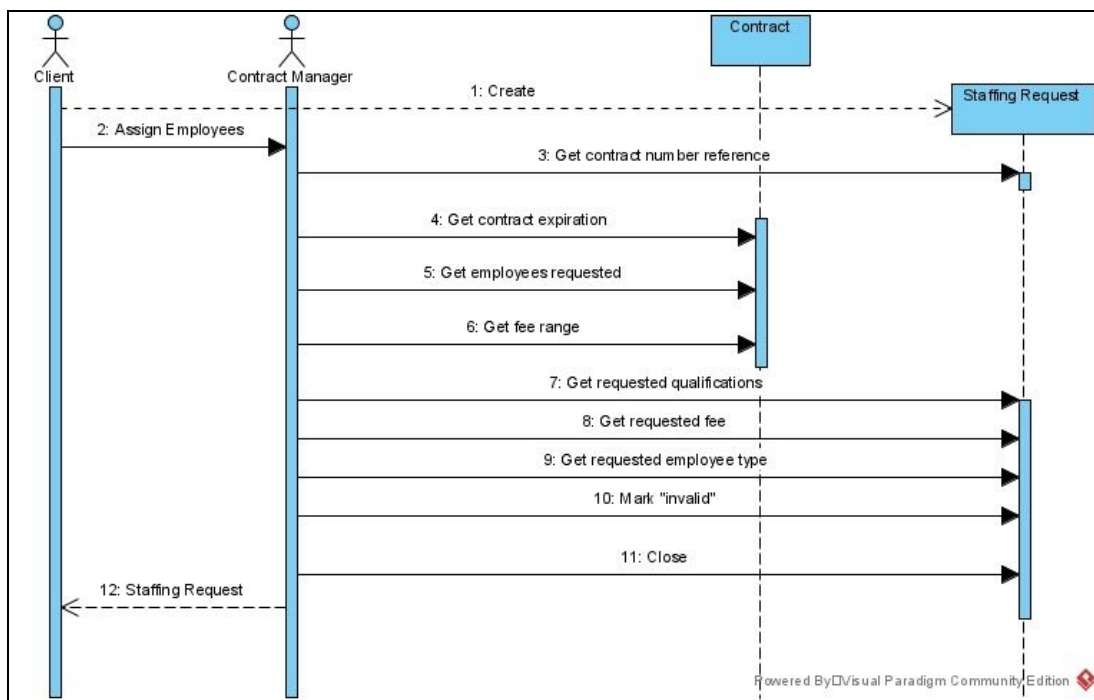


Sequence Diagrams

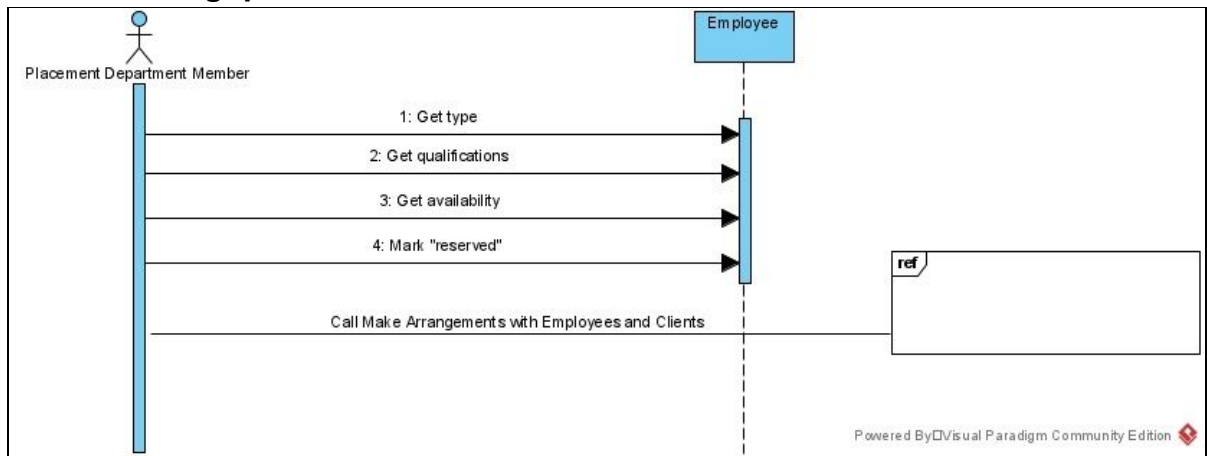
1. Process staffing requests 1



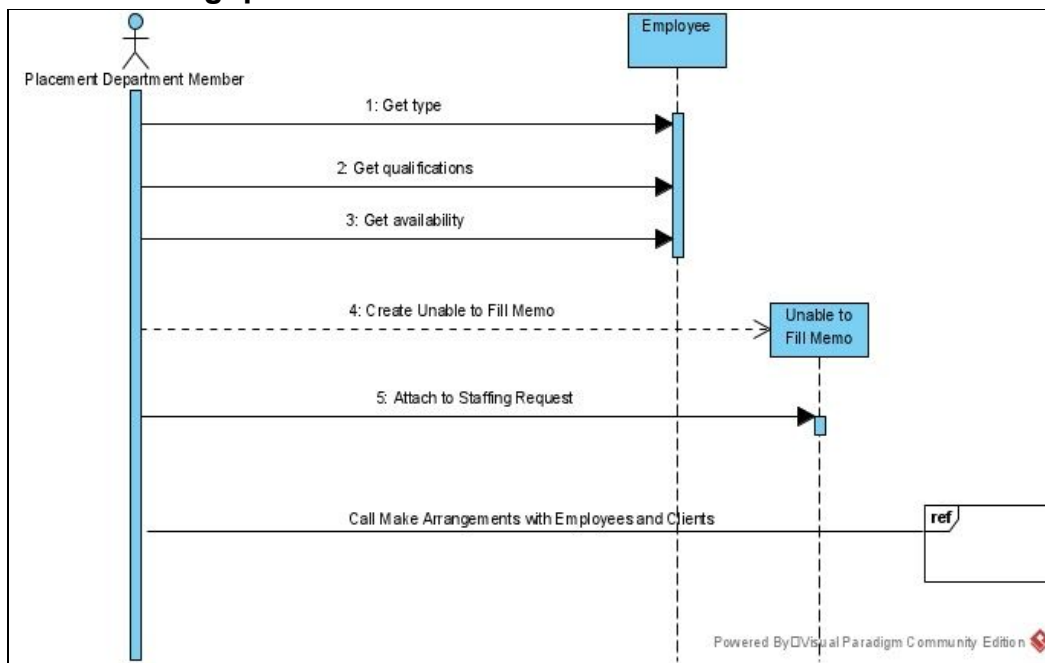
2. Process staffing requests 2



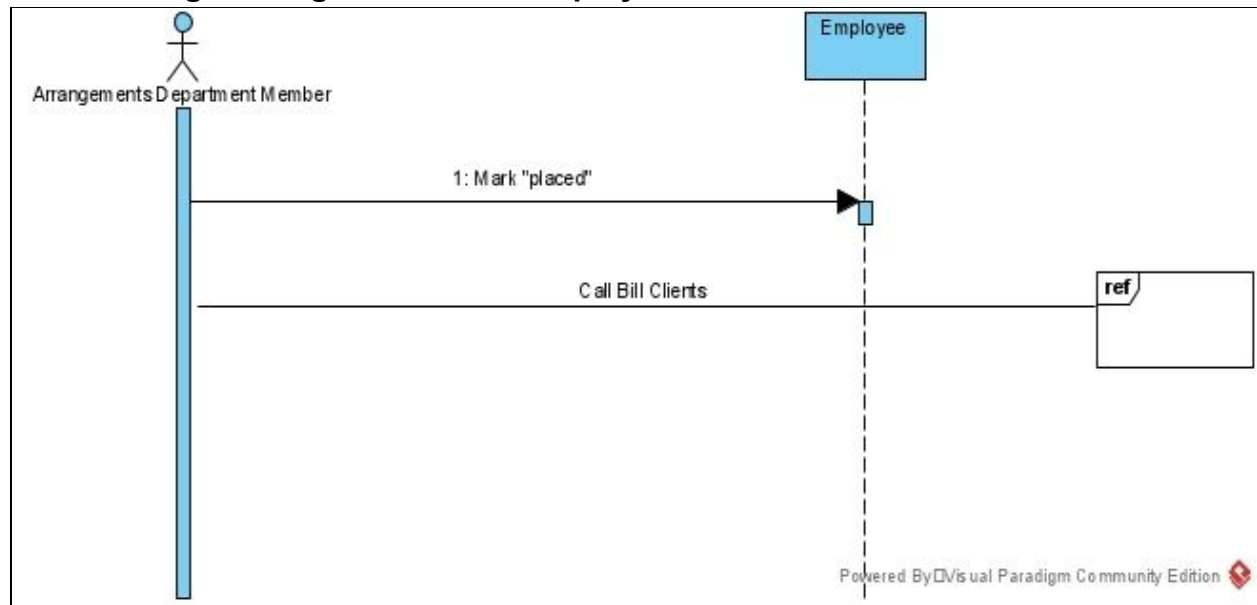
3. Check staffing qualifications 1



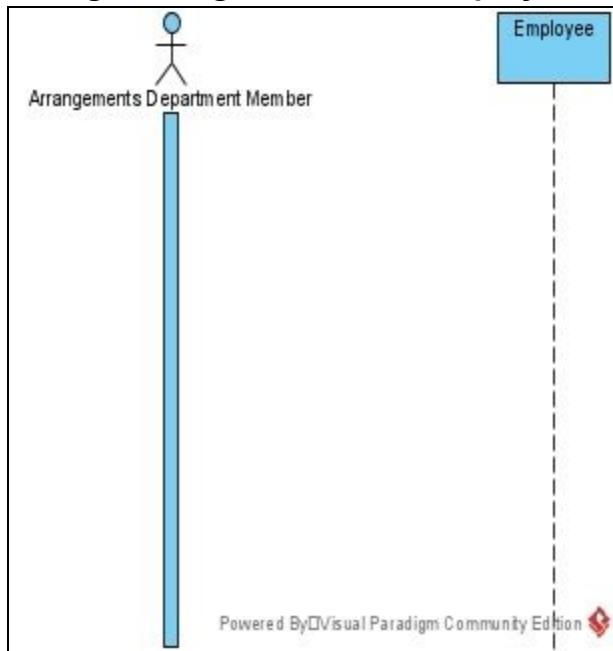
4. Check staffing qualifications 2



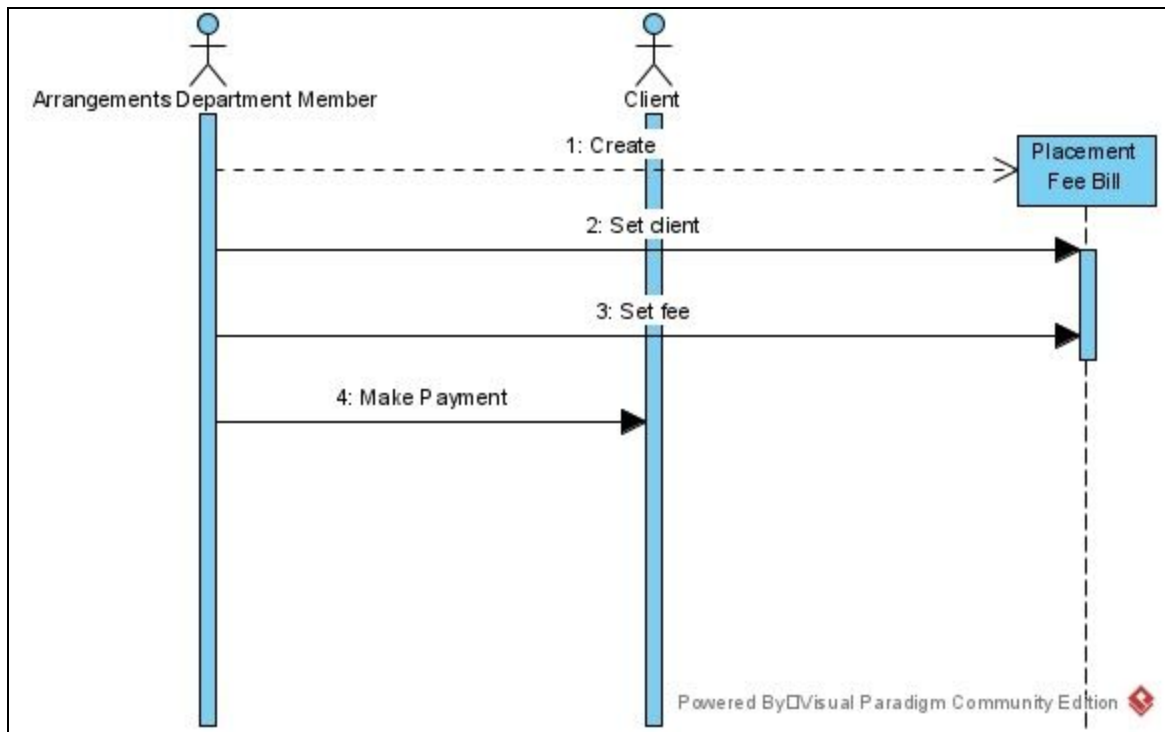
5. Manage arrangements with Employees and Clients 1



6. Manage arrangements with Employees and Clients 2



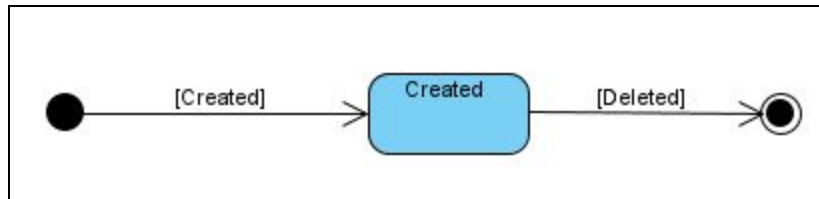
8. Bill Clients



[illegible]

Behavior State Machine Diagrams

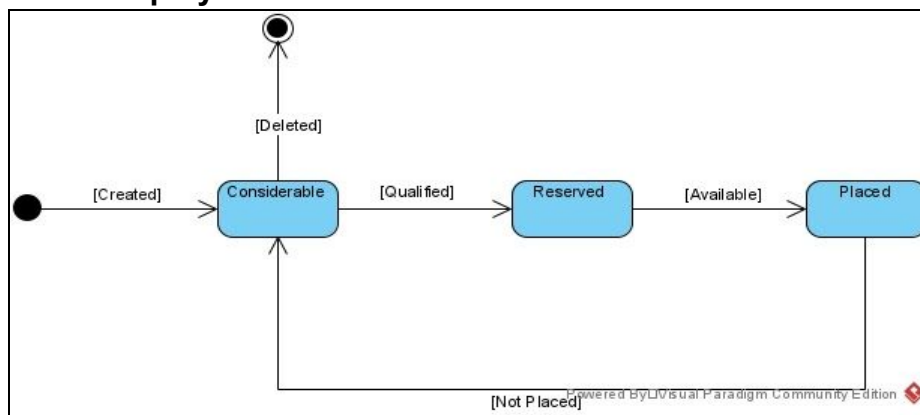
1. Client



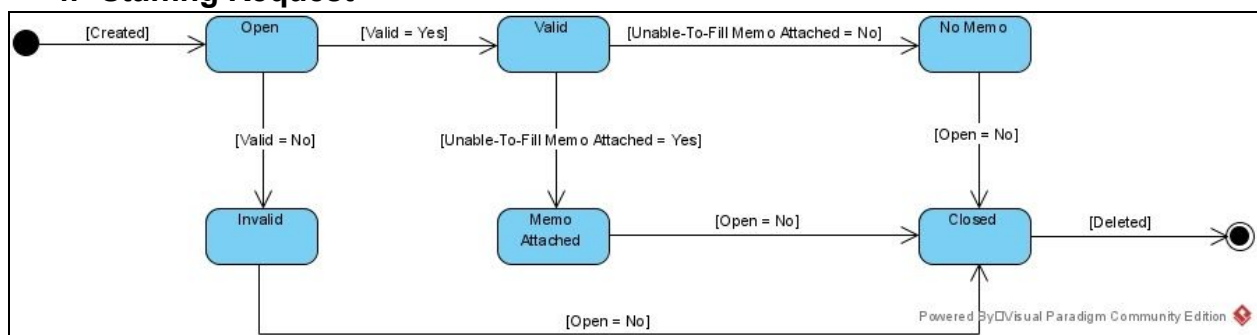
2. Contract



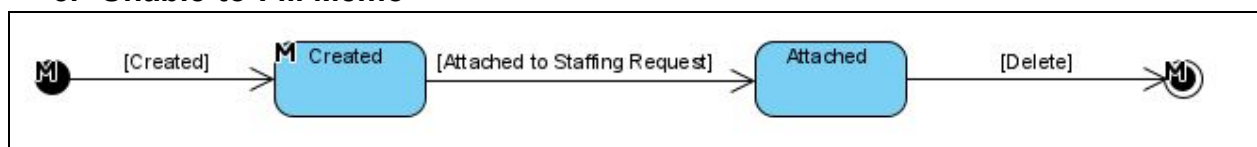
3. Employee



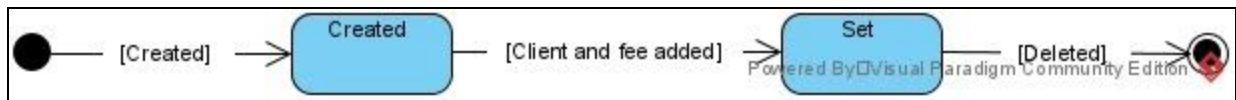
4. Staffing Request



5. Unable-to-Fill Memo



6. Placement Fee Bill



Assumptions

1. Assuming all communications between actors happen outside of system (sending documents between departments, contacting employees to agree to placement, communicating with client via letters)
2. Assuming “filing documents” happens outside the system or, in other words, involves *physically* filing something in an office (ex. Contract manager files staffing request in contract office)
3. Assuming that, if the staffing request is not filled for *any reason*, it is always sent back to the client at the end of the process
4. Assuming that the staffing request is always closed by the contract manager whether it is filled or unfilled
5. Assuming that the client can access the system to create a new staffing request
6. Assuming that the Employee gets recycled within the job system database after it has completed one job
7. An employee’s “qualifications” also includes his “experience”
8. Assuming the attribute “Availability” in the Employee class is a range is availability of dates
9. Assuming the client is existing already in the system and has provided their name and contact information

Meeting Agenda/Reporting Form

Group Number/Name: 4

Location: Zoom

Date: 9/30/20
pm

Start Time: 12pm

End Time: 12:30

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec VanLandingham, Joe Bird, Mustafa Khan, Maliha Jahan, Nick Jiang

Purpose: (Overview description)

Project overview, progress report 1 discussion, delegation of work

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Establish goals for progress report 1

B. Delegate work

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. Description:

Decide what to do for progress report 1

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Project instructions

d. Estimated amount of meeting time to be devoted to this goal: 10 min

e. Determine action items:

What	Who	By When
Decide which items to complete for progress report 1	All	9/30

Goal B (Do this for each major goal):

a. Description:

Decide who does which piece of work for progress report 1

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Project instructions

d. Estimated amount of meeting time to be devoted to this goal: 10 min**e. Determine action items:**

What	Who	By When
Decide who will complete which items for progress report 1	All	9/30

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We did an overview of the project requirements together and decided that we should complete parts C and D by Wednesday, October 8 to submit for progress report 1. We decided to each individually create a rough draft of the functional requirements, non-functional requirements, and user stories before Friday, October 2, and as a group combine them and decide on a final version of all of them. Then we decided to each begin working on the requirements for part D early next week and meet next Wednesday to put together our final versions of everything for parts C and D before the first progress report is due.

Unresolved Issues: (List problems and issues that hinder your progress.)

We are not sure exactly what is required for the progress reports, but we decided it would be best to keep up with the class, at least.

Meeting Agenda/Reporting Form

Group Number/Name: 4

Location: Zoom

Date: 10/7/20

Start Time: 12pm

End Time: 1pm

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec VanLandingham, Joe Bird, Maliha Jahan

Purpose: (Overview description)

Finalize use case diagram, begin work on activity diagrams

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Finalize use case diagram

B. Begin work on activity diagrams

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. Description:

Finalize use case diagram

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Individually create a use case diagram draft

d. Estimated amount of meeting time to be devoted to this goal: 10 min

e. Determine action items:

What	Who	By When
Determine how many use cases	All	10/7
Determine what the use cases are	All	10/7

Goal B (Do this for each major goal):

a. Description:

Begin work on activity diagrams

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by

participants before the meeting)

Project instructions

d. **Estimated amount of meeting time to be devoted to this goal: 10 min**

e. **Determine action items:**

What	Who	By When
Complete the first few activity diagrams	All in meeting	10/7

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We met to merge our use case diagrams and create a final version. We decided on a use case diagram with 4 use cases. We then set to complete some of the activity diagrams for the use cases, and managed to finish 3 of them.

Unresolved Issues: (List problems and issues that hinder your progress.)

We still have one more use case diagram to complete and we need to make sure our functional requirements and activity diagrams match up.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: Zoom

Date: 10/21/2020
12:30PM

Start Time: 12:00PM **End Time:**

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Maliha Jahan

Joe Bird

Alec VanLandingham

Nick Jiang

Purpose: (Overview description)

Progress report 2 discussion, progress report 1 updates, and delegation of work.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Check and update progress report 1 deliverables

B. CRC Card and Class Diagram Discussion

C. Delegate Work

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. Description:

Read comments about progress report 1 and

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Progress Report 1 Comments

d. Estimated amount of meeting time to be devoted to this goal: 10 min

e. Determine action items:

What	Who	By When
Check and update progress report 1 deliverables	All	10/22
Ask about calling optional use cases in class	All	10/22

Goal B (Do this for each major goal):

a. Description:

Talked about what classes are needed, the relationships between the classes, and brainstormed attributes.

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Use Case Diagram and Activity Diagrams

d. Estimated amount of meeting time to be devoted to this goal: 10 min

e. Determine action items:

What	Who	By When
Take notes on what classes are needed	All	10/22

Goal C (Do this for each major goal):

a. Description:

Begin working on CRC Cards individually

b. Responsible Member: All

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

Use Case Diagram, Activity Diagrams, Project Overview

d. Estimated amount of meeting time to be devoted to this goal: 10 min

e. Determine action items:

What	Who	By When
Make draft of CRC Cards for all possible classes	All	10/28

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

During this meeting, we talked about the comments we received for our deliverables in progress report 1. We reviewed our use case and activity diagrams based on that comment and decided to ask Professor Tegarden in class on Thursday, October 22, about calling optional use cases. We discussed which classes should be created for the CRC cards and class diagrams and took notes on that. Lastly, we assigned everyone to fill out CRC cards individually based on the classes we decided to make. This is due next Wednesday, October 28.

Unresolved Issues: (List problems and issues that hinder your progress.)

We will ask about calling optional use cases in class on Thursday, October 22. We are not sure what the comment means by this and couldn't find anything in the textbook.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: Zoom

Date: 10/28/2020

Start Time: 12:00PM

End Time: 1:00 PM

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Maliha Jahan

Joe Bird

Alec VanLandingham

Nick Jiang

Purpose: (Overview description)

Progress report 2 discussion, progress report 1 updates, CRC cards discussion, and creating the class diagram.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

A. V&V and Update Functional Model

B. CRC Card Discussion

C. Draft Class Diagram

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. **Description:**

Go through the functional model to verify and validate. Updated the use case diagram association lines and use case descriptions.

b. **Responsible Member:** All

c. **Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting)

Progress Report 1 Comments

d. **Estimated amount of meeting time to be devoted to this goal:** 10 min

e. **Determine action items:**

What	Who	By When
V&V Functional Model	All	10/28
Update use case diagram	All	10/28
Update use case descriptions	All	10/28

Goal B (Do this for each major goal):**a. Description:**

Discussed which CRC cards should be created and finalized them after comparing all of our drafted CRC cards. Talked about what attributes, responsibilities, collaborators, and associations each class had.

b. Responsible Member: All**c. Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting)

Draft CRC cards based on brainstormed classes

d. Estimated amount of meeting time to be devoted to this goal: 30 min**e. Determine action items:**

What	Who	By When
Finalize CRC cards	All	10/28

Goal C (Do this for each major goal):**a. Description:**

Started creating the class diagram based on the CRC cards we developed.

b. Responsible Member: All**c. Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting)

Drafted CRC cards

d. Estimated amount of meeting time to be devoted to this goal: 20 min**e. Determine action items:**

What	Who	By When
Create class diagram	All	10/28

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

During this meeting, we verified and validated the functional model and updated any changes that were brought up. We updated the use case diagram association lines and the use case description to address the billing clients feedback we received. After, we

went through our drafted CRC cards and talked about which classes should be created, those classes' attributes, responsibilities, collaborators, and associations. We finalized our CRC cards and then started creating the class diagram. We will finish the class diagram during class tomorrow (10/29).

Unresolved Issues: (List problems and issues that hinder your progress.)

Ask the professor about what exactly determines the creation of a class for a CRC card and ask for feedback.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: Zoom

Date: 11/4/2020

Start Time: 12:00PM

End Time: 12:45PM

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Joseph Bird, Maliha Jahan, Nick Jiang, Mustafa Khan, Alec VanLandingham

Purpose: (Overview description)

Go through the deliverables for Progress Report 3

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Create activity diagram for behavioral model

3. Summarize Meeting Accomplishments

We thought it would be most beneficial to create an activity table like the one done in the OTMC answers file, to help us formulate the activity diagram with swim lanes

Goal A (Do this for each major goal):

a. **Description:** Create activity diagram for behavioral model

b. **Responsible Member:** All members

c. **Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting). **Read Chapter 6**

d. **Estimated amount of meeting time to be devoted to this goal:** 45 minutes

e. **Determine action items:**

What	Who	By When
Develop activity table	Group effort	Finished

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

Group successfully developed an activity table that cleared up any confusion that will also be used for the behavioral model deliverables. Also found association errors in our CRC cards and made many corrections.

Unresolved Issues: (List problems and issues that hinder your progress.)

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 11/11/2020

Start Time: 12:00pm

End Time: 1:00pm

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec VanLandingham, Joe Bird, Maliha Jahan

Purpose: (Overview description)

To go over Progress report 2 comments and make fixes. To discuss the swimlanes, sequence diagrams, behavioral state machines and V&V for progress report 3.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

A. Discuss progress report 2 comments

B. V&V for crc cards and diagrams

C. create swimlanes

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. **Description:** go through each comments left for progress report and review what needs to be changed for progress report 3

b. **Responsible Member:** ALL

c. **Required preparation before meeting:** Progress report 2 comments

(List any materials and their location that should be reviewed by participants before the meeting)

d. **Estimated amount of meeting time to be devoted to this goal:** 10 mins

e. **Determine action items:**

What	Who	By When
Update activity diagram	Alec, Joe, Maliha	11/11/20
Update CRC cards	Alec, Joe, Maliha	11/11/20
Update structural model	Alec, Joe, Maliha	11/11/20

Goal B (Do this for each major goal):

a. **Description:** V & V to our activity diagram, crc cards, and structural model

b. **Responsible Member:** ALL

c. **Required preparation before meeting: Progress report 2 comments**
(List any materials and their location that should be reviewed by participants before the meeting)

d. **Estimated amount of meeting time to be devoted to this goal: 10 mins**

e. **Determine action items:**

What	Who	By When
V&V activity diagram	ALL	11/11/20
V&V CRC cards	ALL	11/11/20
V&V structural model	ALL	11/11/20

Goal C (Do this for each major goal):

a. **Description:** create activity diagrams with swimlanes

b. **Responsible Member:** ALL

c. **Required preparation before meeting: updated activity diagram**
(List any materials and their location that should be reviewed by participants before the meeting)

d. **Estimated amount of meeting time to be devoted to this goal:**
40 mins

e. **Determine action items:**

What	Who	By When
Create swimlanes for each case	ALL	11/11/20

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

During this meeting we reviewed each comment and discussed our mistakes in our new draft for progress report 3. After that, we made changes for the V&V for the crc cards where we made fixed the alignment of the responsibilities and collaborations. We also fixed the activity diagrams and removed database from each one. Lastly, we started on making the swimlanes for each case and was able to create 2 of them. We will finish up the rest of the swimlanes in class tomorrow 11/12/20. If time permits we will also pick up the sequence diagram tomorrow in class otherwise in the next meeting.

Unresolved Issues: (List problems and issues that hinder your progress.)

Ask for feedback in class if we are doing the swimlanes correctly.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: Zoom

Date: 11/16/2020

Start Time: 12:00PM

End

Time: 1:00PM

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Joe Bird

Maliha Jahan

Nick Jiang

Mustafa Khan

Alec VanLandingham

Purpose: (Overview description)

Work on behavioral model deliverables for progress report 3

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Complete Sequence Diagrams, Complete CRUDE Matrix

3. Summarize Meeting Accomplishments

Collectively worked on Sequence Diagrams and Crude Matrix over zoom call

Goal A (Do this for each major goal):

a. Description: Worked through sequence diagram

b. Responsible Member: Everyone

c. Required preparation before meeting:

(List any materials and their location that should be reviewed by participants before the meeting)

N/A

d. Estimated amount of meeting time to be devoted to this goal: 1 hour

e. Determine action items:

What	Who	By When
Complete all Sequence Diagrams	Joe, Alec, Nick, Maliha	11/16
Complete Crude Matrix	All	11/16

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

During this meeting, we created each sequence diagram for each activity diagram path. Group members asked questions and we completed all diagrams together. We then went through each sequence diagram to develop our overall Crude Matrix.

Unresolved Issues: (List problems and issues that hinder your progress.)

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 11/18/2020

Start Time: 12:00pm

End Time: 1:00pm

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Nick J., Maliha J., Mustafa K.

Purpose: (Overview description)

To get the swimlane diagrams sorted out, and make fixes to the activity diagrams. We created the behavioral state machines and discussed V&V plans.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

A. Discuss activity diagram fixes and behavioral state machine

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

a. **Description:**

-Discuss activity diagram changes

-Make behavioral state machine diagram

b. **Responsible Member:** All

c. **Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting)

N/A

d. **Estimated amount of meeting time to be devoted to this goal:** 60min

e. **Determine action items:**

What	Who	By When
Make changes to activity diagram	ALL	11/18
Complete behavioral state machine diagram	ALL	11/18

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables)

or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

Based on the comments that were made about the activity diagram on 11/17 in class, changes were made to the activity diagram (by Alec). During our meeting, we looked at the changes that were made as a group and evaluated what we agreed was right and what could be changed. We then changed up the swimlanes so that the diagrams all matched each other. After, we started on the behavioral state machine we discussed and finished all the diagrams. We wrote assumptions and planned on taking notes for tomorrow's class to finalize and do V&V (for 11/19).

Unresolved Issues: (List problems and issues that hinder your progress.)

N/A

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 11/19/2020

Start Time: 4:00pm

End Time: 5:30pm

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Nick J., Maliha J., Mustafa K.

Purpose: (Overview description)

Continue initial V&V and balancing of the entire project, finalize progress report 3.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

Goal A: Complete major steps of V&V and Balancing

Goal B: Finalize Progress Report 3

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

f. **Description:**

Complete “big picture” verification and validation and balancing of all models (worry about small details before final submission)

g. **Responsible Member:** All

h. **Required preparation before meeting:**

(List any materials and their location that should be reviewed by participants before the meeting)

Preliminary viewing of V&V/Balancing steps.

i. **Estimated amount of meeting time to be devoted to this goal:** 60min

j. **Determine action items:**

What	Who	By When
Look over V&V/Balancing steps and pick out big changes to be made	ALL	11/19
Make changes as needed	ALL	11/19

Goal B (Do this for each major goal):

k. Description:**Paste all diagrams into Progress Report 3 Google Doc****l. Responsible Member: All****m. Required preparation before meeting:**

N/A

n. Estimated amount of meeting time to be devoted to this goal: 60min**o. Determine action items:**

What	Who	By When
Paste all diagrams into document	ALL	11/19
Ensure consistency of diagrams and use-case descriptions/CRCs	ALL	11/19

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We made several “big picture” edits to the project and finalized the third progress report to be turned in. We feel we got to a place where the only things left to be changed are small details that we will find later on when we go through the V&V and Balancing process more times with a fine-toothed comb.

Unresolved Issues: (List problems and issues that hinder your progress.)

There are most likely more changes to be made which are smaller, harder to find details.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 12/2/2020

Start Time: 12:00pm

End Time: 12:20pm

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Nick J., Maliha J.

Purpose: (Overview description)

Review comments on Progress Report 3 and determine next steps

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

Goal A: Determine action plan to finish the project

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

p. **Description:**

Review comments from professor on Progress Report 3 and determine next steps

q. **Responsible Member:** All

r. **Required preparation before meeting:**

Review comments on Progress Report 3

s. **Estimated amount of meeting time to be devoted to this goal:** 20min

t. **Determine action items:**

What	Who	By When
Look over comments	ALL	12/2
Make plan	ALL	12/2

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We looked at the comments from the professor on Progress Report 3 and determined that the best course of action would be to visit office hours. The changes being asked to be made by the professor would require a major overhaul of the entire project, so we wanted to be sure before undertaking that level of editing. We decided to end the meeting and join the TA's office hours in the evening

Unresolved Issues: (List problems and issues that hinder your progress.)

Our main issues dealt with the difference between actors and classes and how to handle messages between them. For example should a message between actors without classes associated with them exist if there are no operations to associate with it?

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 12/2/2020

Start Time: 6:00pm

End Time: 6:30

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Mustafa K.

Purpose: (Overview description)

Use information from TA to make necessary changes.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

Goal A: Make changes to class diagram and sequence diagrams

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

u. **Description:**

Use suggestions given by the TA from his office hours and implement them in the class diagram and sequence diagrams

v. **Responsible Member:** All

w. **Required preparation before meeting:**

Visit TA Marcus Taylor's office hours

x. **Estimated amount of meeting time to be devoted to this goal:** 30min

y. **Determine action items:**

What	Who	By When
Make changes to class diagram to show subclasses and superclass	ALL	12/2
Make changes to sequence diagram based on changes to class diagram	ALL	12/2

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We visited TA Marcus Taylor's office hours and asked him questions about comments given by the professor on our third progress report. He suggested implementing a "staff member" superclass with generalization relationships to each of the 3 types of staff members. We also added a "contract" class which took some attributes previously associated with the Staffing Request class. Lastly, we updated the sequence diagrams to match the changes we made to the class diagram. We plan to visit Prof. Tegarden's office hours tomorrow to show him the changes we made.

Unresolved Issues: (List problems and issues that hinder your progress.)

Still unsure of whether we are on the right track in general.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 12/5/2020

Start Time: 11:30pm

End Time: 3:20

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Mustafa K., Maliha J., Nick J. (after 1:30)

Purpose: (Overview description)

Use information from the Professor to review and fix all diagrams including creating the package diagram.

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. List Major Goals:

Goal A: Rework and check entire project

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

z. Description:

Use suggestions given by the Professor from his office hours and implement them in reconstructing the project diagrams from the ground up.

aa. Responsible Member: All

bb. Required preparation before meeting:

Review project big picture

cc. Estimated amount of meeting time to be devoted to this goal: 1:30 hours

dd. Determine action items:

What	Who	By When
V&V Case descriptions with activity diagram	ALL	12/5
V&V/Create sequence diagrams	ALL	12/5
V&V/Create behavior state machine	ALL	12/5
Create Package diagram	ALL	12/5

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

Alec visited the professor's office hours and asked him questions about the fundamental creation of the project so far and to show the changes we implemented following the TA's advice. Per the professor's advice, we reworked a majority of the project from the start to ensure that everything was properly balanced and verifiable. This included CRC cards, case descriptions, activity diagrams, sequence diagrams, and behavior state machines. Additionally, we completed the last of our diagrams (Package diagram), and have a draft of our executive summary under review.

Unresolved Issues: (List problems and issues that hinder your progress.)
Most, if not all, issues are resolved and the project is nearing completion.

Meeting Agenda/Reporting Form

Group Number/Name: Group 4

Location: zoom

Date: 12/6/2020

Start Time: 1:00pm

End Time: 2:30

Attendees: (List the persons at the meeting – not everyone needs to attend every meeting.)

Alec V., Joe B., Mustafa K., Maliha J.

Purpose: (Overview description)

V&V, Balance, user stories, and finalize project

Agenda: (What are you planning to do in this meeting – Keep it short and focused on the topic)

1. Announcements and any results/updates regarding previous meeting

2. **List Major Goals:**

Goal A: V&V, Balance, and Finalize Project

3. Summarize Meeting Accomplishments

Goal A (Do this for each major goal):

ee. Description:

Go through all Verification, Validation, and Balancing steps from the textbook to check through our entire project. Format and submit the project.

ff. Responsible Member: All

gg. Required preparation before meeting: Read through V&V/Balancing steps carefully

Review project big picture

hh. Estimated amount of meeting time to be devoted to this goal: 1:30 hours

ii. Determine action items:

What	Who	By When
V&V/Balance entire project	ALL	12/6
Format document for submission	ALL	12/6
Submit	ALL	12/6

Accomplishments of Meeting: (A paragraph or two that relates what happened at the meeting – may include lists of key points discussed, decisions made, and deliverables or action items worked. Take notes during the meeting, write the description immediately after the meeting.)

We did one last passthrough of the Verification and Validation steps before loading all diagrams into the final document for submission. We finalized the extra aspects to the project including the executive summary and the table of contents. Lastly, we submitted.

Unresolved Issues: (List problems and issues that hinder your progress.)