

Software Architecture Design Specifications
For
CAIS

CSC 470 Fall 2022

Team Members:

Bryce Herring

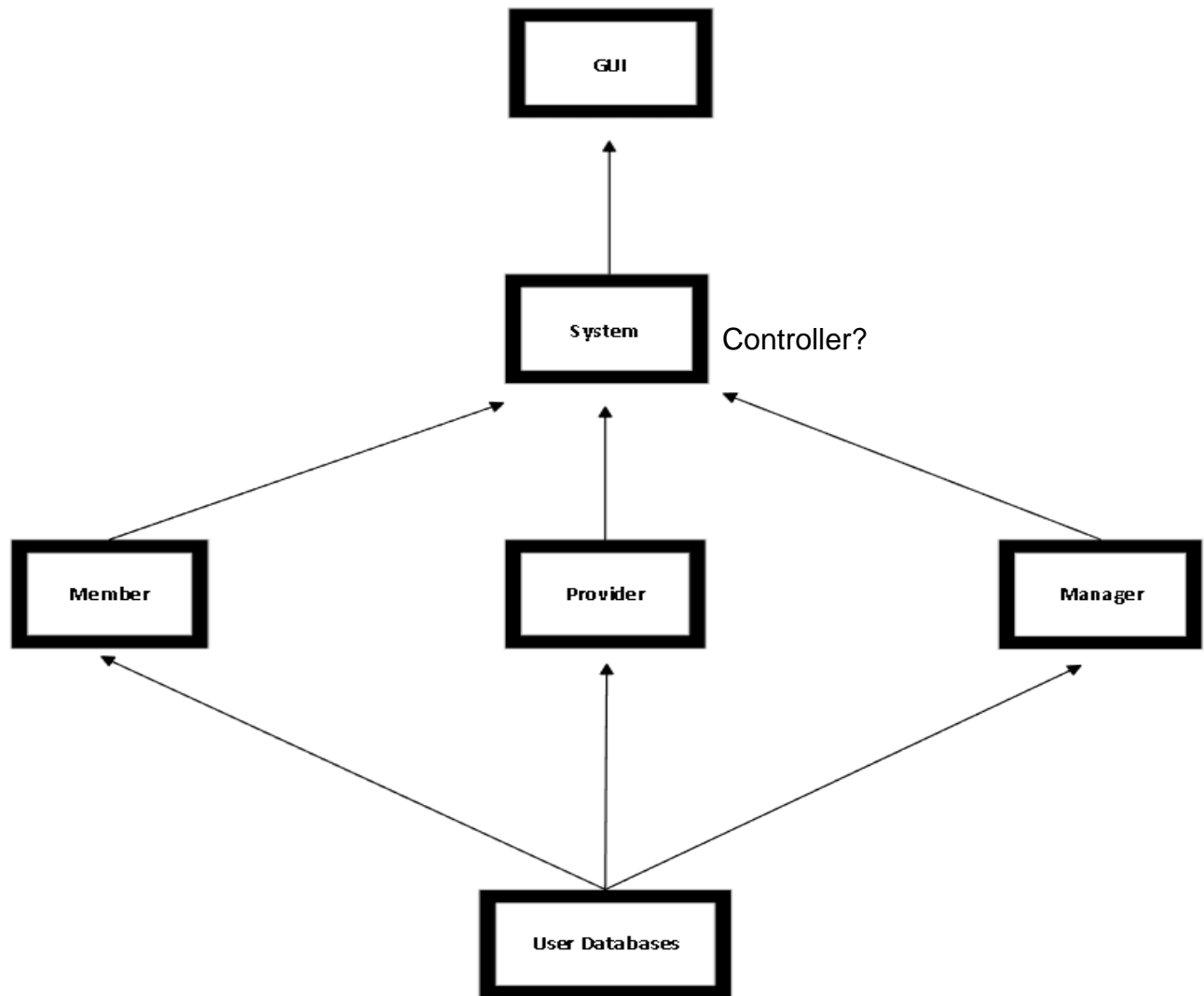
Cameron Mitchell

Edward Stephens

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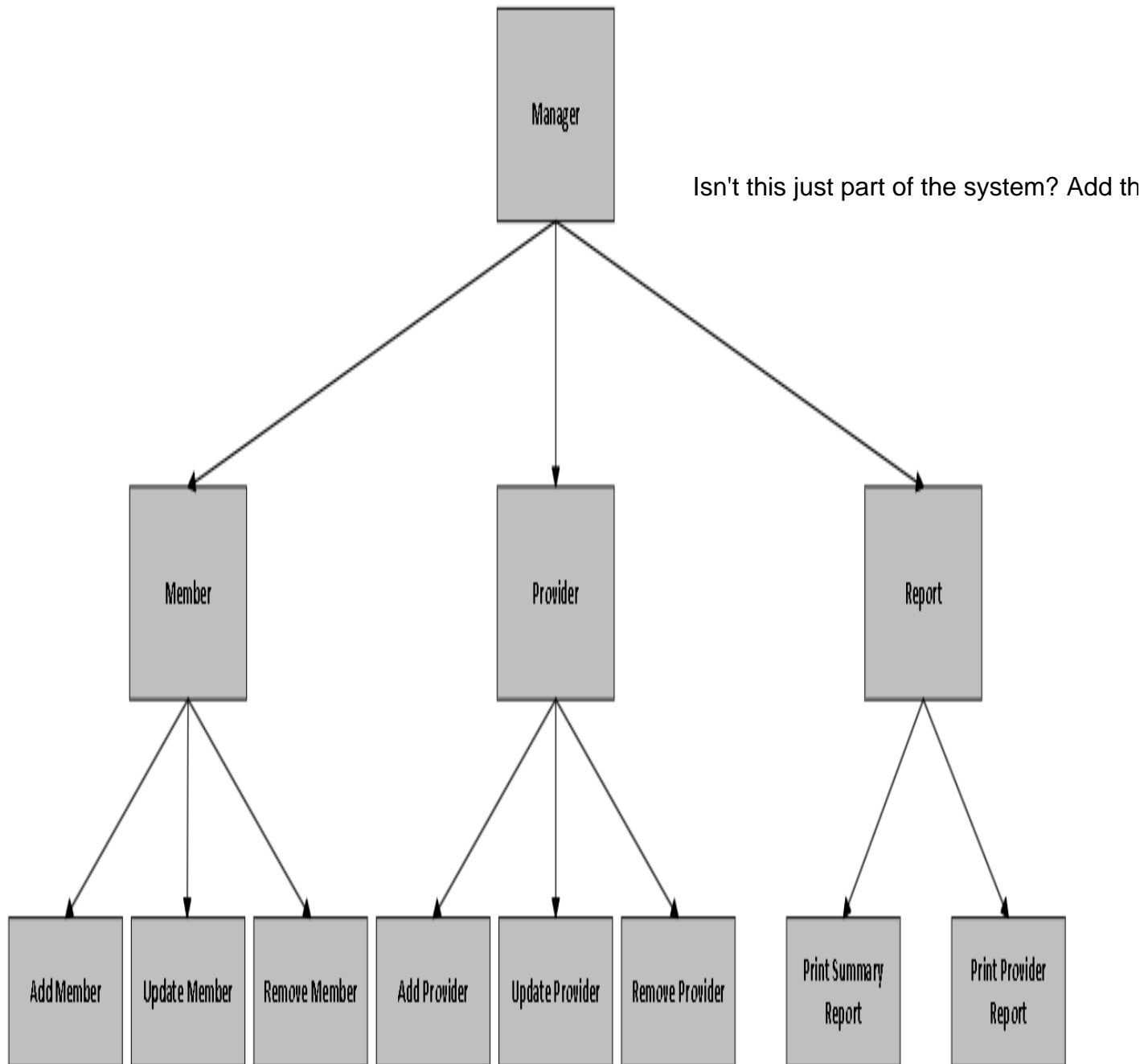
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Architectural Structure Top-Level-Component



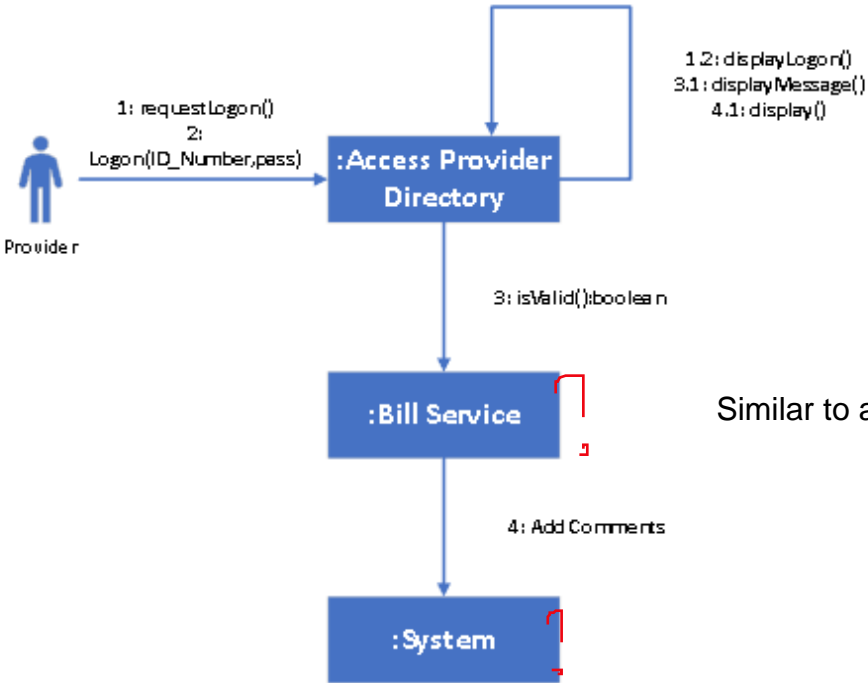
Layered architecture

Call and Return Architectural Style



Provider Submits Claim Communication Diagram

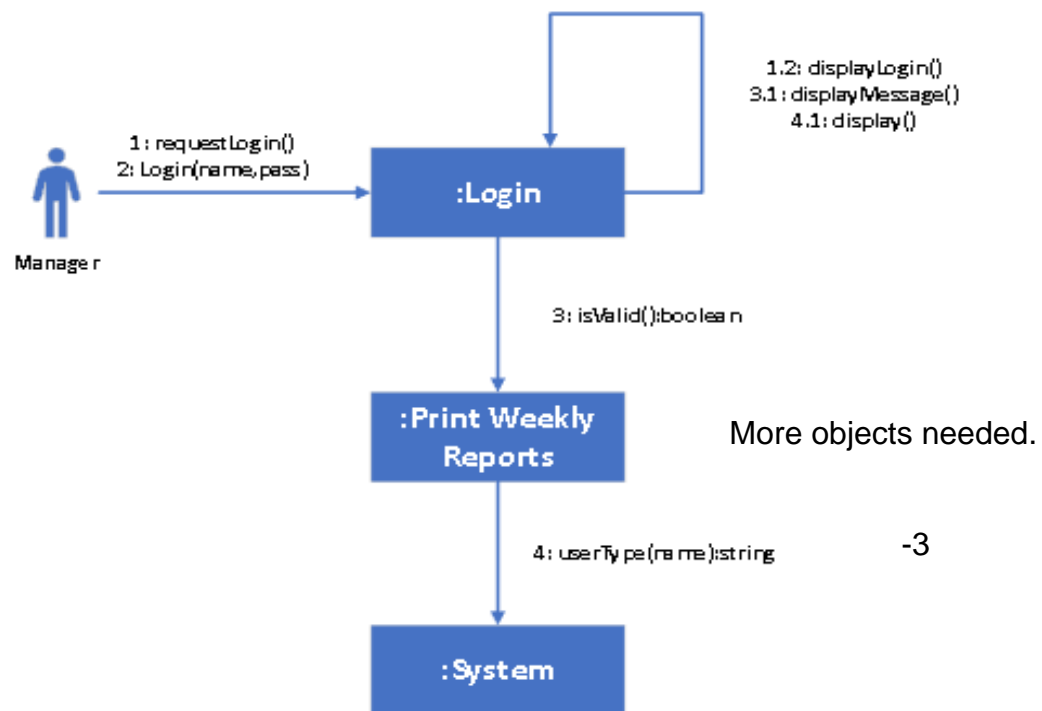
Provider Submits Claim



Similar to a sequence diagram, a con

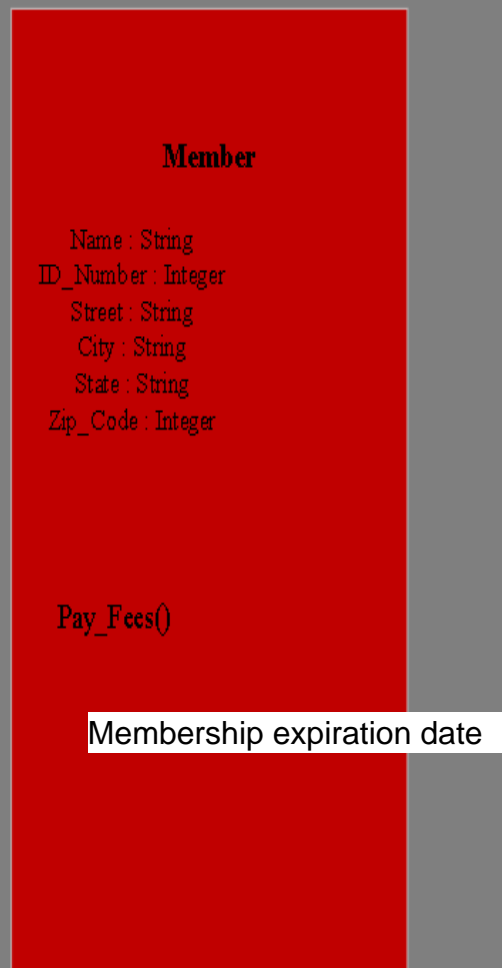
Manager Prints Weekly Summary Report

Manager Prints Weekly Reports

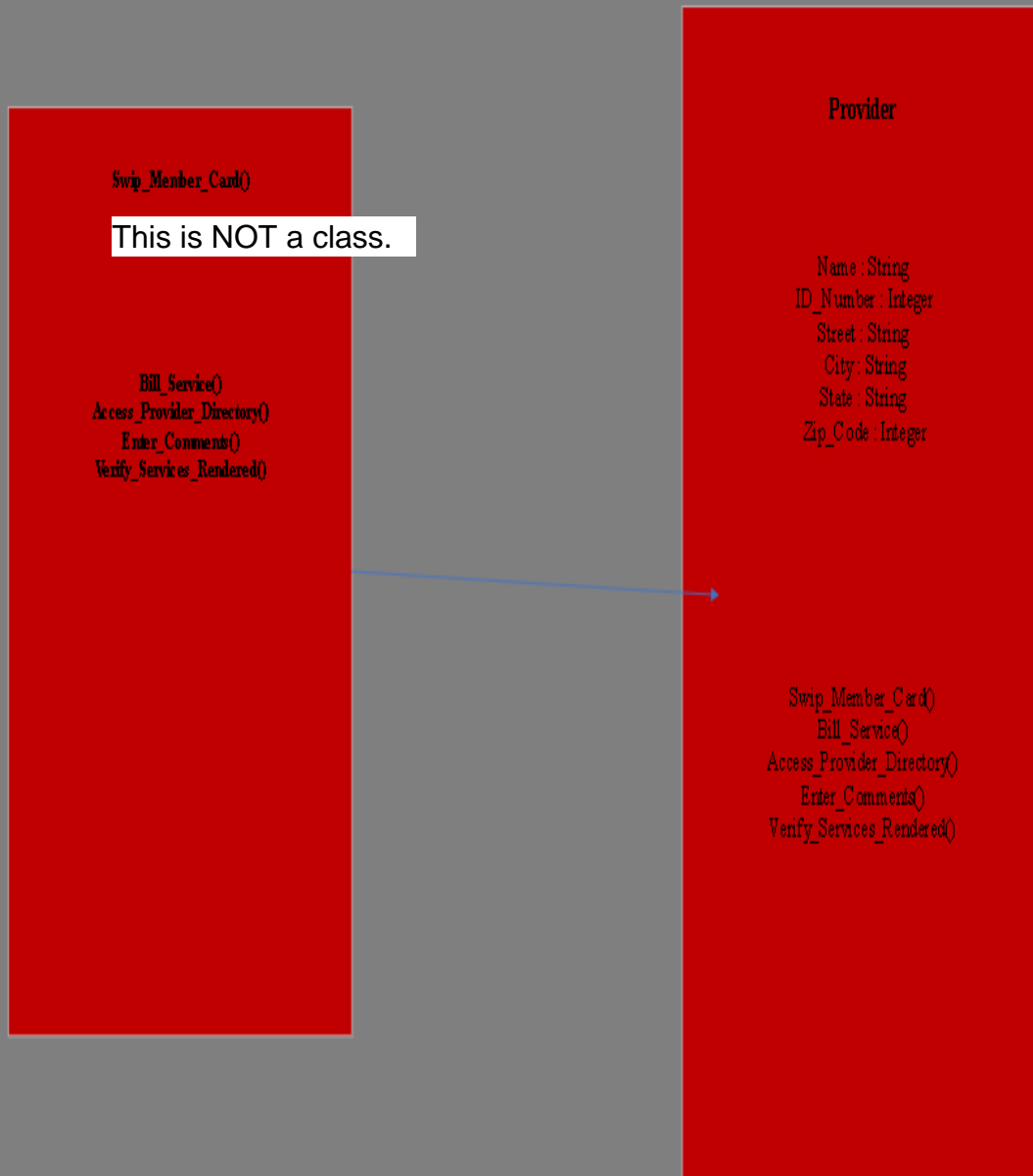


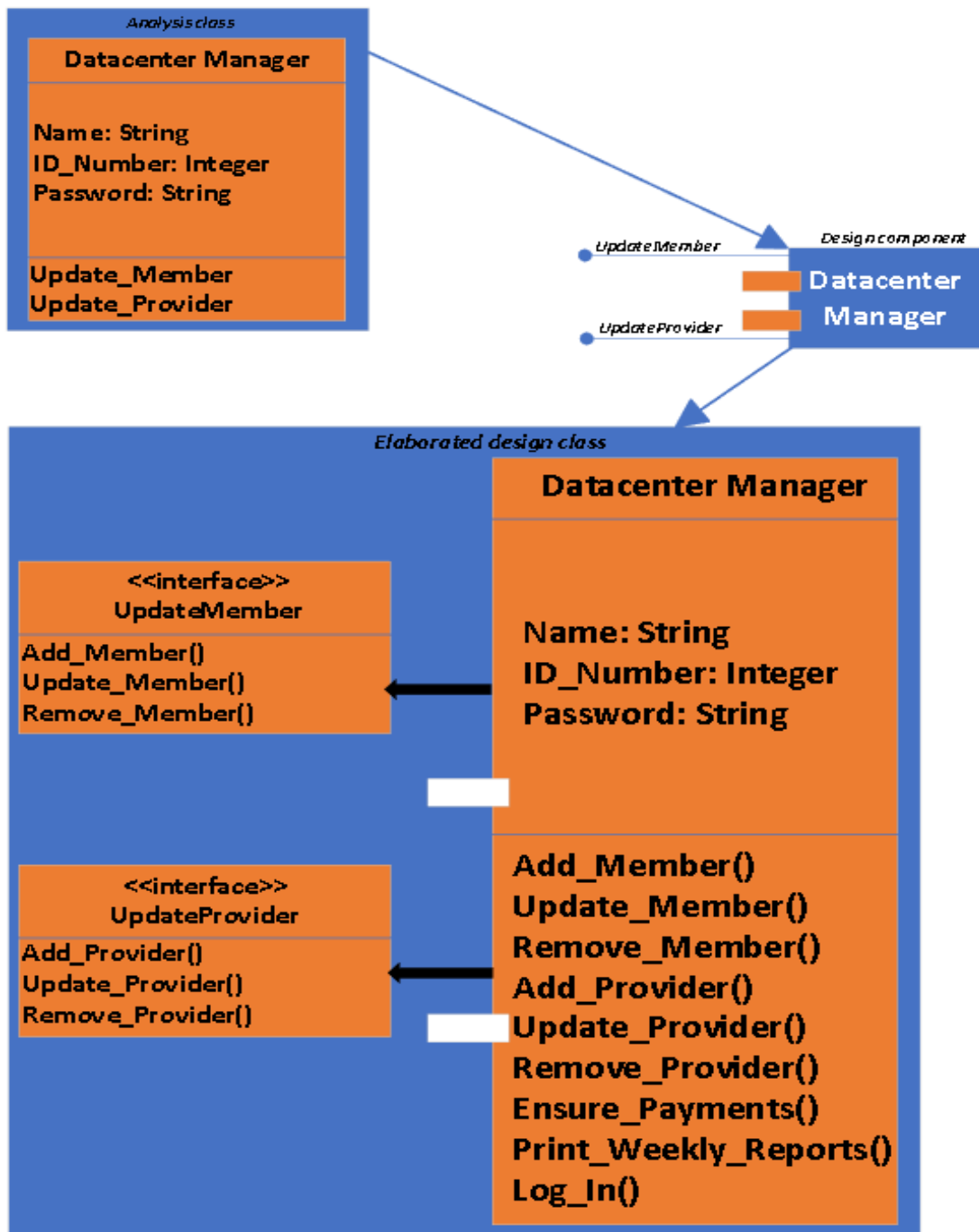
Elaborated Class Diagrams

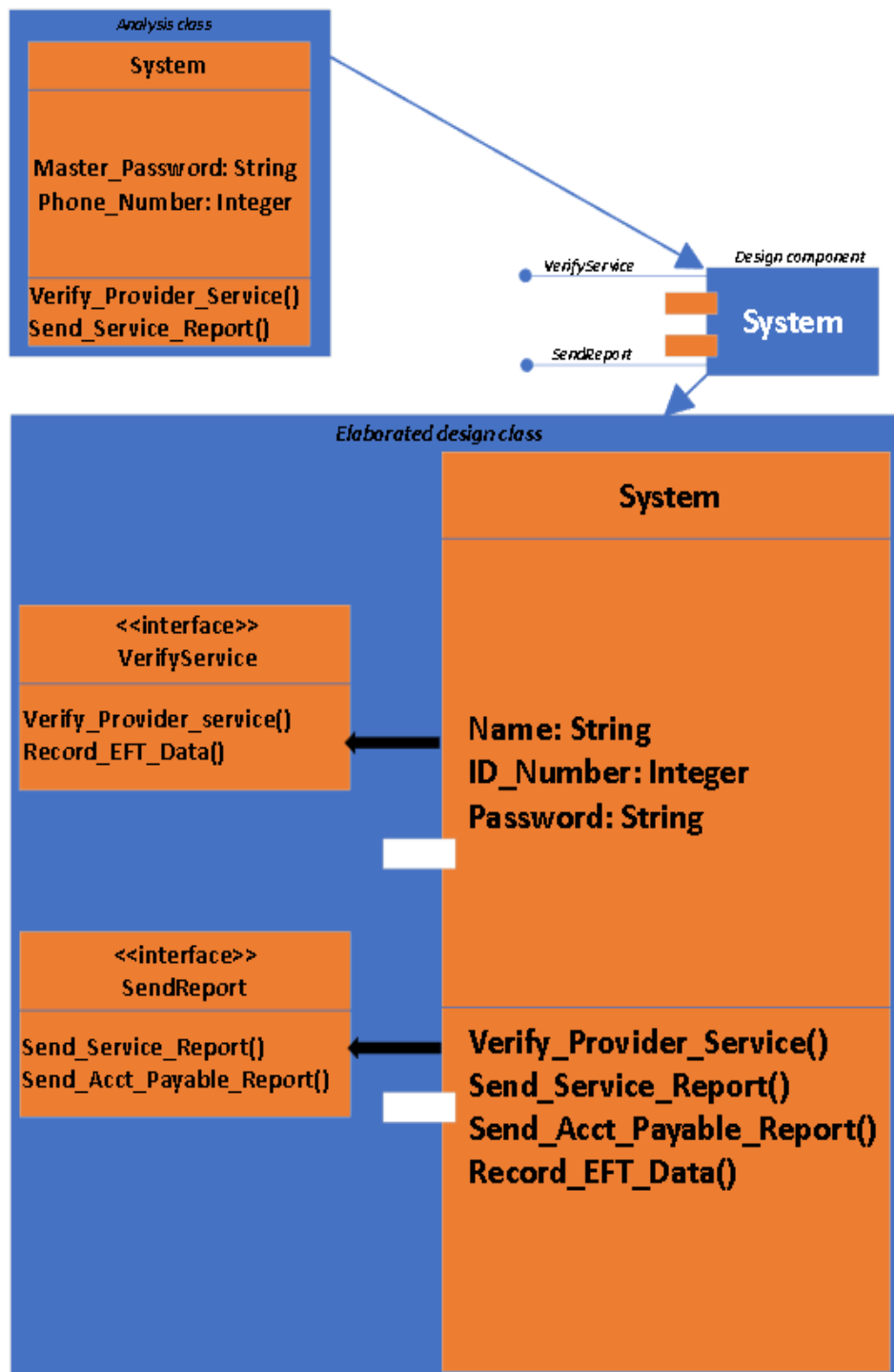
Elaborated Class Diagram for
Member Class



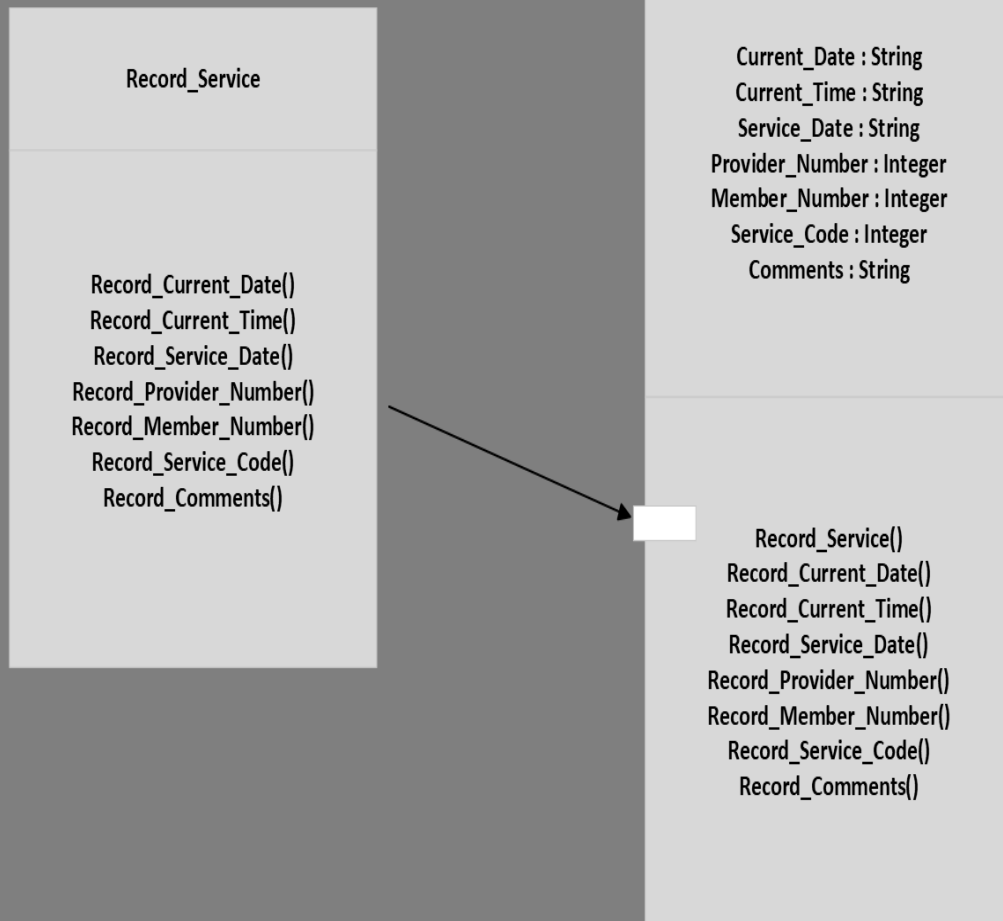
Elaborated Class Diagram for Provider Class



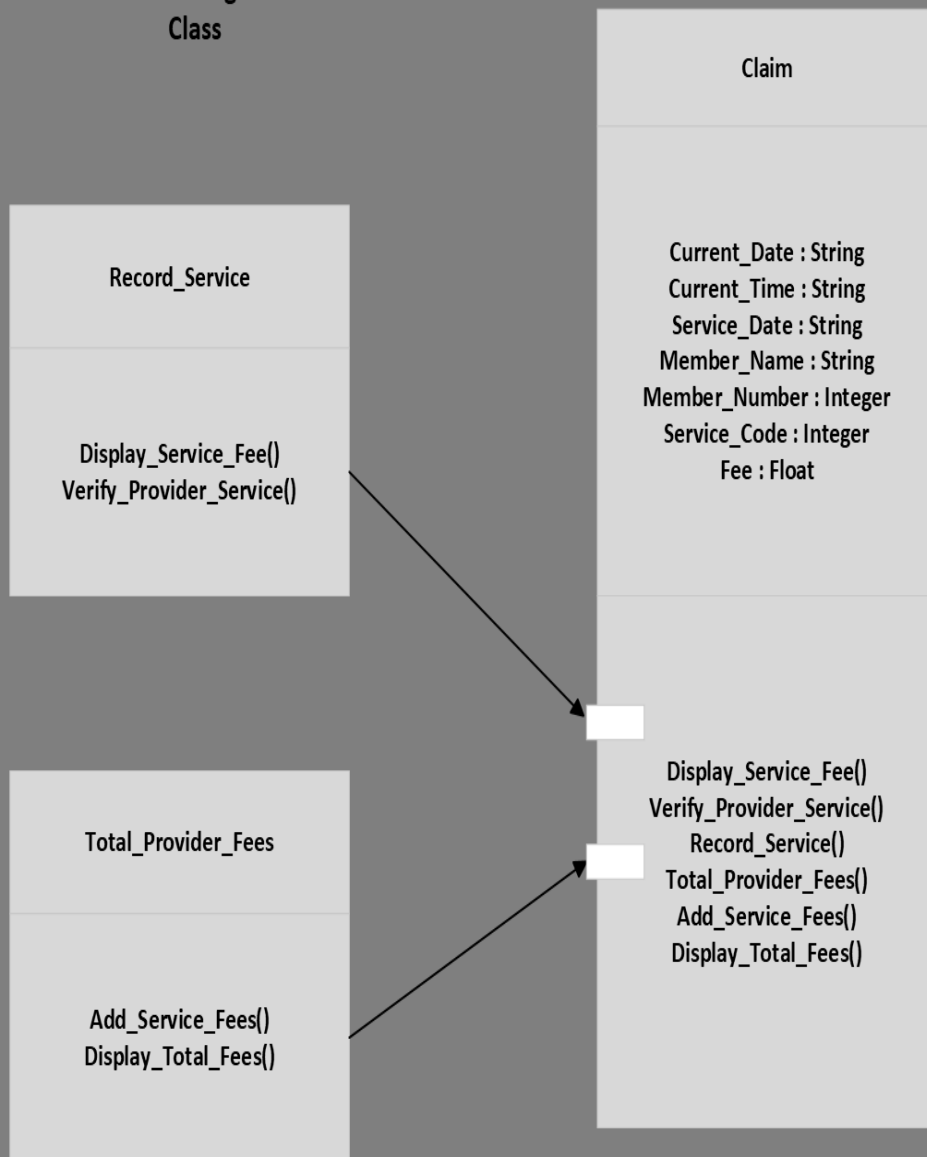




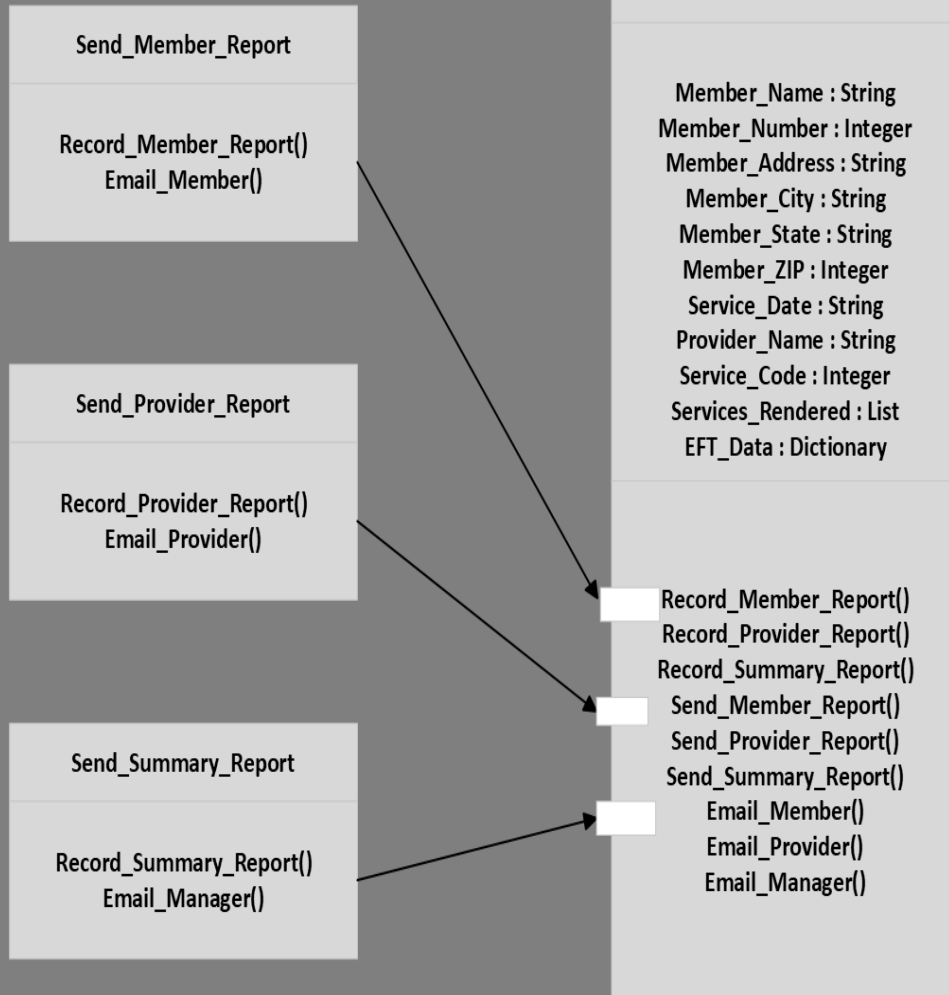
Elaborated Class Diagram for Service Class



Elaborated Class Diagram for Claim Class



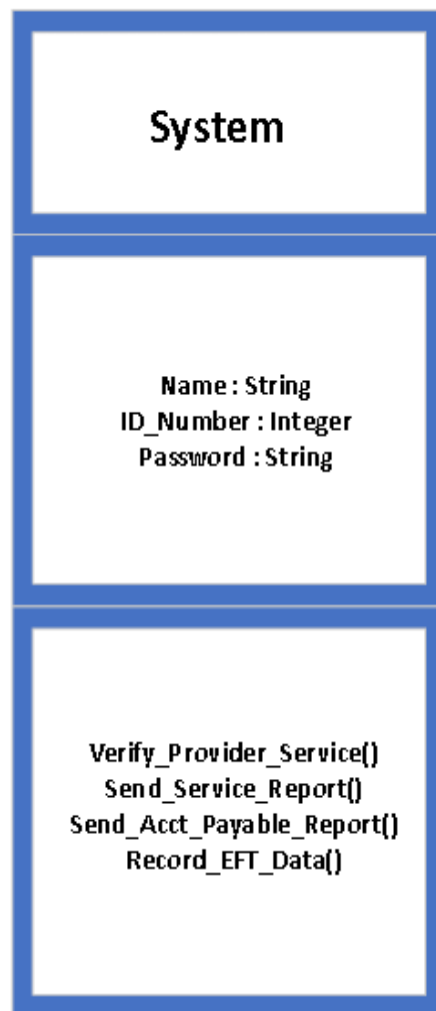
Elaborated Class Diagram for Report Class



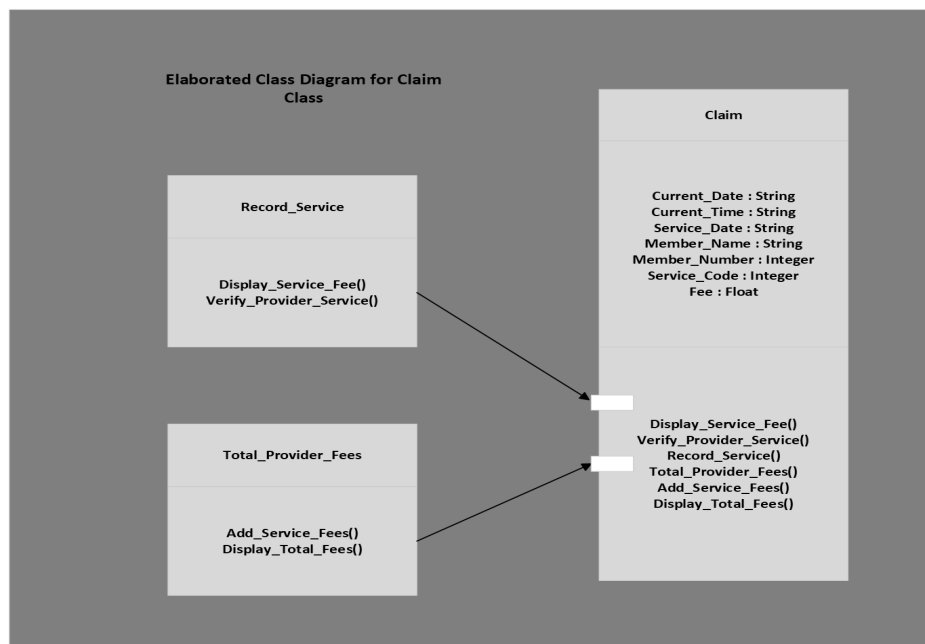
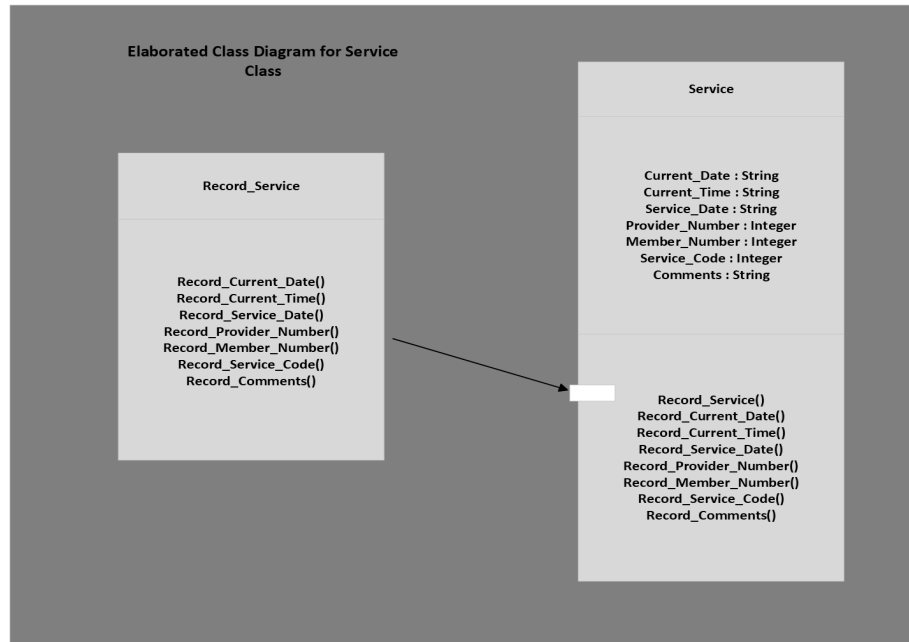
Step 1: Identify All Classes that Correspond to the Problem Domain

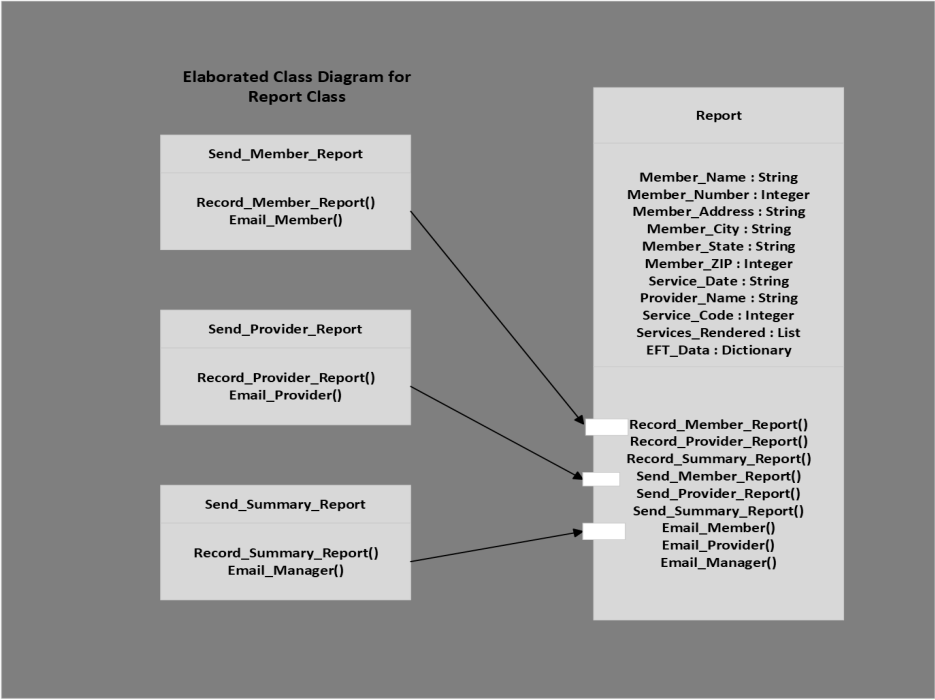


Step 2: Identify All Design Classes that Correspond to the Infrastructure Domain

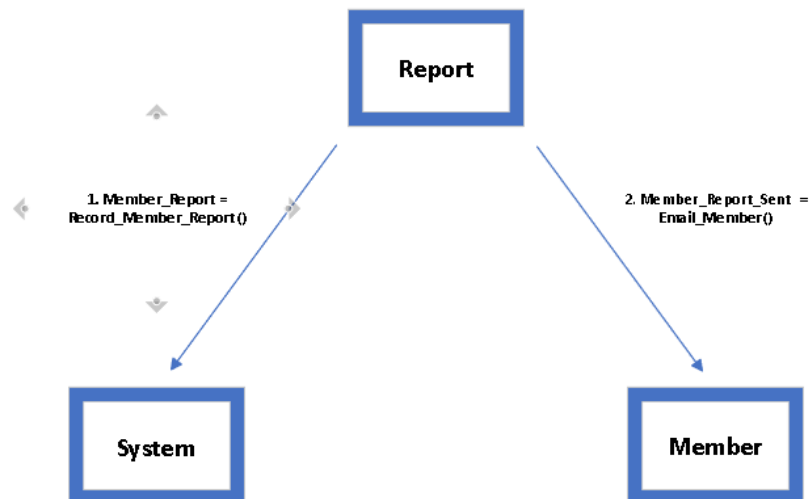


Step 3: Elaborate All Design Classes Not Acquired as Reusable Components

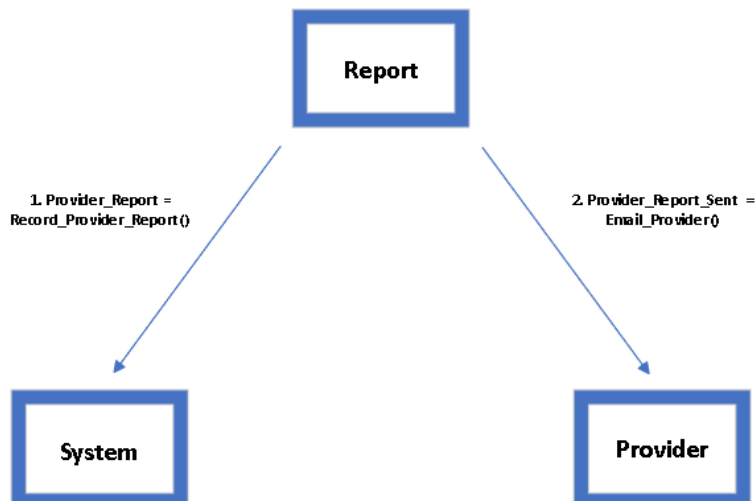




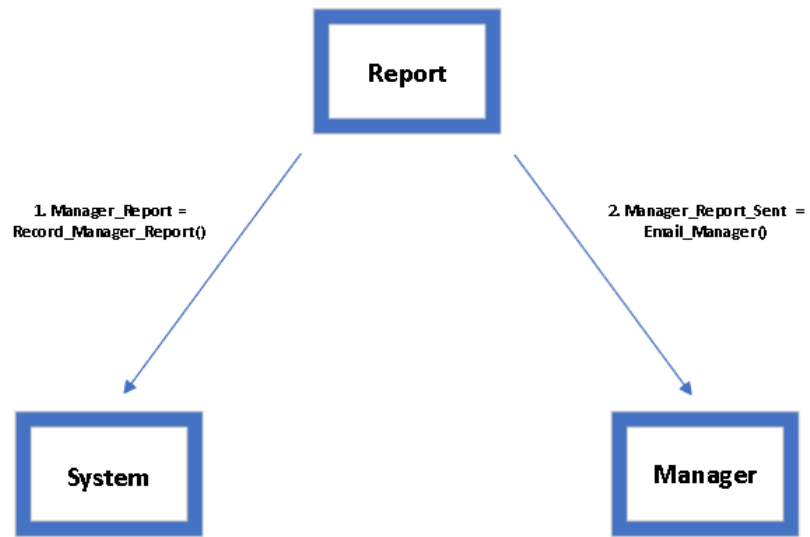
Step 3a: Specify Message Details When Classes/Components Collaborate



Send Member Report

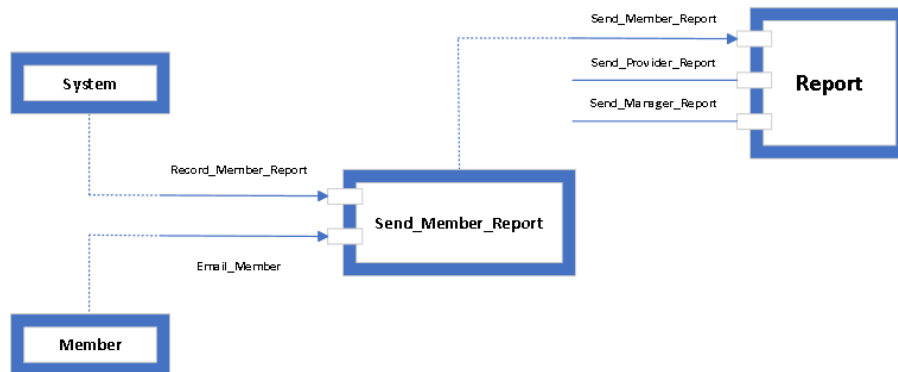


Send Provider Report

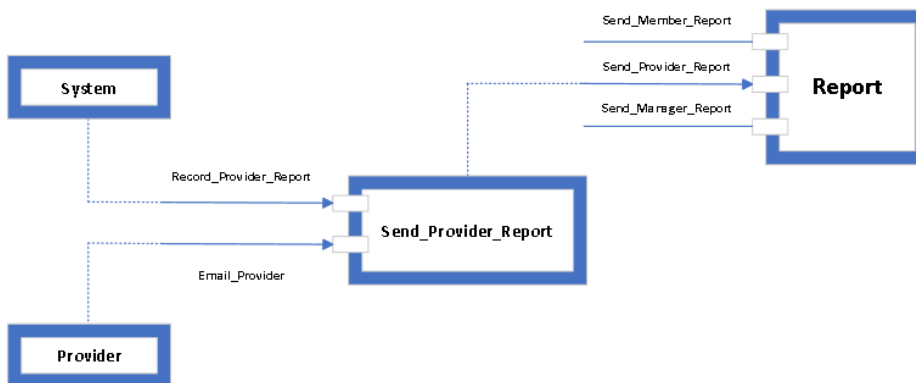


Send Manager Report

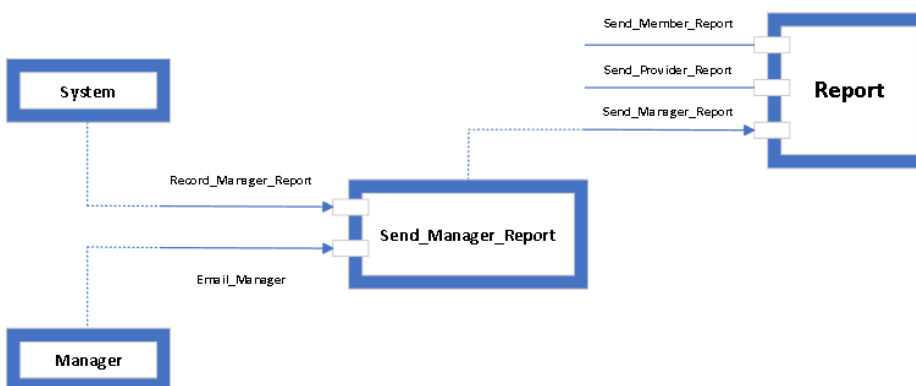
Step 3b: Identify Appropriate Interface for Each Component



Send Member Report



Send Provider Report

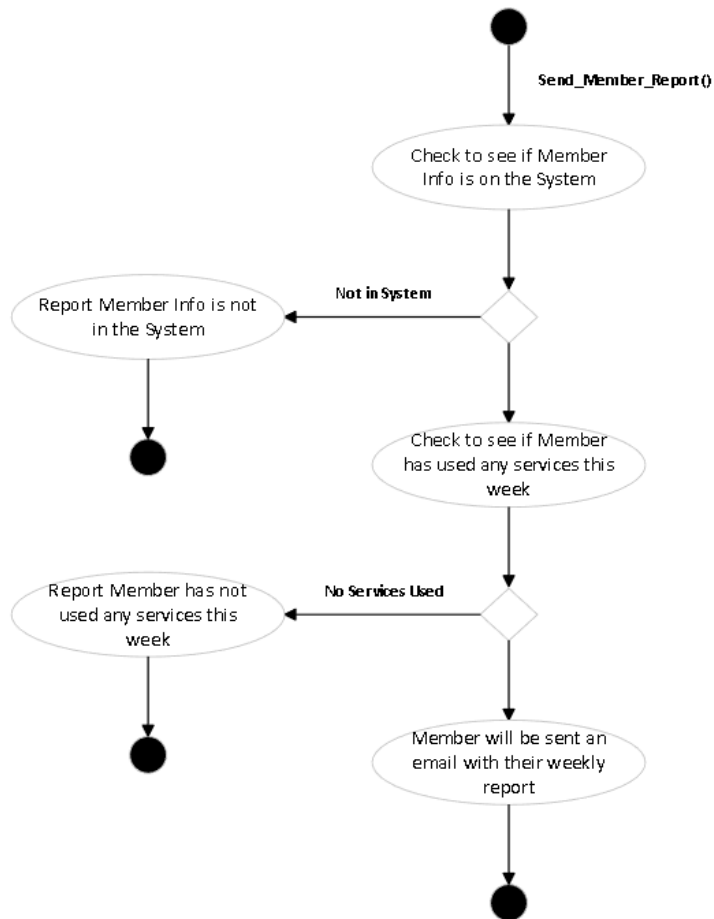


Send Manager Report

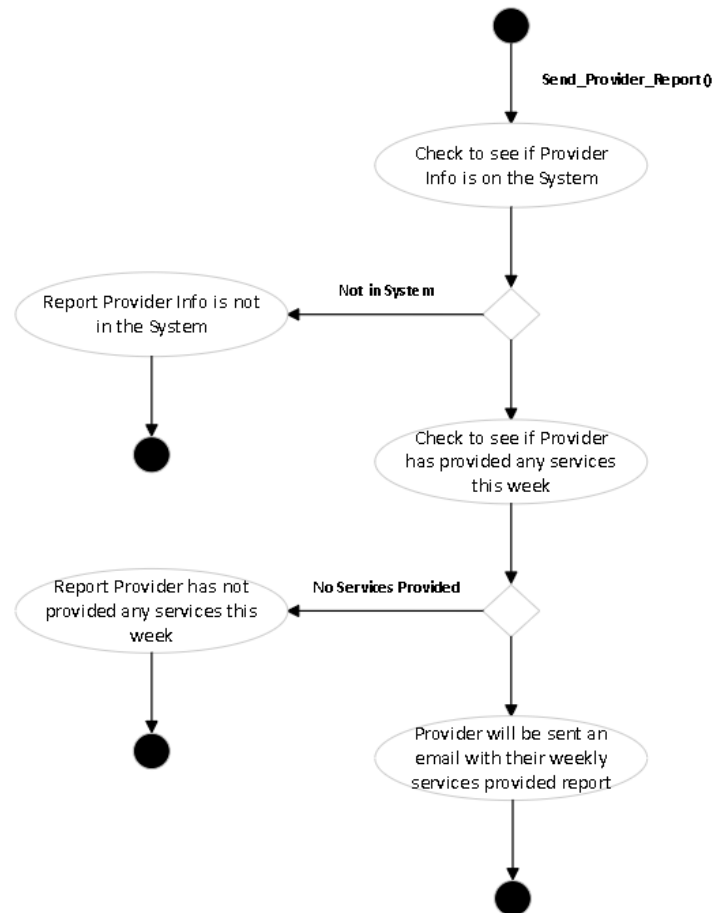
Step 3c: Define Data Types and Data Structures

Attribute Name	Class	Data Type / Data Structure
Member Name	Member, Claim, Report	String
Member Number	Member, Service, Claim, Report	Integer
Member Address	Member, Report	String
Member City	Member, Report	String
Member State	Member, Report	String
Member ZIP	Member, Report	Integer
Service Date	Provider, Service, Claim, Report	String
Provider Name	Provider, Report	String
Service Code	Provider, Service, Claim, Report	Integer
Services Rendered	Provider, Report	List
EFT Data	Manager, System, Report	Dictionary

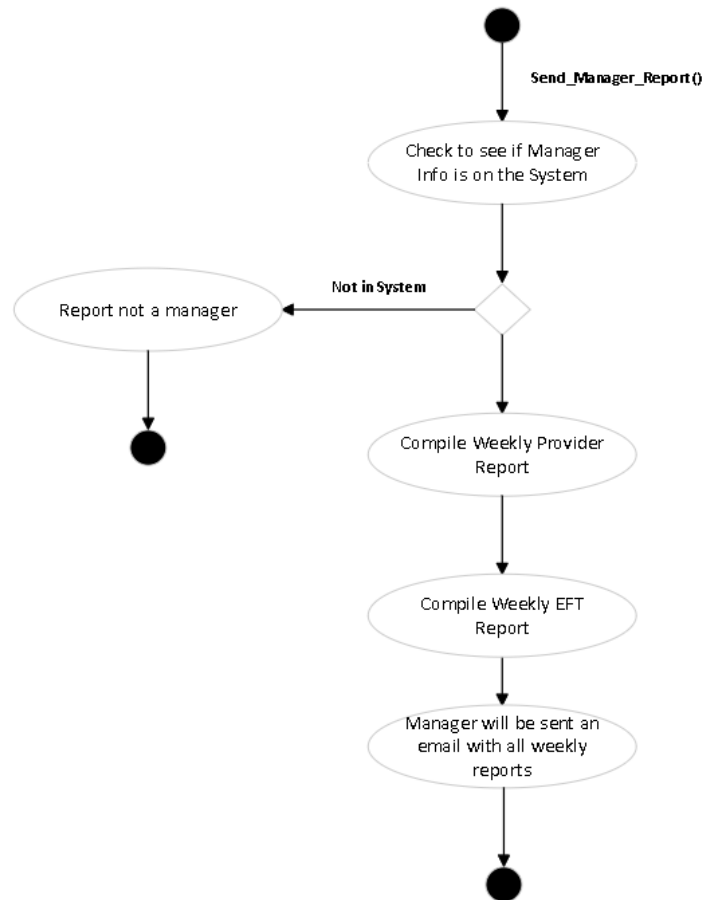
Step 3d: Describe Processing Flow Within Each Operation in Detail



Send Member Report



Send Provider Report



Send Manager Report

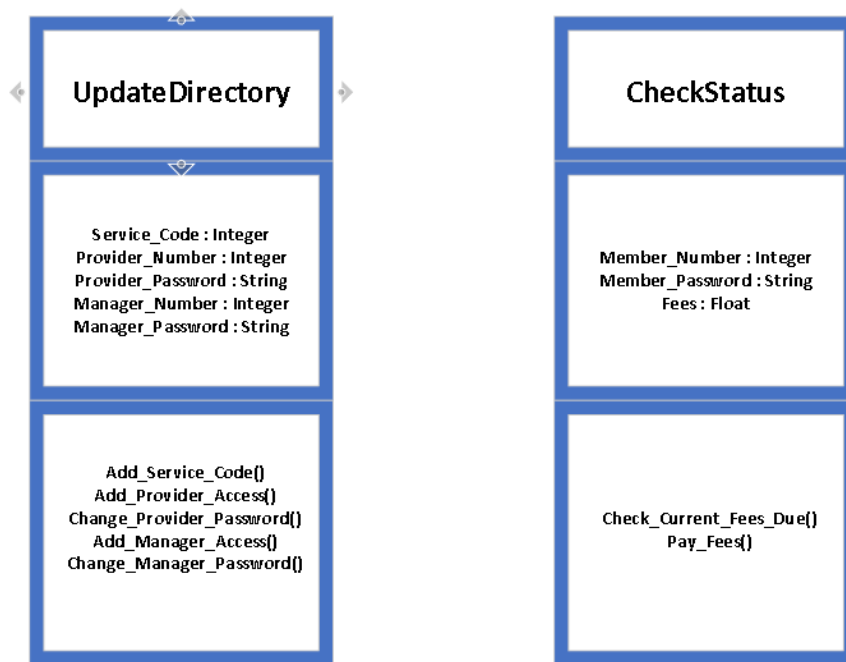
Step 4: Describe Persistent Data Sources

Data Source

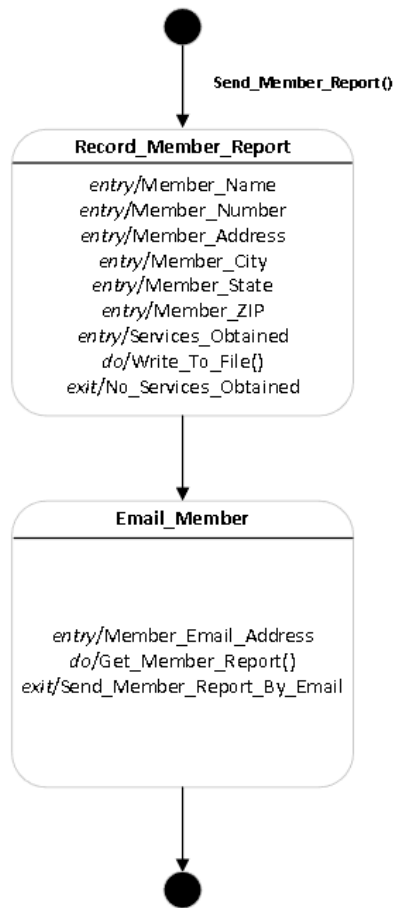
- Provider Directory
- Member Database

Required Class

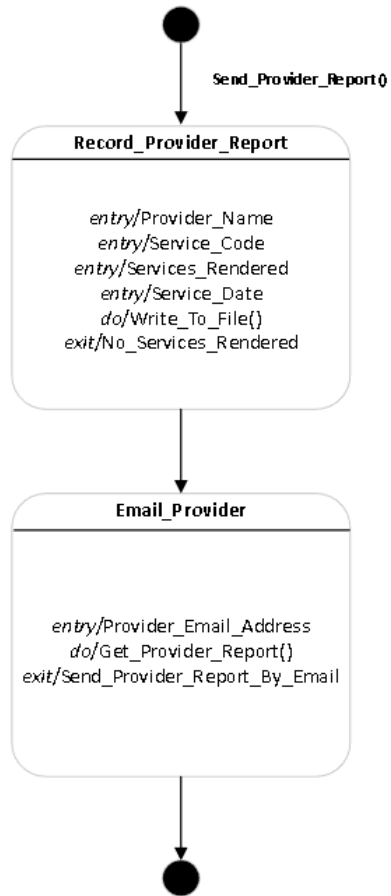
- Update_Directory
- Check_Status



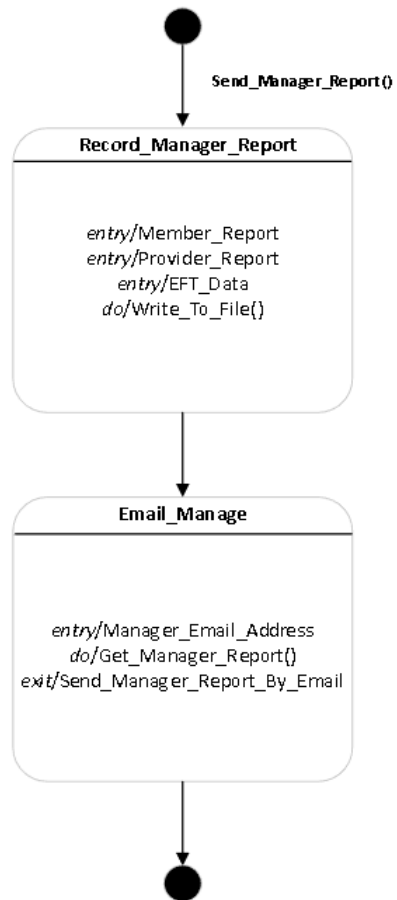
Step 5: Behavioral Representations



Send Member Report

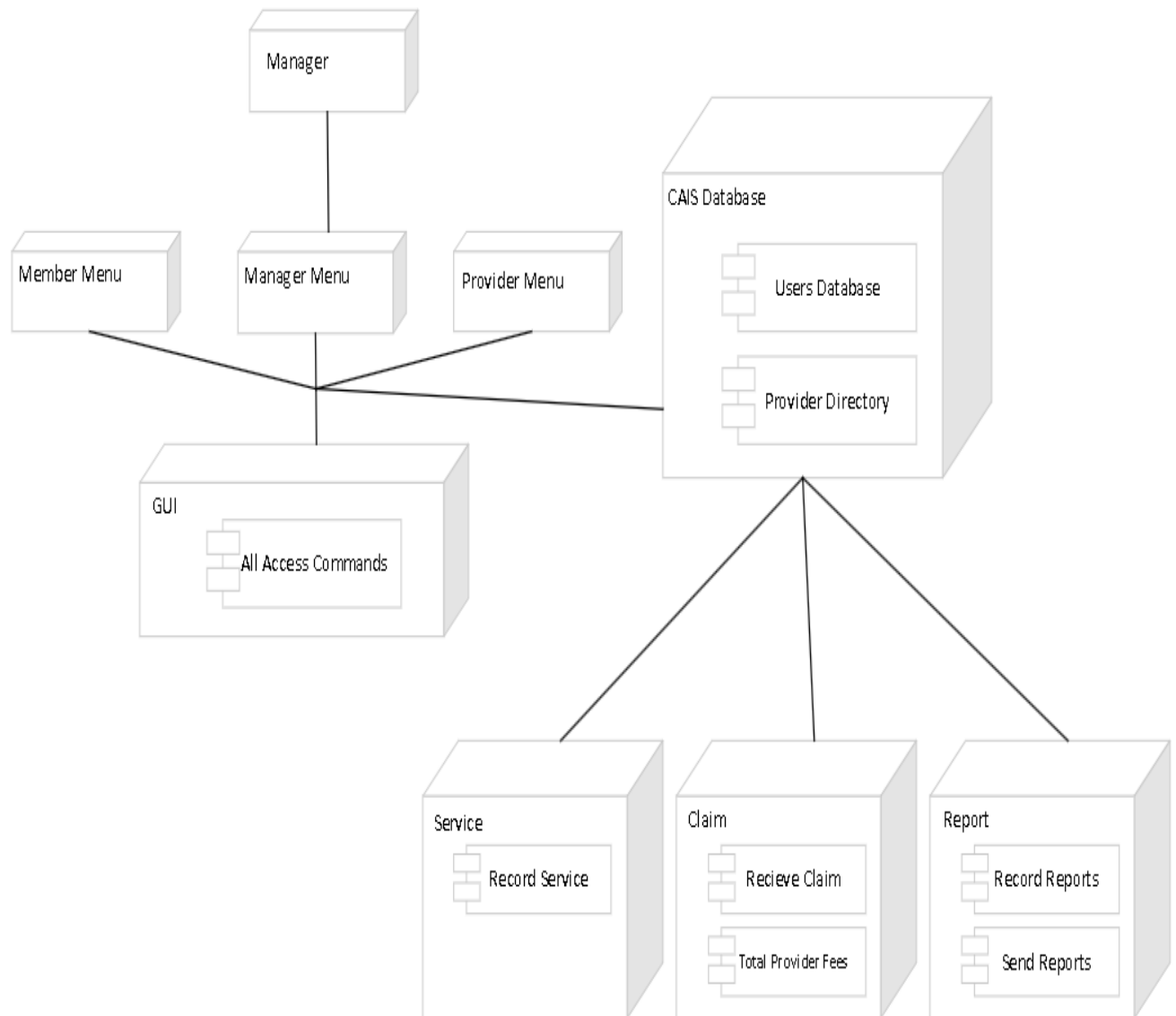


Send Provider Report

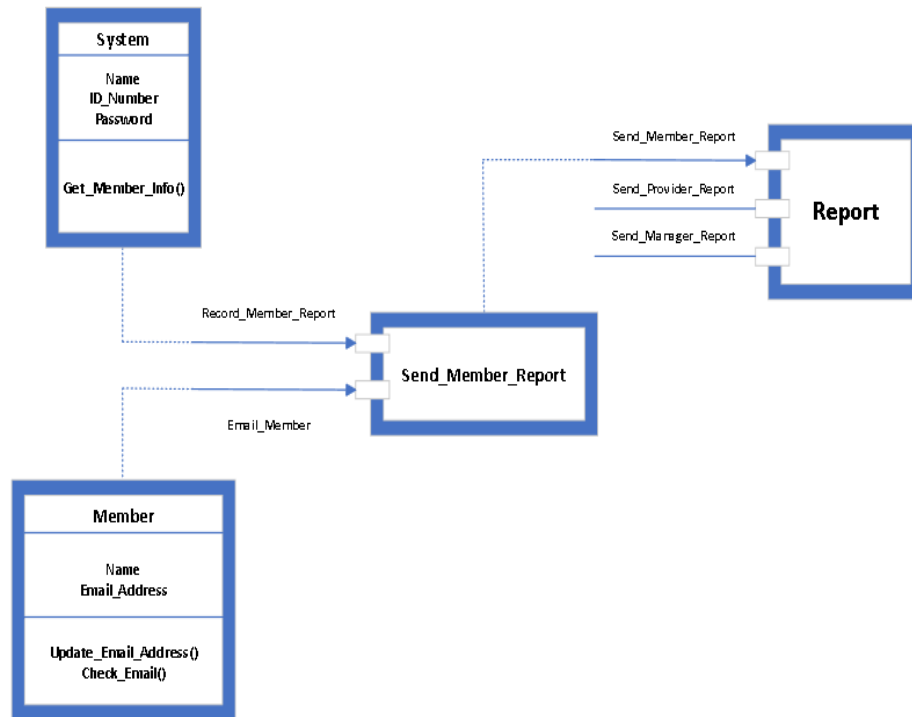


Send Manager Report

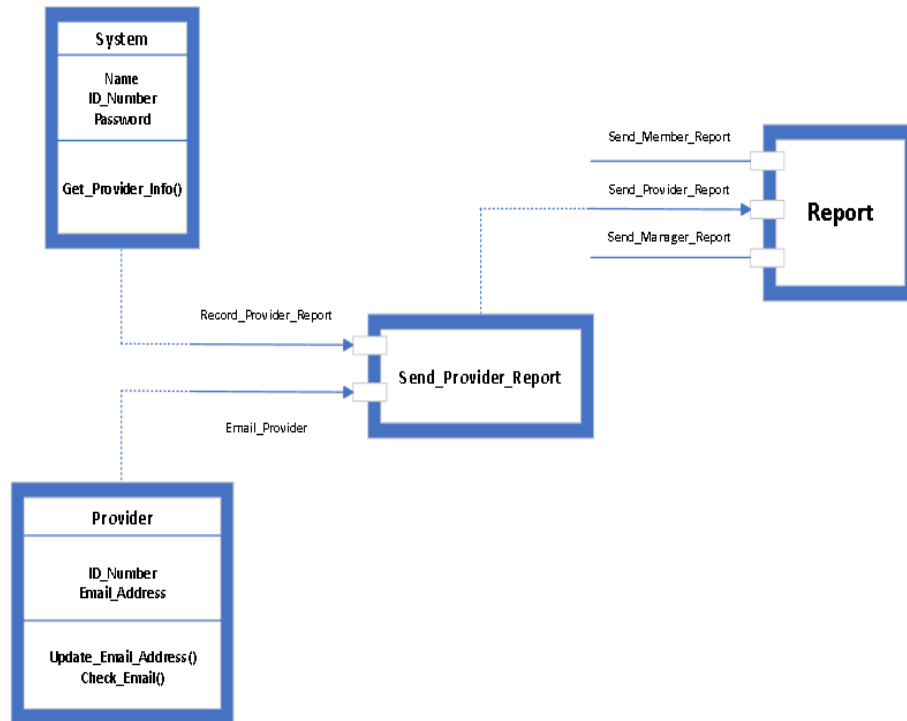
Step 6: Deployment Diagram



Step 7: Refactor Every Component Level Design

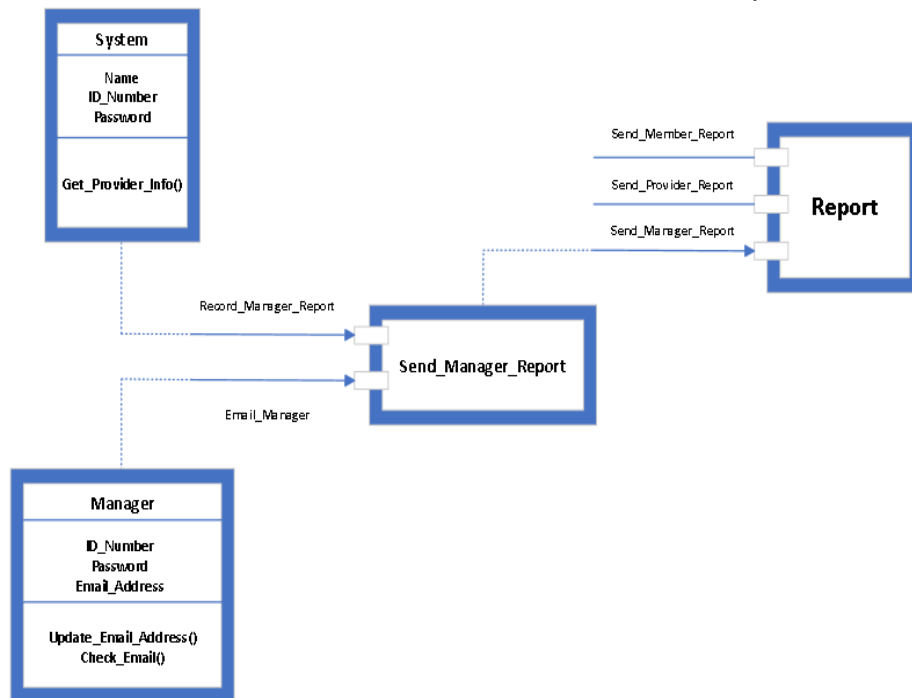


Send Member Report



Send Provider Report

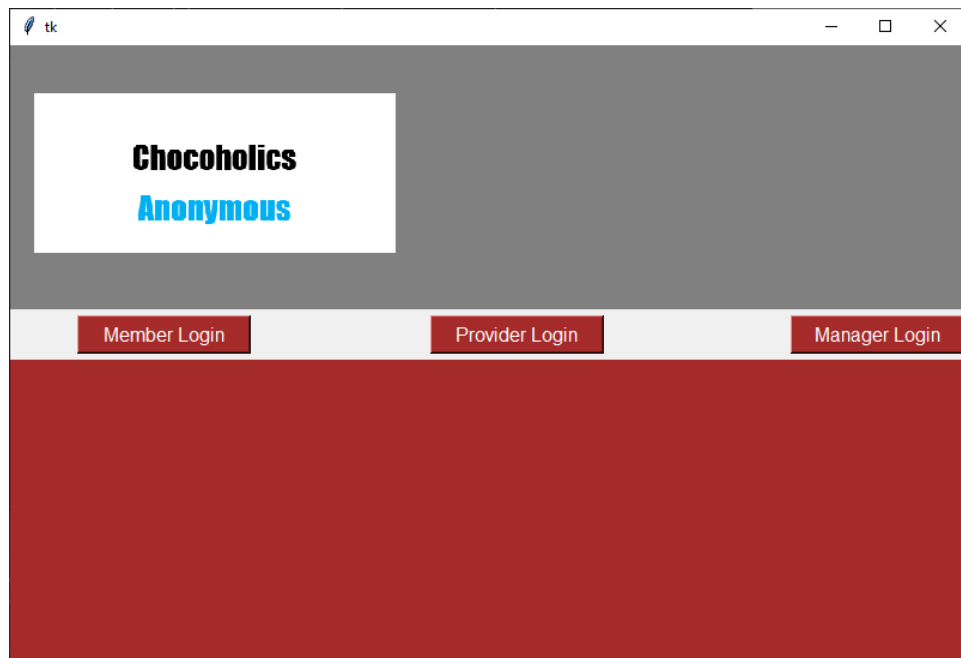
What report? Who sends? I think I asked for '



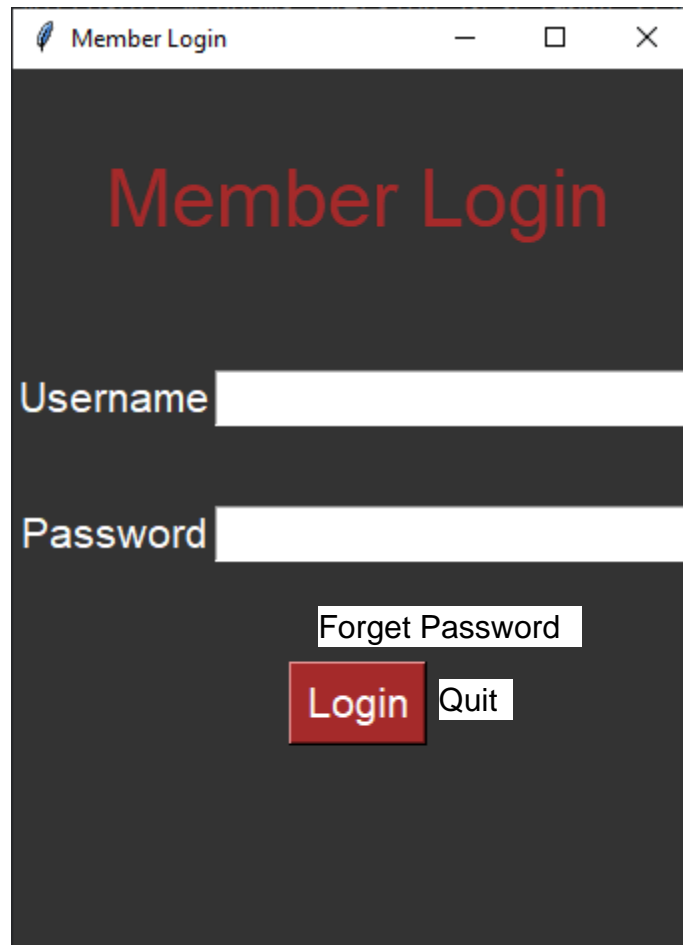
Send Manager Report

It should be Manager (the actor, the initiator)

User Interface Design



Chocoholics Anonymous Main Menu



A screenshot of a web application window titled "Member Login". The window has a dark gray background. At the top, the title bar shows a feather icon, the text "Member Login", and standard window controls (minimize, maximize, close). The main content area features the text "Member Login" in a large, bold, red font. Below this, there are two white input fields. The first is labeled "Username" and the second is labeled "Password". To the right of the "Password" field is a link labeled "Forget Password". Below the "Password" field, there are two buttons: a red button labeled "Login" and a white button labeled "Quit".

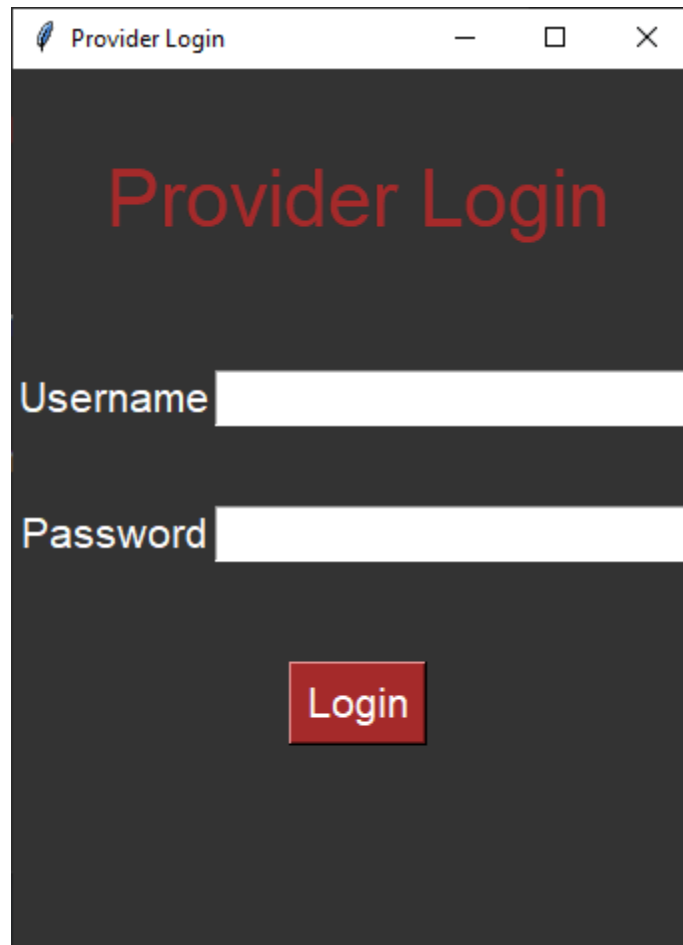
Member Login

Username

Password

[Forget Password](#)

Member Login Screen

A screenshot of a web application window titled "Provider Login". The window has a dark gray background. At the top, the title bar shows a feather icon, the text "Provider Login", and standard window controls (minimize, maximize, close). The main content area features the text "Provider Login" in a large, bold, red font. Below this, there are two white input fields. The first field is labeled "Username" and the second is labeled "Password". Both labels are in a white, sans-serif font. Below the input fields, there is a red rectangular button with the word "Login" in white, sans-serif font.

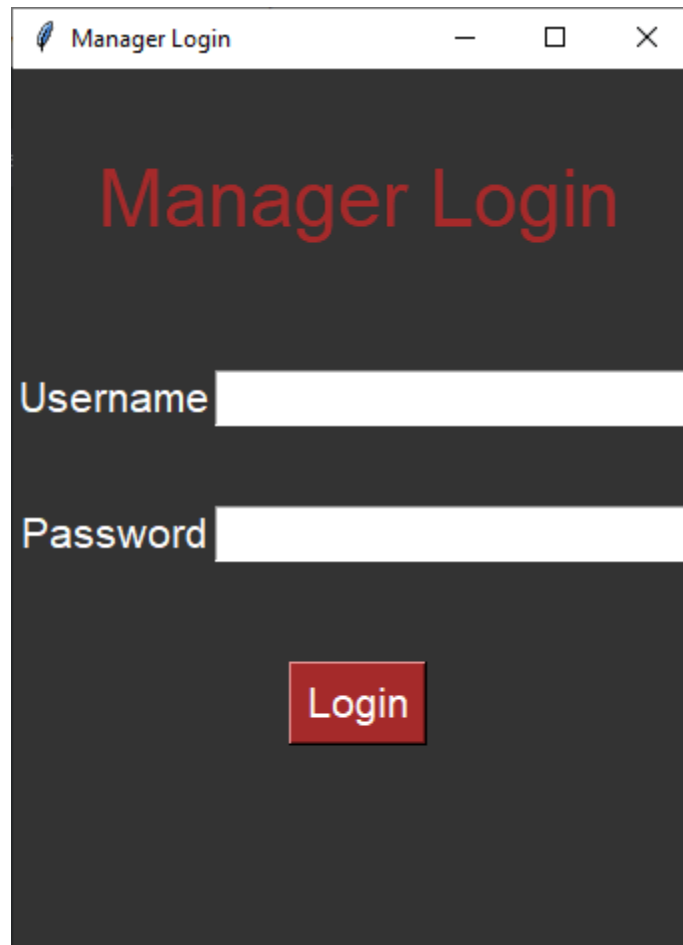
Provider Login

Username

Password

Login

Provider Login Screen

A screenshot of a web application window titled "Manager Login". The window has a dark gray background. At the top, the title bar shows a feather icon, the text "Manager Login", and standard window controls (minimize, maximize, close). The main content area features the text "Manager Login" in a large, bold, red font. Below this, there are two white input fields. The first is labeled "Username" and the second is labeled "Password". Both labels are in a white, sans-serif font. Below the input fields, there is a red rectangular button with the word "Login" in white, sans-serif font.

Manager Login

Username

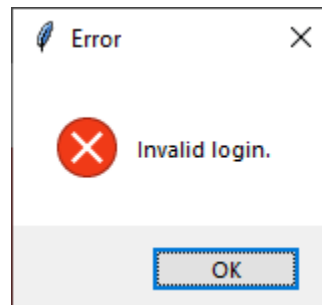
Password

Login

Manager Login Screen



Successful Login Message



Failed Login Message

Only login screens. Need more UIs for other functions. -10

Worklog

- **CSC 470 Project #2 October 3rd, 2022**

Facilitator: Bryce

Recorder: Edward

Moderator: Cameron

Reviewed first Project submission with annotations on how to refine the original project. Refined Classes and Sequence Diagram. Next meeting October 4th, 2022.

- **CSC 470 Project #2 October 4th, 2022**

Facilitator: Bryce

Recorder: Edward

Moderator: Cameron

Assigned Parts 2A, 2B, and 2C to different members of the team. Next meeting October 5th.

- **CSC 470 Project #2 October 5th, 2022**

Facilitator: Cameron

Recorder: Bryce

Moderator: Edward

Went over work on parts 2A through 2C. Assigned Member and Provider elaborated design class diagrams to Edward. Assigned Manager and System elaborated design class diagrams to Bryce. Assigned Service, Claim, and Report elaborated design class diagrams to Cameron. Meet Monday, October 10th.

- **CSC 470 Project #2 October 10th, 2022**

Facilitator: Cameron

Recorder: Edward

Moderator: Bryce

We went over the Professor's example of the project to refine and get ideas for our own project. Started building our project's main document adding in work we have already done. Went over work done for part 3 of the project. Started preparing for parts 4 and 5 of the project. Next meeting will be on October 11th, 2022.

- **CSC 470 Project #2 October 11th, 2022**

Facilitator: Bryce

Recorder: Edward

Moderator: Cameron

We went over notes from the meeting with the Professor. Started reworking part 2A and 2B upon suggestion from the Professor. Finished part 3 of the project. Next meeting October 14th, 2022.

- **CSC 470 Project #2 October 14th, 2022**

Facilitator: Cameron

Recorder: Edward

Moderator: Bryce

We went over work on Part 4 Conduct Component Level Design. Looked over a preliminary implementation of code for the graphical user interface prototype. Started working on coding for our prototype.

- **CSC 470 Project #2 October 15th, 2022**

Facilitator: Bryce

Recorder: Edward

Moderator: Cameron

We finished a prototype using Python and Atom.io. We took screenshots of the main page, member login page, provider login page, manager login page, successful login message, and failed login message. We added the screenshots to the Project document and typed up our worklog in the document. We did a final look over of the document and refined any parts we thought could still be improved.