



Term Project

Spring 2022

Course ID: CSE307

Section: 1

Instructor: Sabrina Alam

Submitted to:

<u>Name</u>	<u>ID</u>
Abu Musa Sakib	1810617
Sumyia Afnan Mukta	1810668

Date of Submission: 28 April 2022

Table of Contents

Section 1	3
1. Introduction	3
2. History leading to project request:	3
3. Identify Problem, opportunity	3
4. Project goal and objectives	5
Section 2	5
5. Product Description	5
6. System Context Diagram	6
7. Hardware detail	7
8. Key Technical Features of Software	9
Section 3	9
9. Information Gathering methods	9
10. Major functionalities offered by the system	16
11. Use Case Diagram	17
12. Normal Scenarios	18
13. Alternate Scenarios	23
14. Functional Requirements	28
15. Non-Functional Requirements	28
Section 4	30
16. Entity Relationship Diagram	30
17. Logical Data Flow diagram	31
18. Physical Data Flow diagram	35
19. Activity diagrams	39
20. Sequence diagrams	45
21. Communication diagrams	47
22. Class diagrams	49
23. State-chart diagrams	50
24. CRUD matrix	51
Section 5	53
25. Structured English Pseudo code for the system	53
26. Prototype the user interface	55

Section 1

1. Introduction

Helping Hand

Helping Hand is a mobile application that will enable its users to find domestic helpers near them. Customer/User can choose experience works near them for hourly, weekly or monthly bases. This will create a secure place for female domestic helpers and ensure customer satisfaction. In addition to this, child labor will also reduce through this application.

2. History leading to project request:

On a sunny day, I wake up to a phone call from my domestic helper. She told me that she is sick and would not be able to work for me anymore. After hearing that, it spoils my mood. Also, on that day some of my relatives plan to visit my home. So, I was under a lot of pressure with my house holding task. Therefore, it enforced me to think of a trusted and reliable service ready at the user's doorstep. Then I looked for a helping hand on the internet, but could not find any suitable domestic helper. When I discuss this issue with my friend. She also told me that her aunt is a working woman and she is not satisfied with the babysitting service in the babysitting center. Instantly, instant of this she wants a home babysitting service for her child.

Then I thought of making an application, which would help the user with house holding tasks, babysitting as well as taking care of old people whenever they need.

3. Identify Problem, opportunity

Problems and Solutions:

Problem: While shifting a house, there required a lot of cleaning and organizing. Which becomes difficult without a domestic helper. It is very problematic for the user to take the domestic helper with them to the new house. Also, he/she may not know any domestic helper in that new area.

Solution: Our application will be a relief from this problem by looking for a domestic helper in the new area on hourly or weekly or monthly basis service.

Problem: In some cases, parents don't want to leave their home country as well as their home and live with their children. But the children remain tense about the well being of their parents. So, they want any trusted 24/7 services for their parents. Sometimes money is not a problem for them. But time is a fact for them.

Solution: Our application will provide importance to their valuable time and help them to get a trusted, experienced and suitable domestic helper who will stay with their parents all day either by shift or staying with them permanently.

Problem: Festivals are part of our lives. But it requires a lot of work to set up the festivities. Many guests also visit our home on special occasions. As a result, our home gets very dirty and messy. We need domestic help at most at that time.

Solution: Our application will provide domestic helpers to those families and make their festival more enjoyable at festival time with a reasonable price.

Problem: There are a lot of working parents in our city. They need trusted, experienced and educated domestic helpers to look after their children.

Solution: Our application will help them to achieve those needs in a single click.

Opportunities:

- The aim of this project is to replace the time-consuming and inconvenient procedure of finding domestic help with a simple and pleasant experience for the users.
- Pre-booking and on-demand booking will be promoted by Helping Hand, making them more accessible and inexpensive to users.
- Because of Helping Hand's verification process, hiring a domestic assistant through this app is highly secure, and there is minimal risk of being scammed.
- This software will be updated as needed in response to user comments and rating.
- This will be an intercity service. Later on, our services will be available in more cities.
- Now we will start with only female workers. Later on, we will add male workers as well.

4. Project goal and objectives

Goal:

Our ultimate goal is to develop an application, which would help the user to call a domestic helper on demand. It will make the user choose any suitable domestic helper and save their time and energy.

Usually, it is very difficult to find a domestic helper in the traditional approach. There always remains a trust issue, as the client also has to pay a good amount of money to the third party for getting the domestic helper. Our software would simplify the process of getting the domestic helper and making a bridge between them and the client.

Objectives:

- Set up a database.
- Create the Login and Registration system.
- Register the domestic helper.
- Keep the domestic helper NID card into the database.
- Also give a copy of it to the nearby thana.
- Bangla English both languages will be available.
- Provide basic medical help to the domestic helper.
- Do a basic medical checkup.
- Get user address from user GPS module.
- Arrange training sessions for the domestic helper.

Section 2

5. Product Description

a. Product Summary:

- Our services would include house holding tasks, such as house cleaning, washing clothes, dish washing, cooking, cutting vegetables, meats, fish, baby seating, looking after old people etc.
- Our user has the option to choose among some domestic helpers nearby them.
- Users can pre book services and also on-demand booking.
- Users can choose how many hours, weeks or months he/she needs the services.
- Users can get to know the cost of the services online.
- Concerned third party creates a direct communication platform between the user and domestic helper.

- Users can get experience and trusted helpers.
- Users can rate the services and the domestic helper as well.
- Users will also get some discounts.
- We can allocate user addresses from the GPS Module.
- Users can view domestic helpers' proof of identification (NID card).

b. Product Stakeholders:

The Stakeholders of this application are:

- Customers
- Domestic helpers
- Accountant
- Admin

6. System Context Diagram

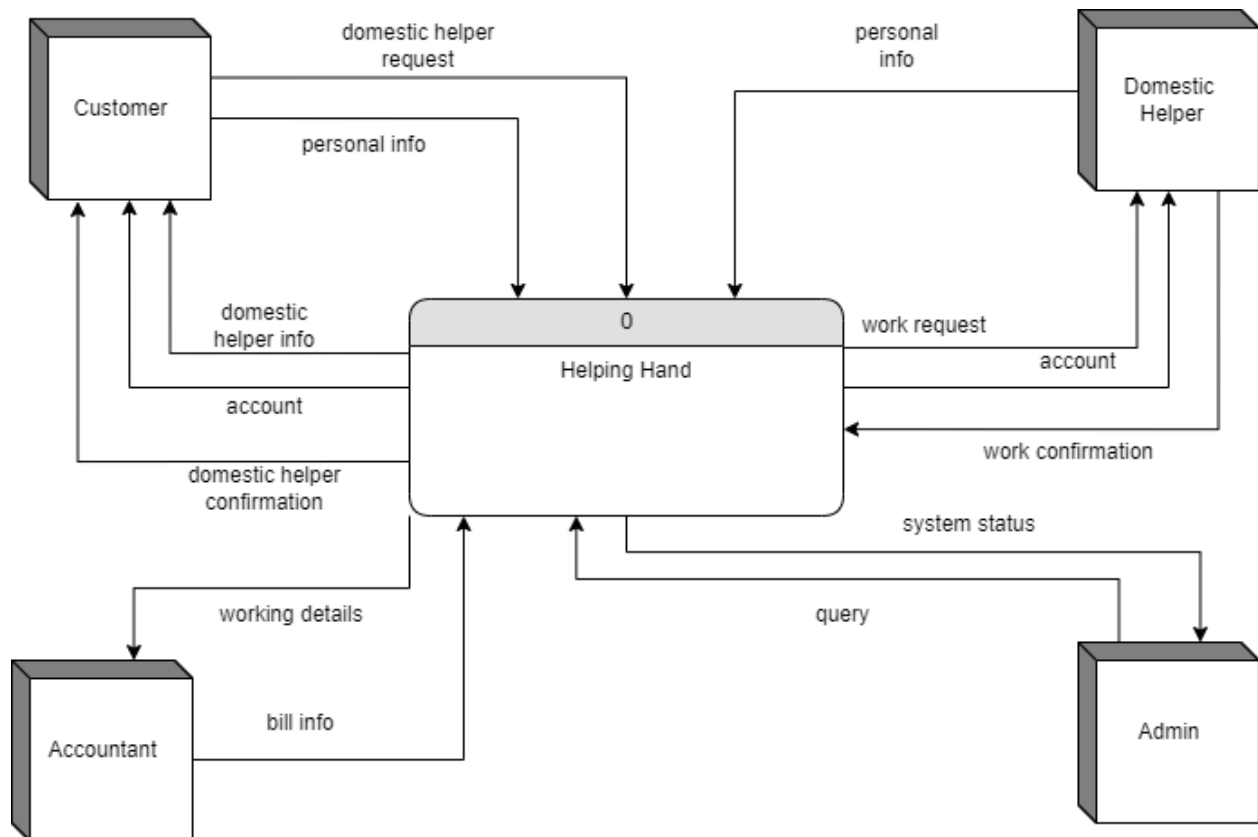


Fig 2.1: Context Level Data Flow Diagram

7. Hardware detail

Hardware Components:

- Database Server
- Application Server
- Web domain
- Laptop.
- Mobile phone

Hardware Architecture:

The minimum hardware requirements for any platform:

- A working internet connection and a good band width.
- A Laptop with at least Core i7 and 16GB RAM, 128GB SSD.
- For mobile devices at least 256 MB of free hard-drive space.
- For mobile devices at least 128 MB of RAM.
- Good enough processor.

Software Components:

- As it is an android application, this application will only run-on android operating system. It won't run on any other operating system.
- Flutter.
- XAMPP version at least v3.3.0.
- Android Studio Bumblebee.

Software Architecture:

- IOS (iOS 11.0 Tigris and higher)
- Android ("Nougat 7.0" and higher)

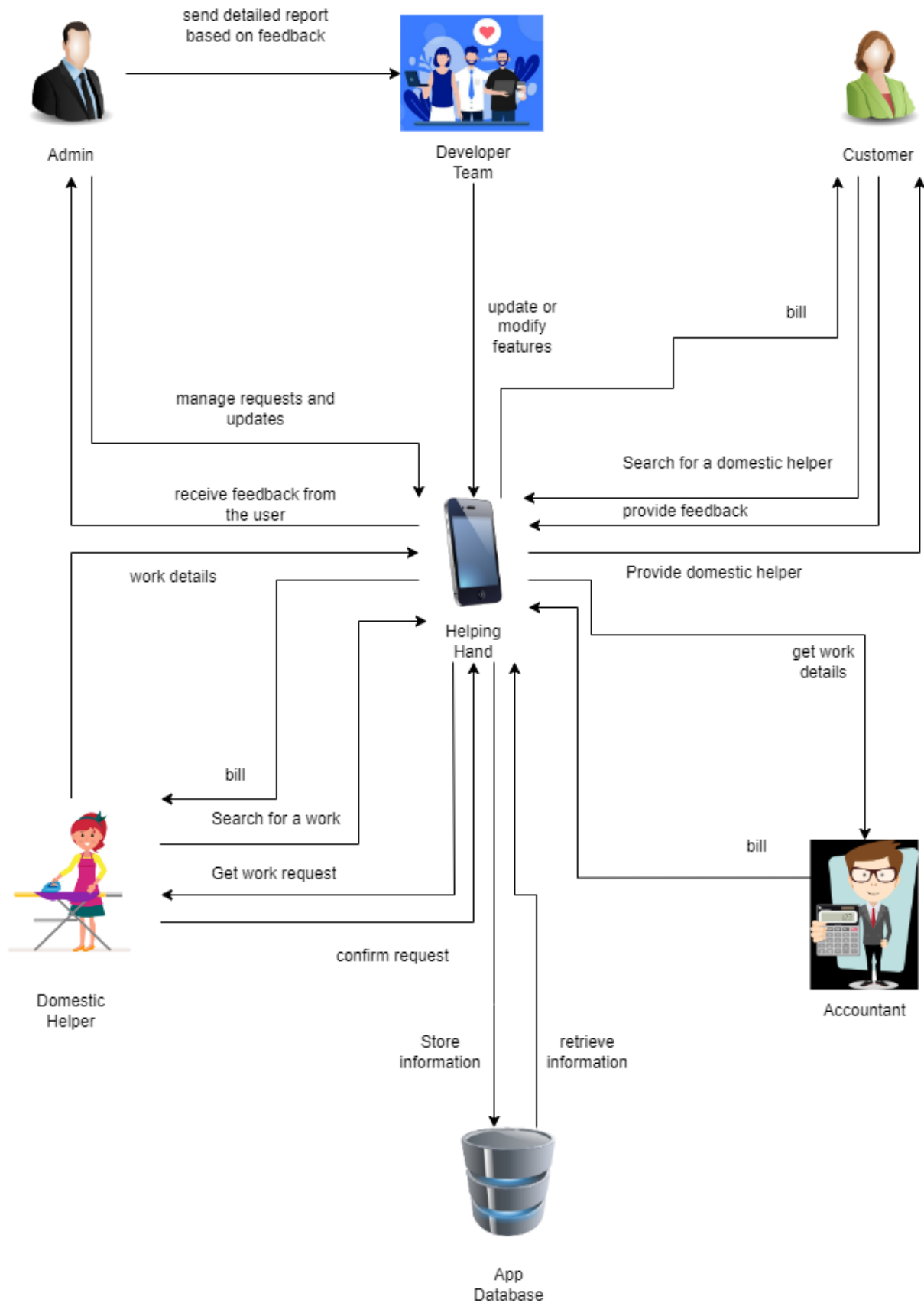


Fig 2.2: Rich picture

8. Key Technical Features of Software

- Makes life easier while finding a domestic helper.
- Takes as much as possible detailed information of domestic helpers to make the service secure and trusted.
- Both the options are available for pre booking and on-demand booking.
- Well categorized search options.
- Creates a user profile for the registered users.
- In-built chat box for communication.
- Less chance of data-loss as all information is saved in the database.

Section 3

9. Information Gathering methods

"Helping Hand" is a web-based application that will help to find domestic helpers nearby. To set the requirements of our system, we collected information from the stakeholders. We followed three processes to gather information. They are Interview, Questionnaire and Storytelling.

a. Interview

I chose to meet with the stakeholders to gain a better understanding. Interviewing is a critical step in acquiring data and information to meet the criteria. Interviews reveal details about a variety of important topics. Feelings and opinions, goal explanations, and crucial Human Computer Interactions are only a few examples (HCI). I began our interview by telling them about our web app and how it will work. Both open-ended and closed-ended questions were asked during the interview. While closed questions helped to rapidly complete the session by getting adequate information, open-ended questions allowed me to learn about their ideas and perspectives on the challenge they experienced while looking for a domestic helper. Stakeholders with explicit and general inquiries might use the pyramid structure inquiry.

Customer/user:

1. Do you think the proposed system will help to serve your needs properly?
2. How long did it take previously to get a domestic helper?
3. How many domestic helpers have you changed in the past two years?
4. If you have changed. Why did you change the domestic helper?
5. What type of work does your domestic helper help you with?

6. Are you satisfied with the current domestic helper that you have?
7. Do they think the new system will be successful and accepted?
8. Share your opinion on the new system.

Domestic helpers:

1. Do you have a mobile phone?
2. Are you able to read and write Bangla properly?
3. Do you feel safe while helping with domestic tasks/work?
4. How many houses do you help with domestic tasks/work every day?
5. What are the domestic tasks that you are capable of?
6. What's your average monthly income?
7. How frequently would you use the software?
8. Are you going to recommend the system to others?
9. Do you think the new system will be successful and accepted?
10. Share your opinion on the new system.

Owners:

1. How many times a year can they change the protocol?
2. Do they think the new system will be successful and accepted?
3. Share your opinion on the new system.

Admin/System Developer:

1. What are the security issues that will cause problems?
2. How often do they need to check the system?
3. How long will it take to update the system?
4. Can they work in case of an emergency?

b. Questionnaire

I created an online survey form on Google Forms as well as a hard copy survey form for the questionnaire session, and I asked general people (customers/users) and domestic helpers to respond to questions about challenges encountered in domestic tasks/work. The variety of multiple-choice questions, brief questions, and the chance to submit comments to specific questions, as well as whether they will be satisfied with our system.

Selected stakeholder: General people or customer/user of the system:

(Personal Information)

Read question 1-8 and circle the appropriate answer:

1. Select your gender:
 - Male
 - Female
 - Other
2. Do you have a smartphone?
 - Yes
 - No
3. Do you take any help from any domestic helper?
 - Yes
 - No
4. If yes. Does your domestic helper do part time or full-time domestic work?
 - Part time
 - Full time
 - I don't have any domestic helper
5. How often do you change domestic helpers?
 - Every 6 month
 - Every 1 year
 - Every 2 years
 - More than every 2 years
6. Why did you change your last domestic helper:

7. Do you believe that you have got a trusted domestic helper?
 - Yes
 - No
 - Maybe
 - I don't have any domestic helper

8. How did you find your domestic helper?

- Friends, family, or neighbors have helped me
- Caretakers suggested me
- From a third party
- I don't have any domestic helper

Read question and circle the appropriate number:

9. Do customers remain patient if the domestic helper makes any mistake?				
Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

10. Do you feel the necessity of an automated system for getting a domestic helper in this modern progressive era?				
Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

11. How much will this automated system help you?				
Not at all	little	a little much	helpful	very helpful
1	2	3	4	5

12. How much help do you think this automated application will do to the general people?				
Not at all	little	a little much	helpful	very helpful
1	2	3	4	5

13. Will you feel comfortable running a web application?

Not at all	little	a little much	comfortable	very comfortable
1	2	3	4	5

Selected stakeholder: Domestic helper

(Personal Information)

Read question 1-8 and circle the appropriate answer:

1. Select your gender:
 - Male
 - Female
 - Other
2. Do you have a smartphone (android phone) or a button phone?
 - Smart phone (android phone)
 - Button Phone
 - None
3. For what purpose do you use your mobile phone?
 - Phone calls
 - Message
 - Imo calls
 - Social Media uses
 - Others _____
 - None
4. How many years have you been working as a domestic helper?
 - 6 months
 - 1 years
 - 2 years
 - 3 years
 - More than 3 years

5. Your educational experience:
- P.S.C (up to class 5)
 - J.S.C (up to class 8)
 - S.S.C (up to class 10)
 - H.S.C (up to class 12)
 - Can read and write Bangla fluently
 - None
6. Do you work as a part time or full-time domestic helper?
- Part time
 - Full time
 - Both
7. How did you find the work?
- I got to know about this task from one of my currently working place
 - I got to know about this task from another domestic helper
 - Third party
 - Friendly and family

(Working Information)

Write your answers shortly below:

8. Do you feel safe to work as a domestic helper?
- _____
9. Have you ever faced any kind of harassment while working?
- _____
10. Is your personal income sufficient to meet you and your family's needs?
- _____
11. If a web application has been developed, how can I make it user friendly?
- _____

I have done the survey and got a mixed of positive and negative response:
The positive responses indicate they are ready to welcome the new system and found the current system to be time consuming and lengthy. Moreover, general people(customer/user) and domestic helper both gave positive responses because general people are tired of traditional ways of finding domestic helpers. General

people(customer/user) also want hassle free experience for getting domestic helper on a single click and new business will group up.

Users with negative responses were happy with the traditional/current system and comfortable with it. Also didn't want to adapt to a new system.

c. Story Telling

Story-1

I have talked to a working woman named Mona who was searching for a trusted domestic helper. In her busy life she needed a domestic helper to help her in her work. She could not find any trusted domestic helper even after looking for several months. Then she found a domestic helper who was not much trusted and not according to her expectations. The domestic helper helped in her house for two and a half months but stole many things from her house. One day Mona found that her locker was open, and the key was with the locker. Then she called for her domestic helper. But she did not respond. Then Mona looked for her domestic helper all around her home, but she could not find her. Then she called her caretaker and came to know that she left the home in a hurry a few hours ago. Then Mona filed a complaint to the police against her. But Mona couldn't submit any proof such as a picture or NID card photocopy etc. So, the police couldn't help much, and her valuable things are still missing.

Findings from story:

- The customer should be able to get a domestic helper near them.
- A copy of the NID card must be taken from the domestic helper.
- The domestic helpers NID card must be verified and saved in the database.
- A copy of the NID card of the domestic helper will be given to the customer.
- The customer must be able to give a complaint or feedback about the domestic helper.
- Necessary action must be taken against complaint or feedback as soon as possible.

Story-2

I also talked with a working lady named Rani Bishas. She was a branch manager of a reputed bank for 5 years. When she gave birth to her child, she got maternity leave from the bank. Soon the maternity leave was getting over and she was tense about her child. Mrs. Bishas was looking for a trusted, educated and a caring babysitter for her beloved daughter to look after 24/7. But she couldn't find any. After looking for so long, she found a babysitter who was not educated. She spent more time on her mobile phone

rather than taking care of the baby. Due to this the baby also had a bad habit of looking at the mobile phone while eating. And, the baby didn't like human interaction, rather would like to spend time on gadgets. So unwillingly Mrs. Bishas resigned from the bank and dedicated herself to taking care of her daughter.

Findings from story:

- The customer should be able to get a trusted and caring baby sitter near them. Who would stay with the baby 24/7.
- The babysitter should be educated enough (At least pass SSC or HSC).
- The babysitter should be responsible.
- Adequate training should be given to the babysitter.

10. Major functionalities offered by the system

- Anyone with internet connection and an android phone can use this app.
- Can easily find a suitable domestic helper.
- Easily accessible features will make the user experience better.
- Customers can communicate with the admin directly by chatting.
- All the provided data by the user will be stored in the application database.

11. Use Case Diagram

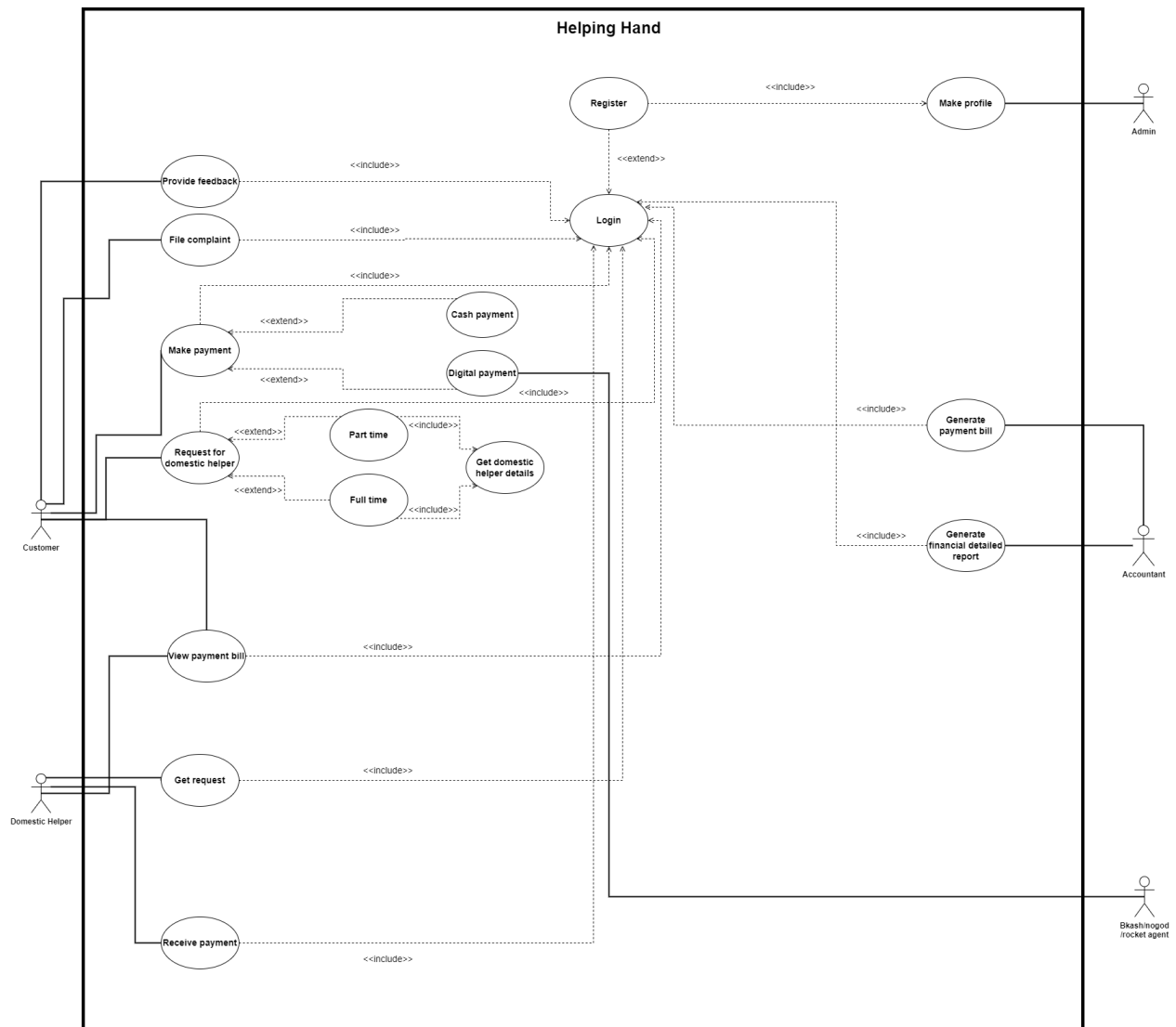


Fig 3.1: Use case diagram

12. Normal Scenarios

Scenario 1:

Use Case Name: Register		Unique ID: SA-00001
Actor(s): Customer, domestic helper.		
Stakeholders: Customer, domestic helper.		
Description: User registers in the app as Customer or domestic helper.		
Triggering Event: User registers in the app and inputs information.		
Trigger type: External		
Steps Performed:	Information Required for Steps:	
1. The registration interface loads.		
2. Selects user type.	the user wants to register as a customer or domestic helper.	
3. User enters the following information: Email, User type, user name, mobile Number, address, NID number, NID card copy, photo, password etc.	Personal information of the user like User type, user name, Mobile Number, password, email, NID number, NID card copy, photo, password.	

4. Click the submit button.	All required information must be filled up.
5. If all information is correct then the user will be registered to the system.	
6. A unique id will be given to the user and a confirmation message will be shown to the user interface.	Unique id and a confirmation message
Pre-condition: User needs to have an idea about the features of the app.	
Post-condition: Users have to carefully input all required information while registering.	
Assumption: User wants to find a domestic helper or task through the app.	

Scenario 2:

Use Case Name: Request for domestic helper		Unique ID: SA-00002
Actor(s): Customer.		
Stakeholders: Customer, Domestic helper, Admin		
Description: View list of available domestic helper.		
Triggering Event: After requesting the customer will be shown a list of available domestic helpers.		
Trigger type: External		
Steps Performed:	Information Required for Steps:	
1. User logs in to the system.		
2. Click the Find Domestic helper button.	users must be registered in the app.	
3. Fills up required information on the page like part time or full time and types of work etc.	Personal preferences of the user like part time or full time and types of work.	

4. Click the search button.	All required information fields must be filled up properly.
5. A list of available domestic helpers appears.	Domestic helper matching user's preferences will have to be stored in the app database.
6. Choose a domestic helper from the list containing name, rating, number of houses worked successfully.	Chosen domestic helper and name, rating, number of houses worked successfully
7. Domestic helper's name, address and phone number, gender, preferable working location, preferable time, NID number, NID card copy, photo will be shown for confirming.	Domestic helper's name, address and phone number, gender, preferable working location, preferable time, NID number, NID card copy, photo

<p>8. After domestic helper finishes working, the customer will have to pay using the "Payment" option</p> <p>a. If pay with cash is selected just click the "Confirm" option.</p> <p>b. If digital payment is selected, then choose an agent like bkash/nagad/rocket. Suppose if Bkash payment is selected then:</p> <ul style="list-style-type: none"> • Give your Bkash number. • Enter the payable amount. • Enter bkash pin. • Select "Confirm" option 	<p>agent number, payable amount, agent pin</p>
<p>9. If payment is done a confirmation message will be shown. Else will show an error message</p>	<p>Confirmation message, error message</p>
<p>Pre-condition: User needs to be Registered to the app.</p>	
<p>Post-Condition: User has successfully viewed the available domestic helper list.</p>	
<p>Assumptions: User wants to find a domestic helper through the app.</p>	

13. Alternate Scenarios

Scenario 1:

Use Case Name: Register		Unique ID: SA-00001
Actor(s): Customer, domestic helper.		
Stakeholders: Customer, domestic helper.		
Description: User registers in the app as Customer or domestic helper.		
Triggering Event: User registers in the app and inputs information.		
Trigger type: External		
Steps Performed:	Information Required for Steps:	
1. The registration interface loads.		
2. Selects user type.	the user wants to register as a customer or domestic helper.	
3. User enters the following information: Email, User type, user name, mobile Number, address, NID number, NID card	Personal information of the user like User type, user name, Mobile Number, password, email.	

copy, photo, password etc.	
4. Click the submit button.	All required information must be filled up.
5. If any information is not correct then an error message will be shown that information is not valid and which information is invalid is also shown. Then prompted to enter valid information.	Error message, invalid information
6. The user will enter correct information and continue with the registration.	Correct information
7. A unique id will be given to the user and a confirmation message will be shown to the user interface.	Unique id and a confirmation message
Pre-condition: User needs to have an idea about the features of the app.	
Post-condition: User must carefully input all required information while registering.	
Assumption: User wants to find a domestic helper or task through the app.	

Scenario 2:

Use Case Name: Request for domestic helper		Unique ID: SA-00002
Actor(s): Customer.		
Stakeholders: Customer, Domestic helper, Admin		
Description: View list of available domestic helper.		
Triggering Event: After requesting the customer will be shown a list of available domestic helpers.		
Trigger type: External		
Steps Performed:	Information Required for Steps:	
1. User logs in to the system.		
2. Click the Find Domestic helper button.	users must be registered in the app.	
3. Fills up required information on the page like part time or full time and types of work etc.	Personal preferences of the user like part time or full time and types of work.	

4. Click the search button.	All required information fields must be filled up properly.
5. A list of available domestic helpers appears.	Domestic helper matching user's preferences will have to be stored in the app database.
6. Choose a domestic helper from the list containing name, rating, number of houses worked successfully.	Chosen domestic helper and name, rating, number of houses worked successfully
7. Domestic helper's name, address and phone number, gender, preferable working location, preferable time, NID number, NID card copy, photo will be shown for confirming. As per policy if the domestic helper is part time, then the customer may get it instantly. But if the domestic helper is full time (24/7) then it may take 3-7 days normally to get the domestic helper. If the user wants it urgently then he would have to pay extra charges.	Domestic helper's name, address and phone number, gender, preferable working location, preferable time, NID number, NID card copy, photo

<p>8. "Urgent Need" option will be there too, the user must click it for urgent delivery. In case of urgent delivery user must pay Tk. 250 advance through digital payment</p> <p>If "Urgent Need" is selected, then:</p> <ul style="list-style-type: none"> • Give your agent number. • Enter the payable amount with extra 250tk. • Enter the agent pin. • Select "Confirm" option 	<p>agent number, payable amount, agent pin</p>
<p>9. If payment is done a confirmation message will be shown. Else will show an error message</p>	<p>Confirmation message, error message</p>
<p>Pre-condition: User needs to be Registered to the app.</p>	
<p>Post-Condition: User has successfully viewed the available domestic helper list.</p>	
<p>Assumptions: User wants to find a domestic helper through the app.</p>	

14. Functional Requirements

Functional requirements are product features or functions those developers must implement to enable users to accomplish their tasks. So, it's important to make them clear both for the development team and the stakeholders. The functional requirements of our application are:

1. Users will be able to access the application via multiple devices.
2. Users will be able to sign-up as a customer or domestic helper.
3. Customer and domestic helpers will have different user interfaces.
4. Users will be able to give their preference for better results.
5. Users will be able to both input and select required data.
6. All information will be stored in the app database.
7. All stored information will be secured and cannot be tampered with.
8. A user profile will be created for all registered users.
9. Users will be able to edit profiles anytime.
10. User's edited information will be automatically updated and stored.
11. Updated data of the domestic helpers' availability will be shown.
12. Option for both part time and full time domestic helper will be available.
13. Proper domestic helper will be suggested as per the given information of the user.
14. Will encrypt all user data and host it in the cloud for data security.
15. Will verify the identity of the users by email verification while registering.
16. Users will get a verification code in their email or phone number.
17. Users will be able to reset passwords through request.
18. Users will be able to rate the domestic helper and send feedback or file a complaint.
19. Users will be able to rate and give feedback about the application.
20. Manager will be able to send reports to the owner.
21. Manager will be notified about any feedback from the users.

15. Non-Functional Requirements

A non-functional requirement is one that defines criteria that can be used to evaluate a system's performance rather than specific actions. Functional requirements, on the other hand, define precise behavior or functions. Our application's non-functional requirements are as follows:

1. The user interface must be simple and easy to use.
2. Users should be able to interact with one another.
3. To reduce the number of bugs, the software must be updated on a regular basis.
4. To process all the data, the hardware must be powerful.

5. It must protect users' privacy and provide security.
6. The system must be designed in such a way that it can be readily maintained, updated, or upgraded in the future to add new features.
7. To ensure robustness and eliminate any security threats, the system must be checked and maintained on a regular basis.

Section 4

16. Entity Relationship Diagram

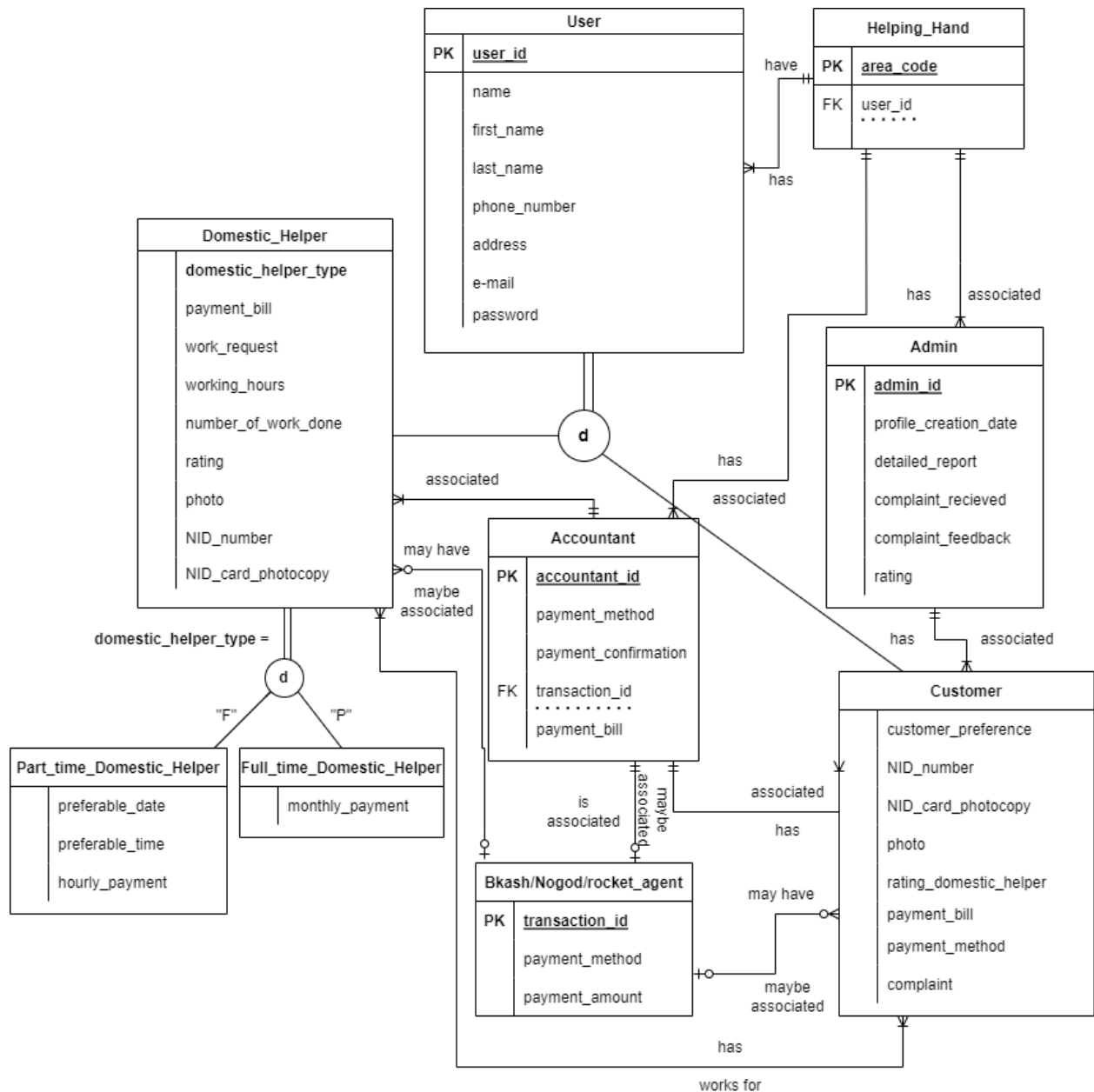


Fig 4.1: E-R Diagram

17. Logical Data Flow diagram

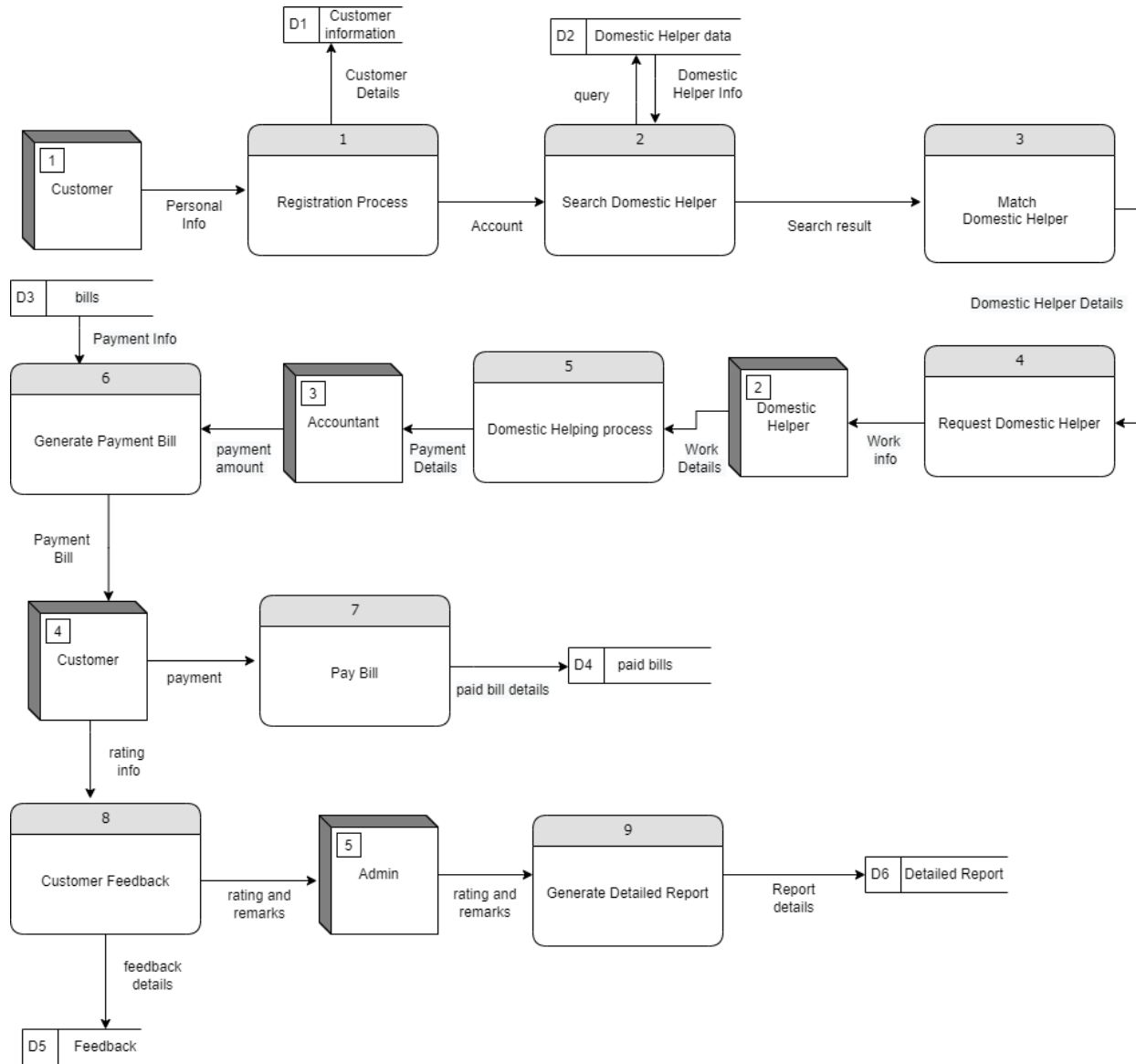


Fig 4.2: Logical Data Flow Diagram

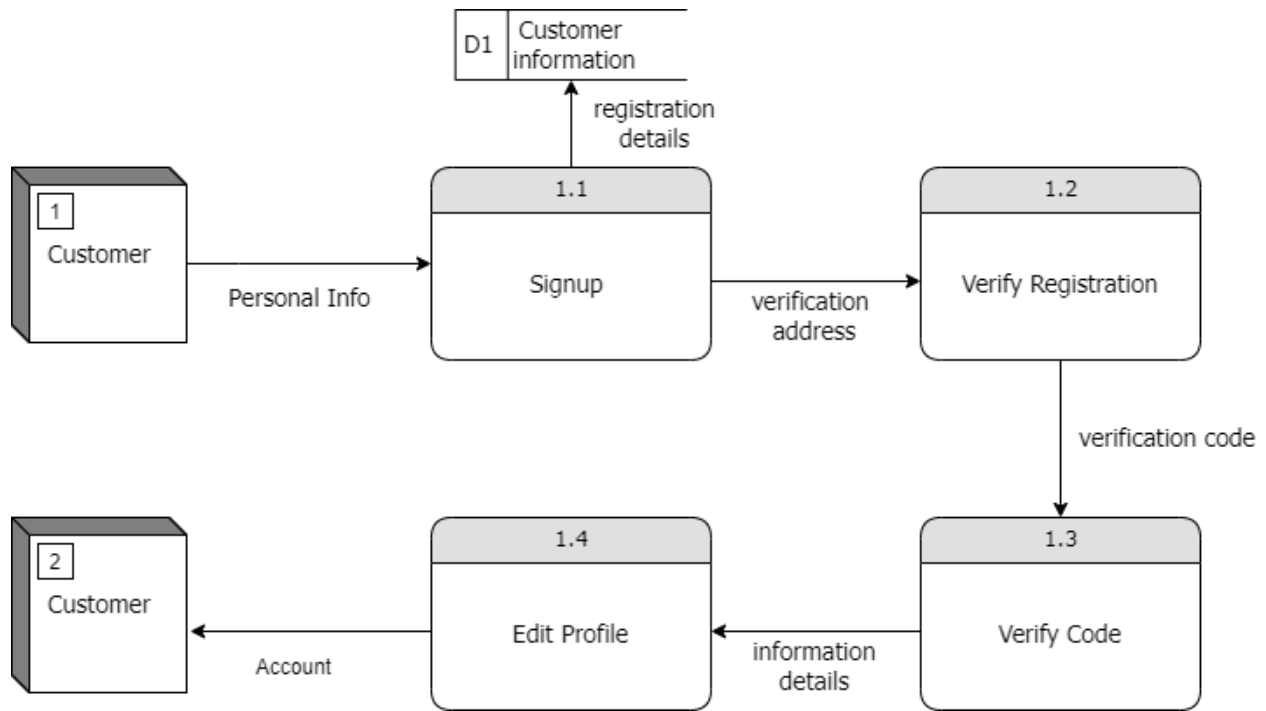


Fig 4.2a: Logical Data Flow Diagram for “Registration Process”

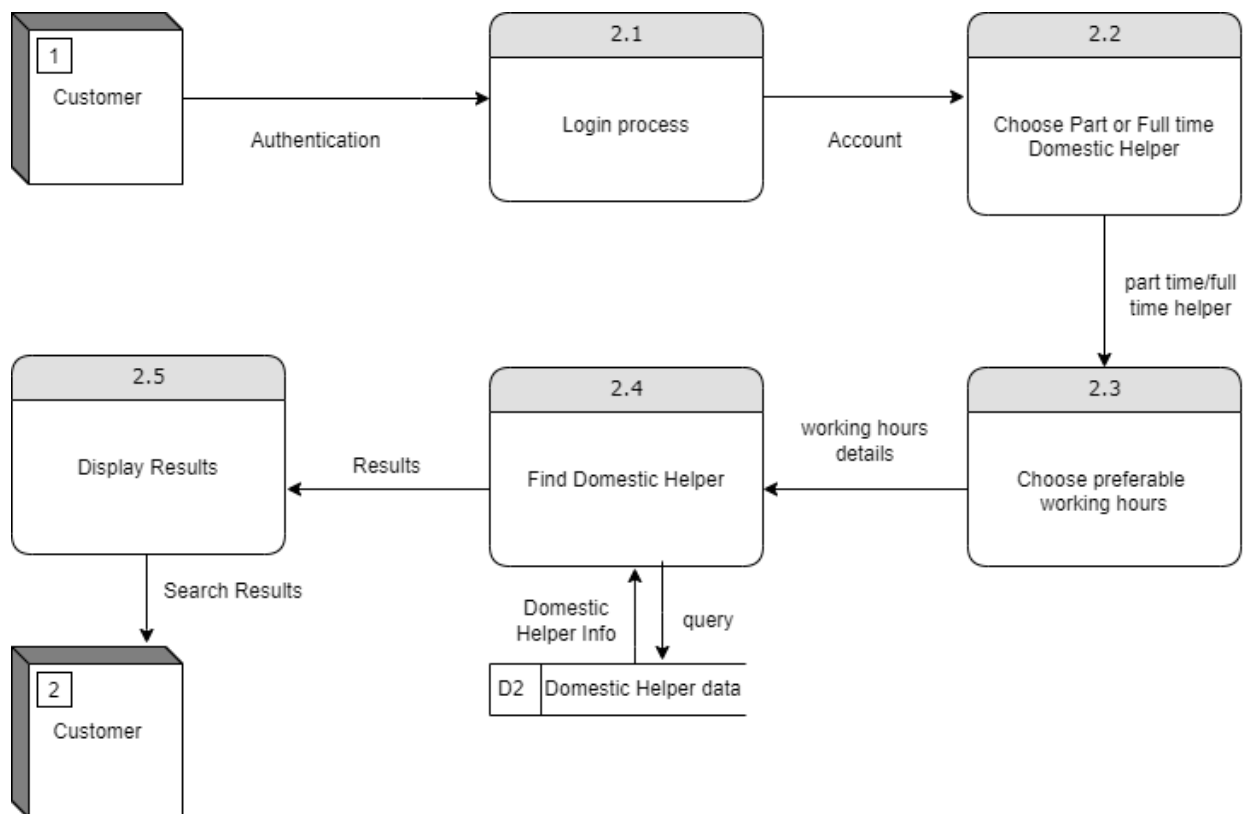


Fig 4.2b: Logical Data Flow Diagram for “Searching Domestic Helper”

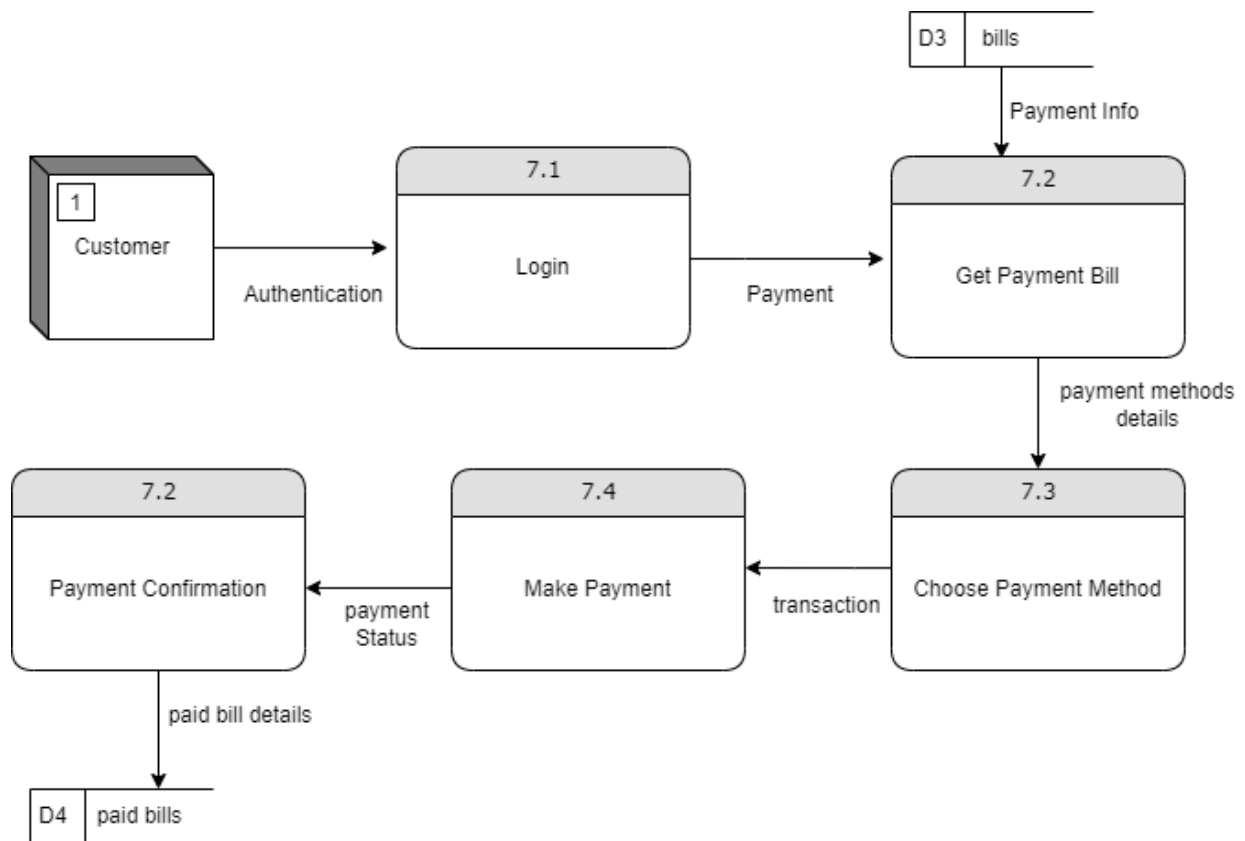


Fig 4.2c: Logical Data Flow Diagram for “Pay Bill”

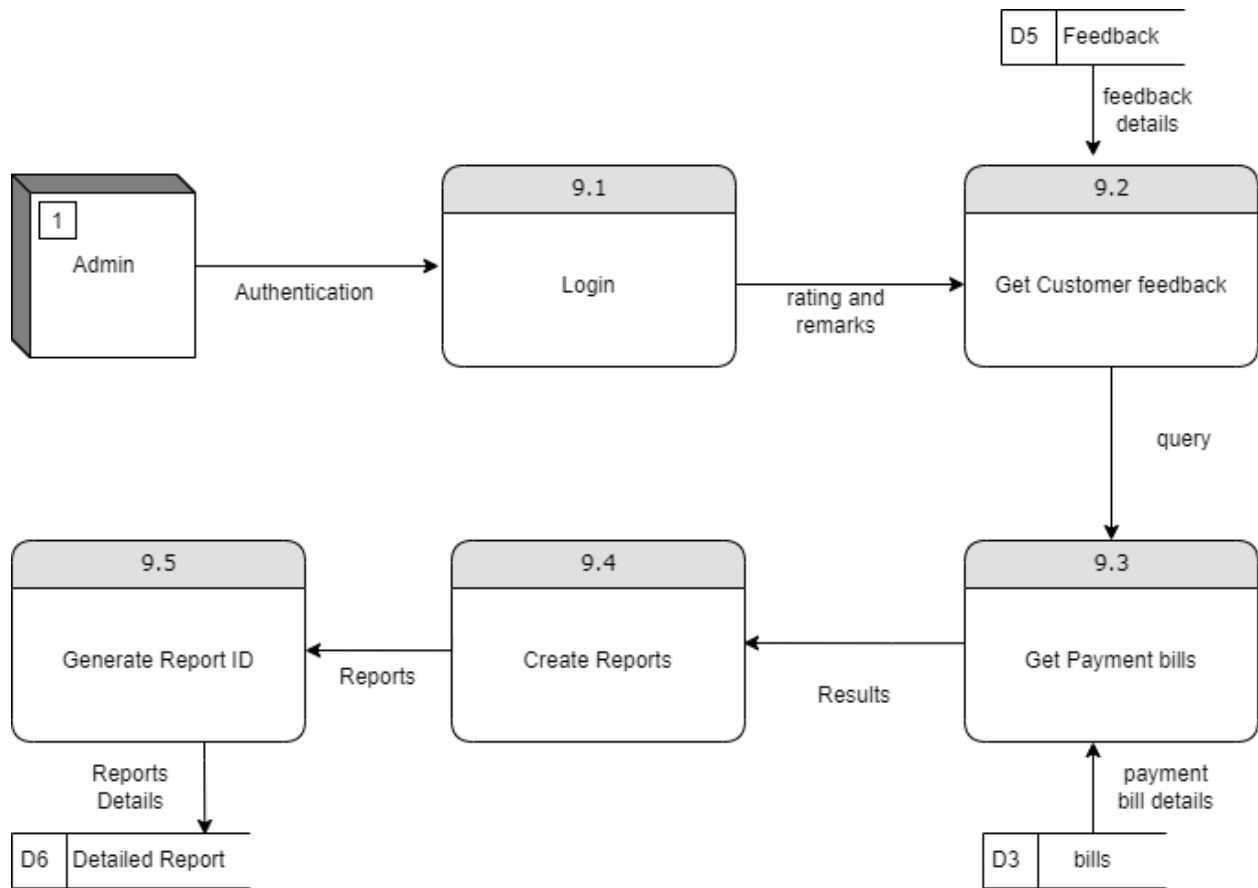


Fig 4.2d: Logical Data Flow Diagram for “Generate Report”

18. Physical Data Flow diagram

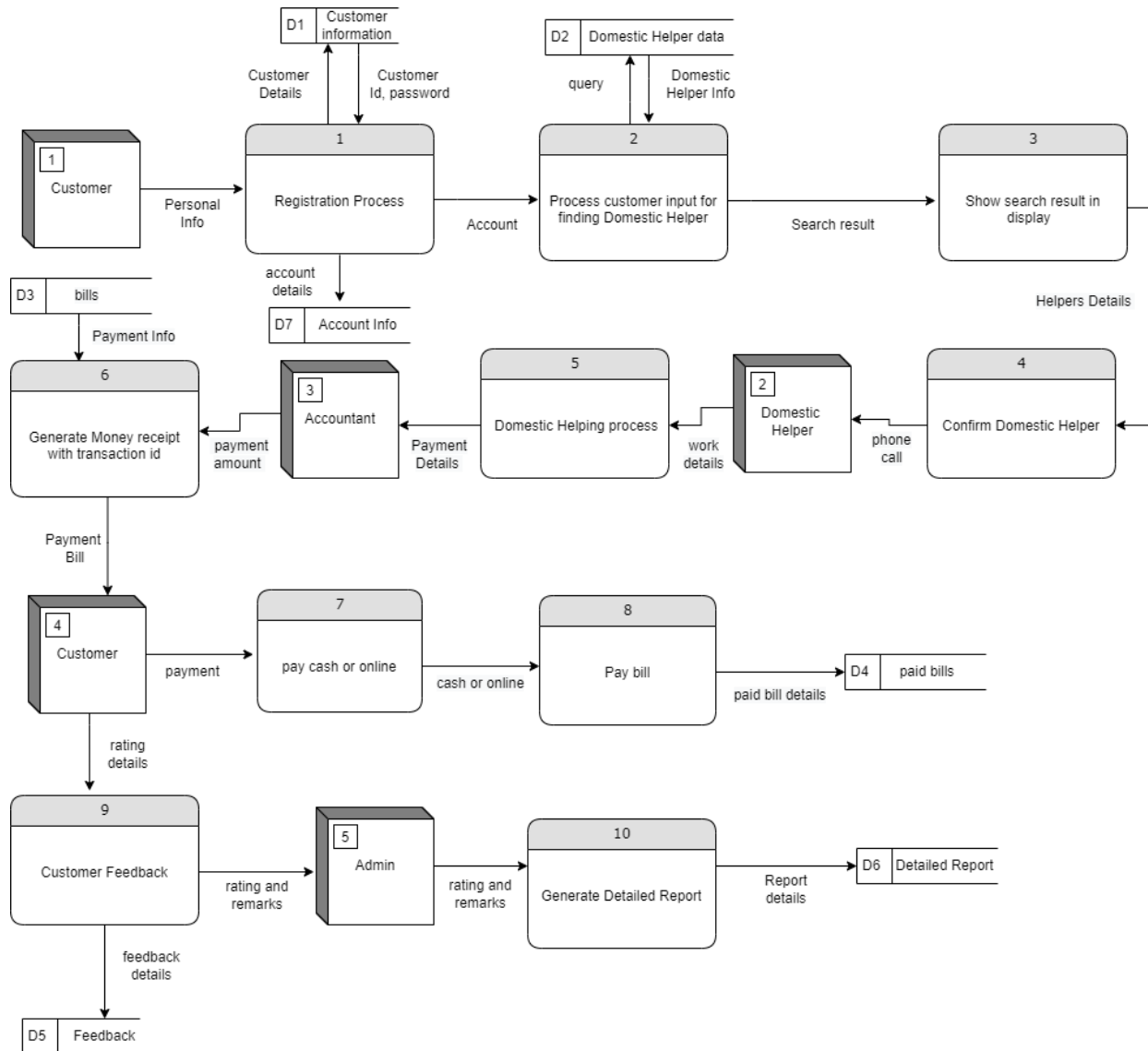


Fig 4.3: Physical Data Flow Diagram

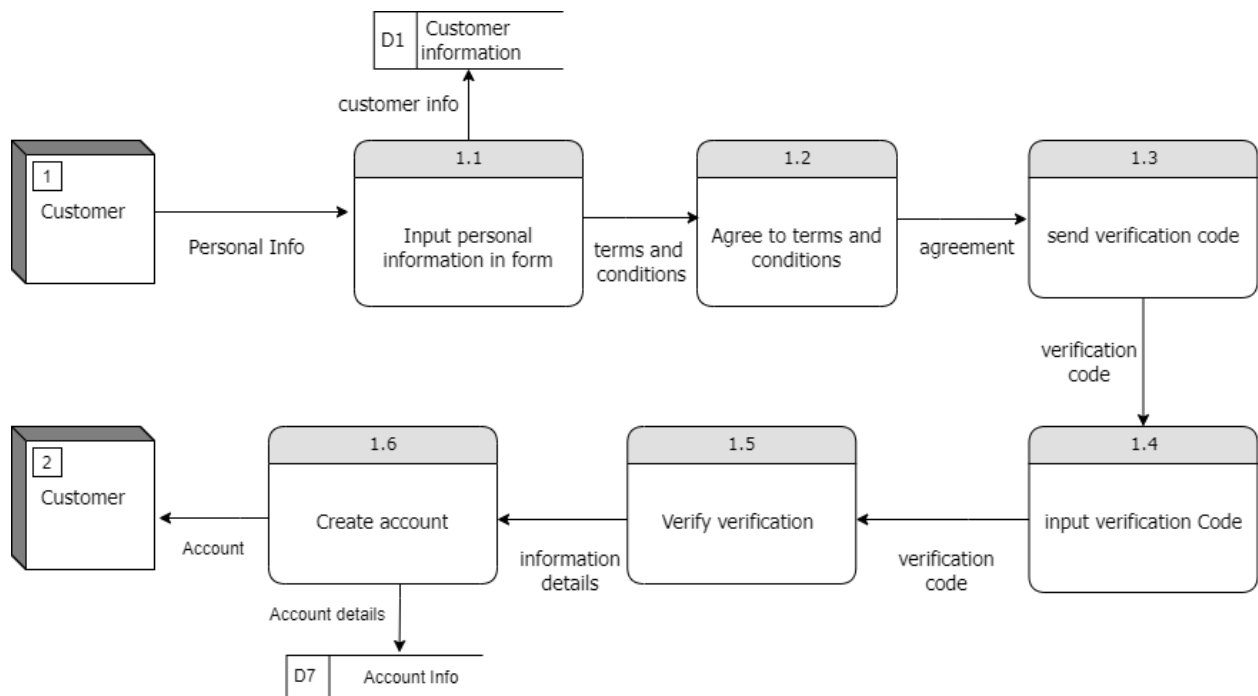


Fig 4.3a: Physical Data Flow Diagram “Registration Process”

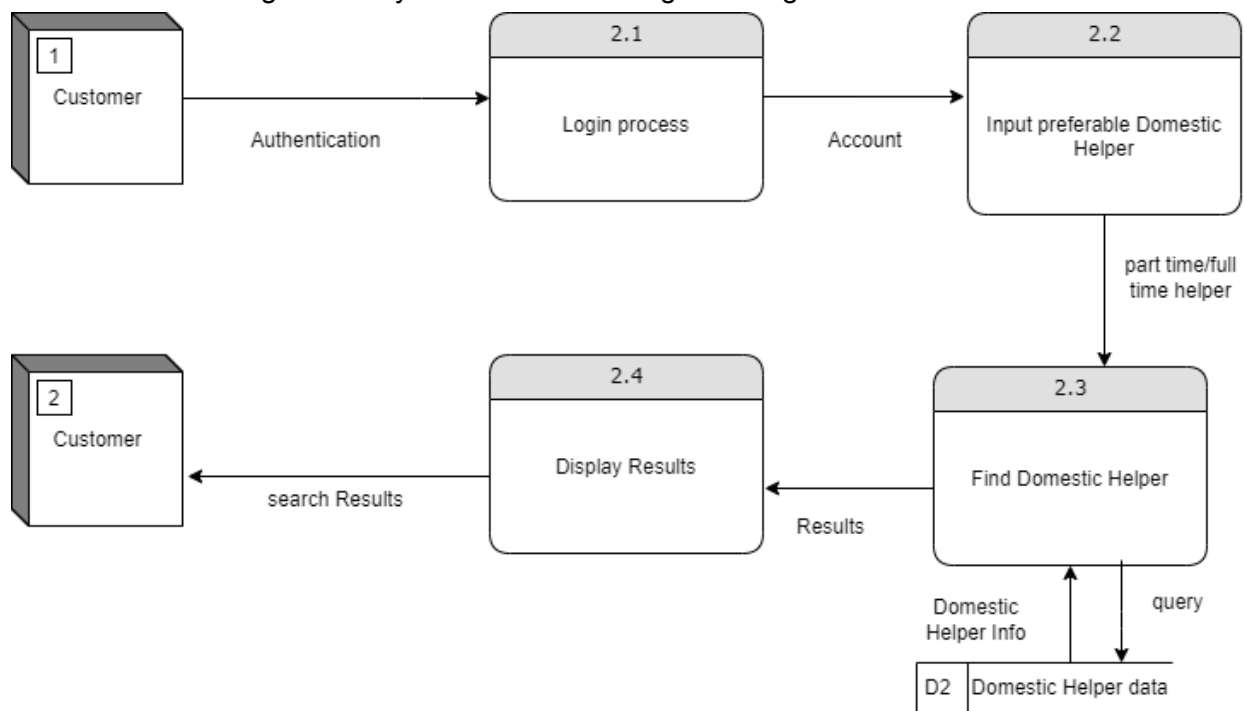


Fig 4.3b: Physical Data Flow Diagram “Searching Domestic Helper”

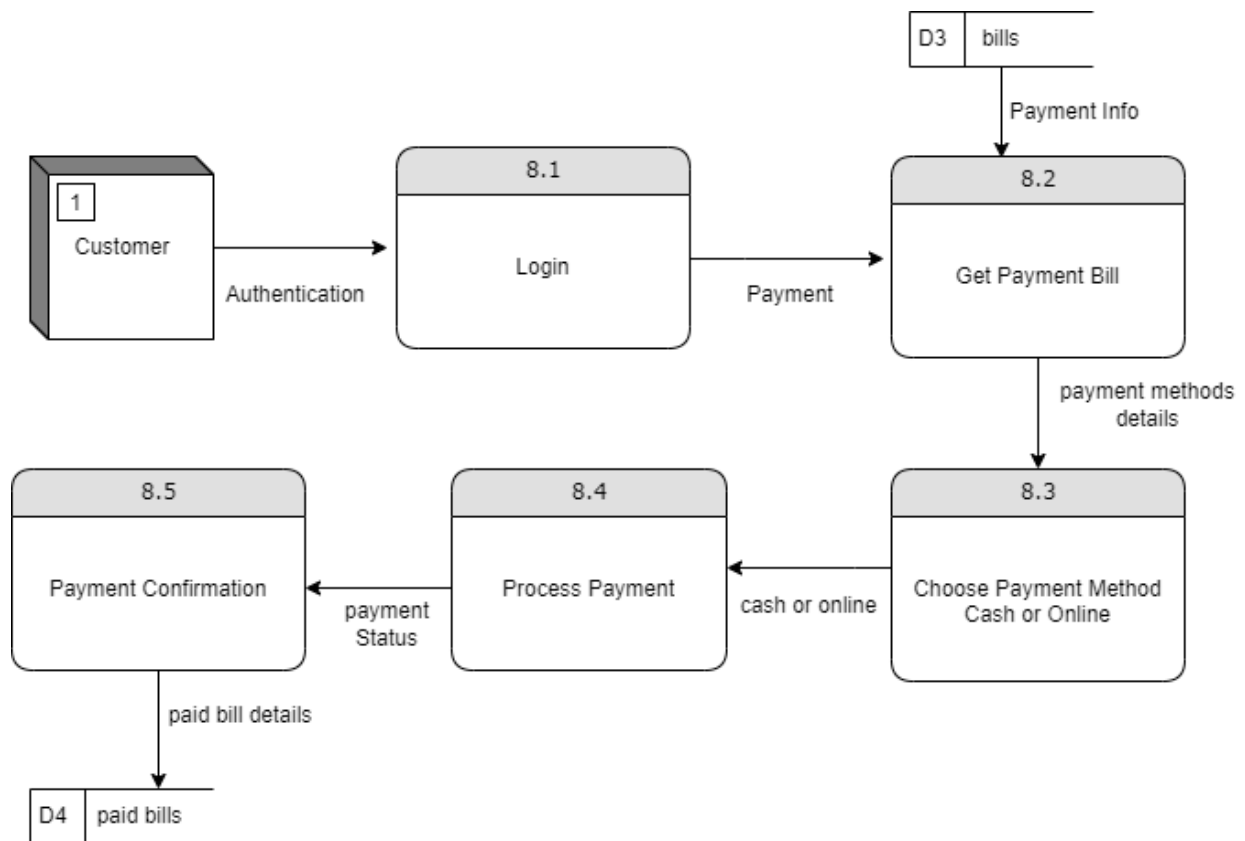


Fig 4.3c: Physical Data Flow Diagram "Pay Bill"

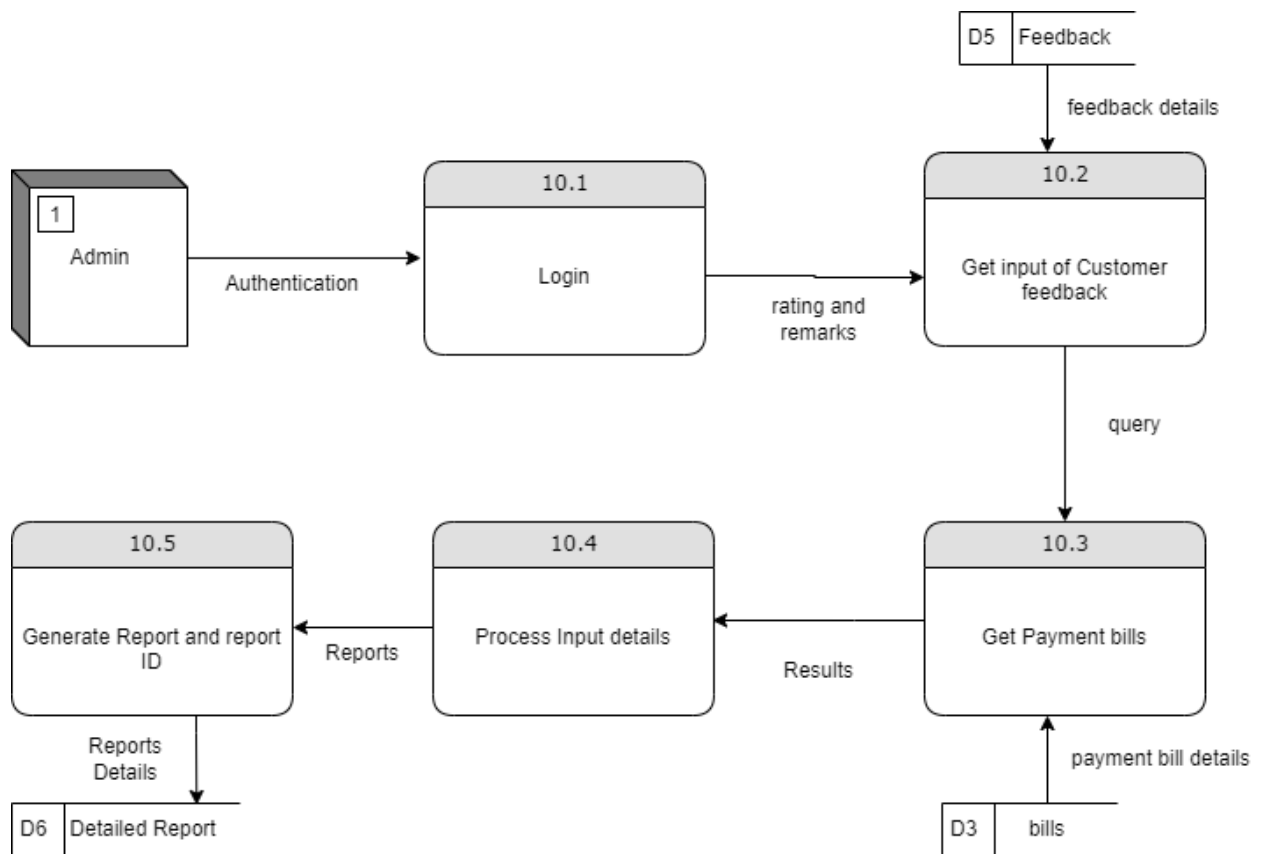


Fig 4.3d: Physical Data Flow Diagram "Generate Report"

19. Activity diagrams

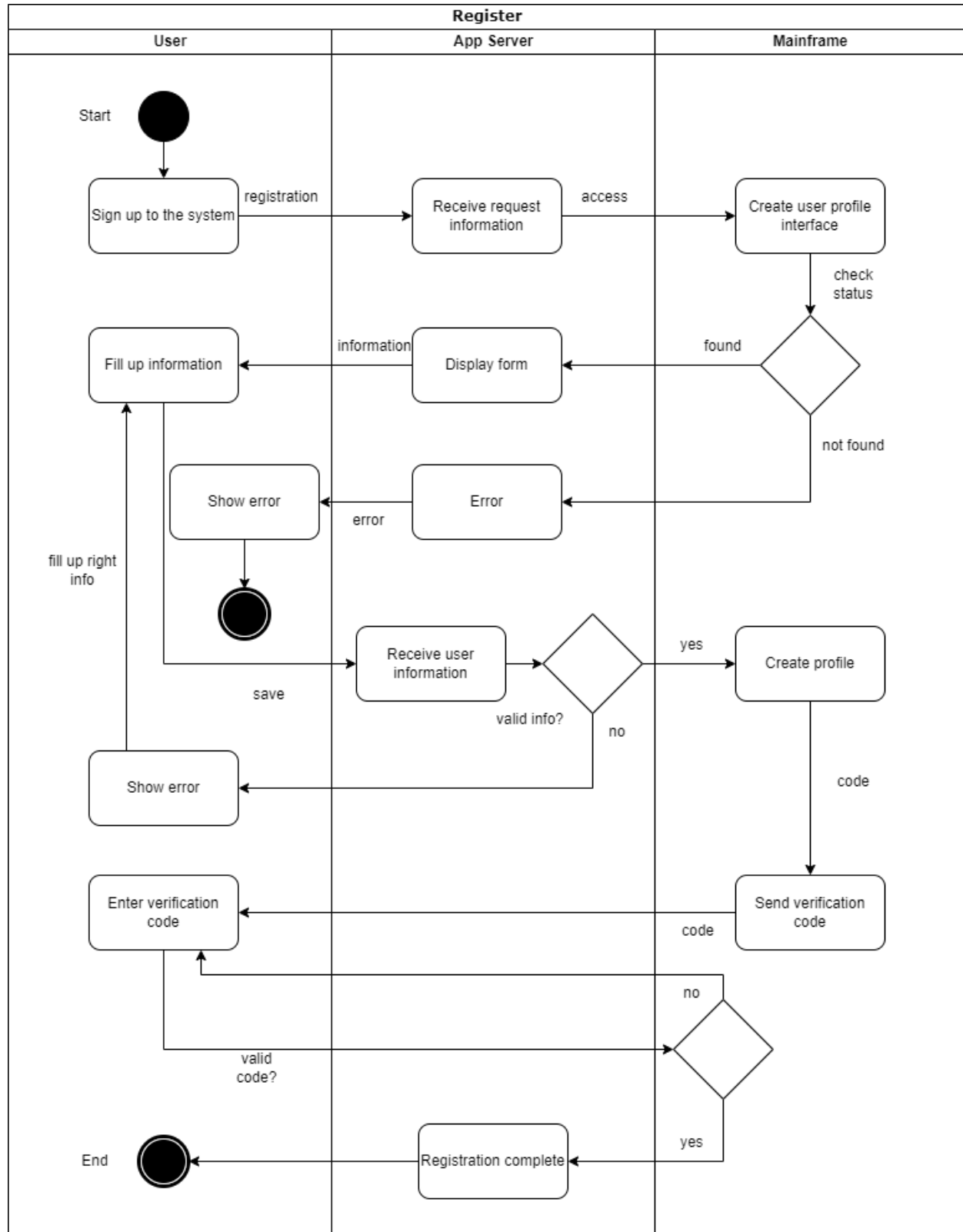


Fig 4.4a: Activity Diagram for "Registration Process"

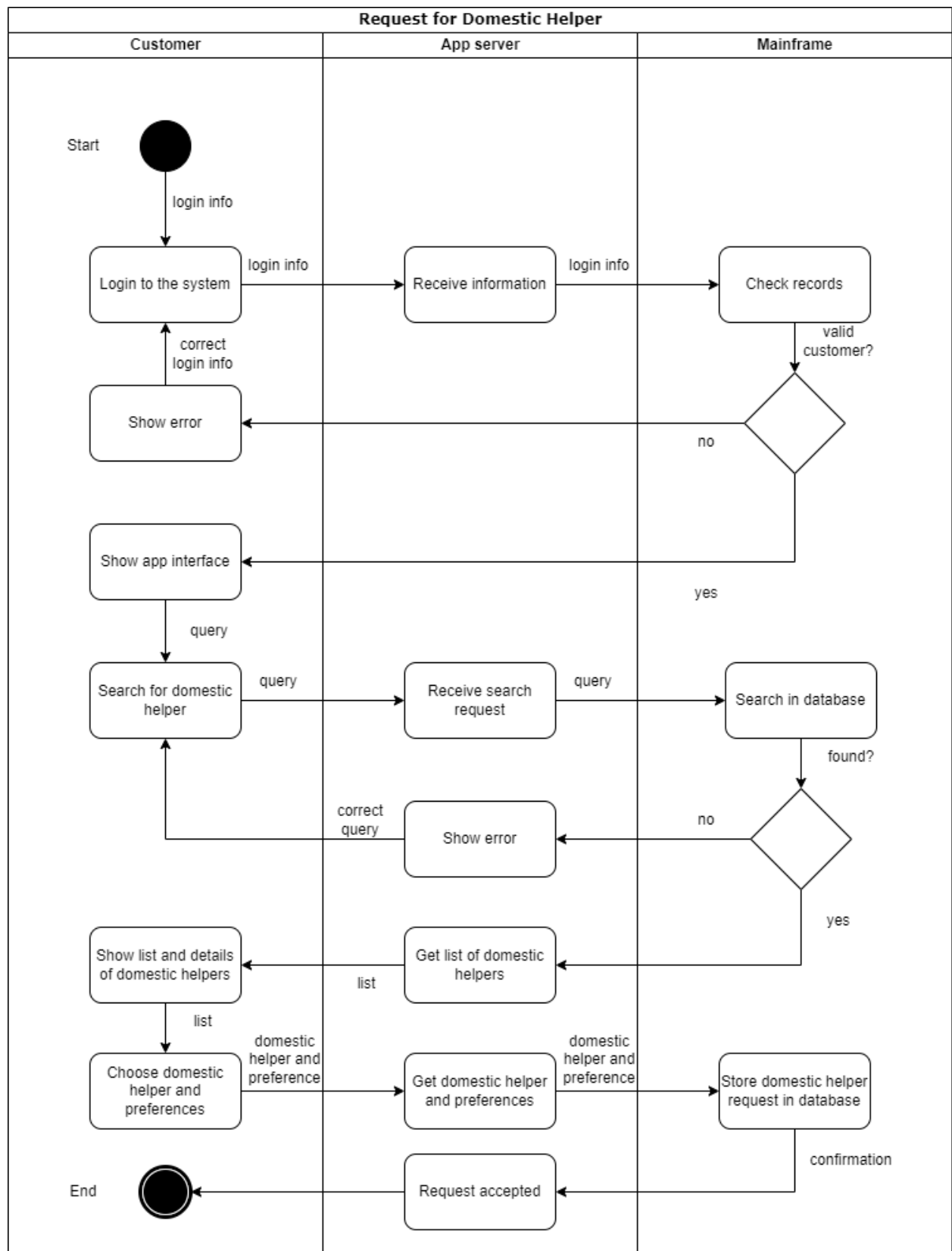


Fig 4.4b: Activity diagram for “Request for Domestic Helper”

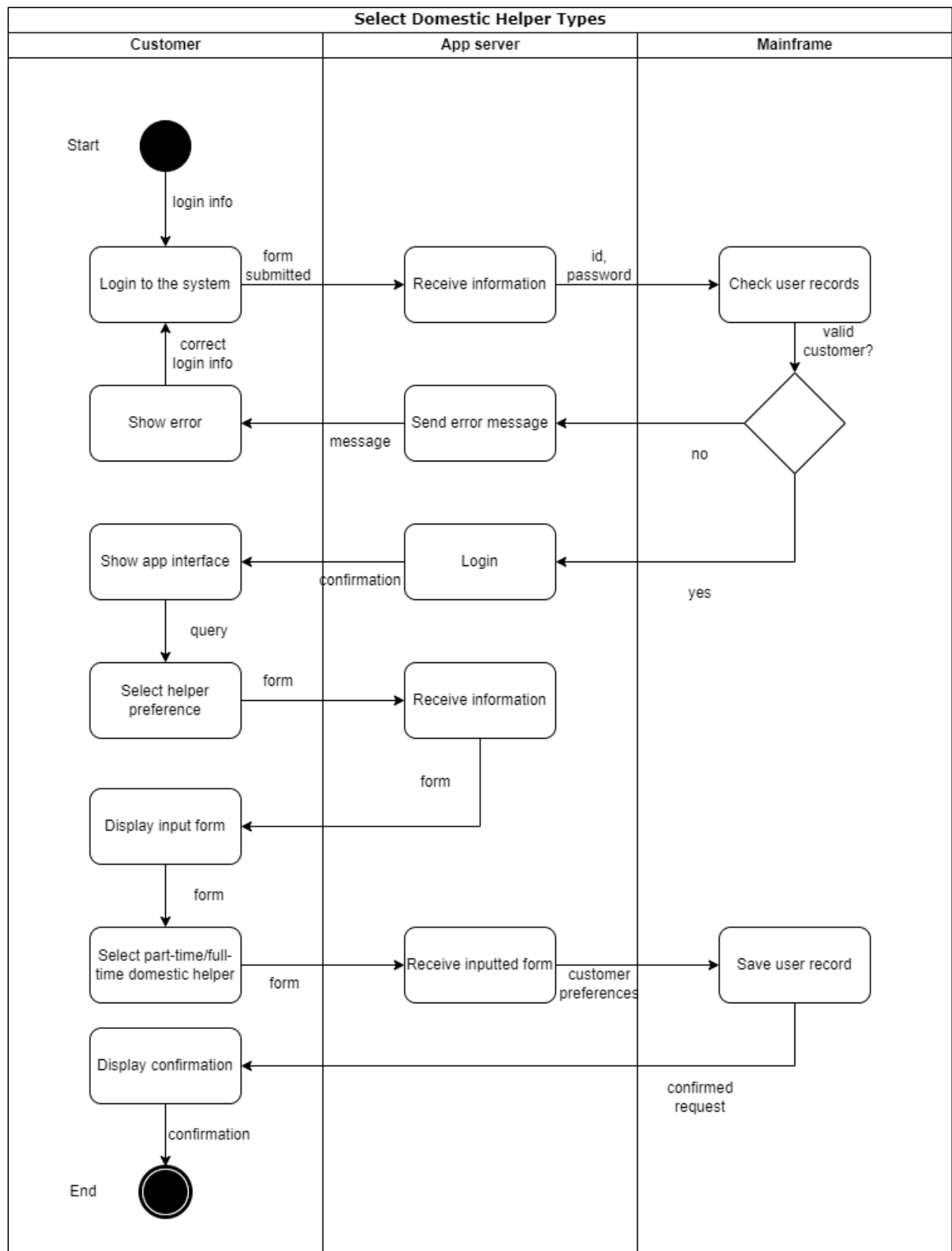


Fig 4.4c: Activity diagram for “Select Domestic Helper types”

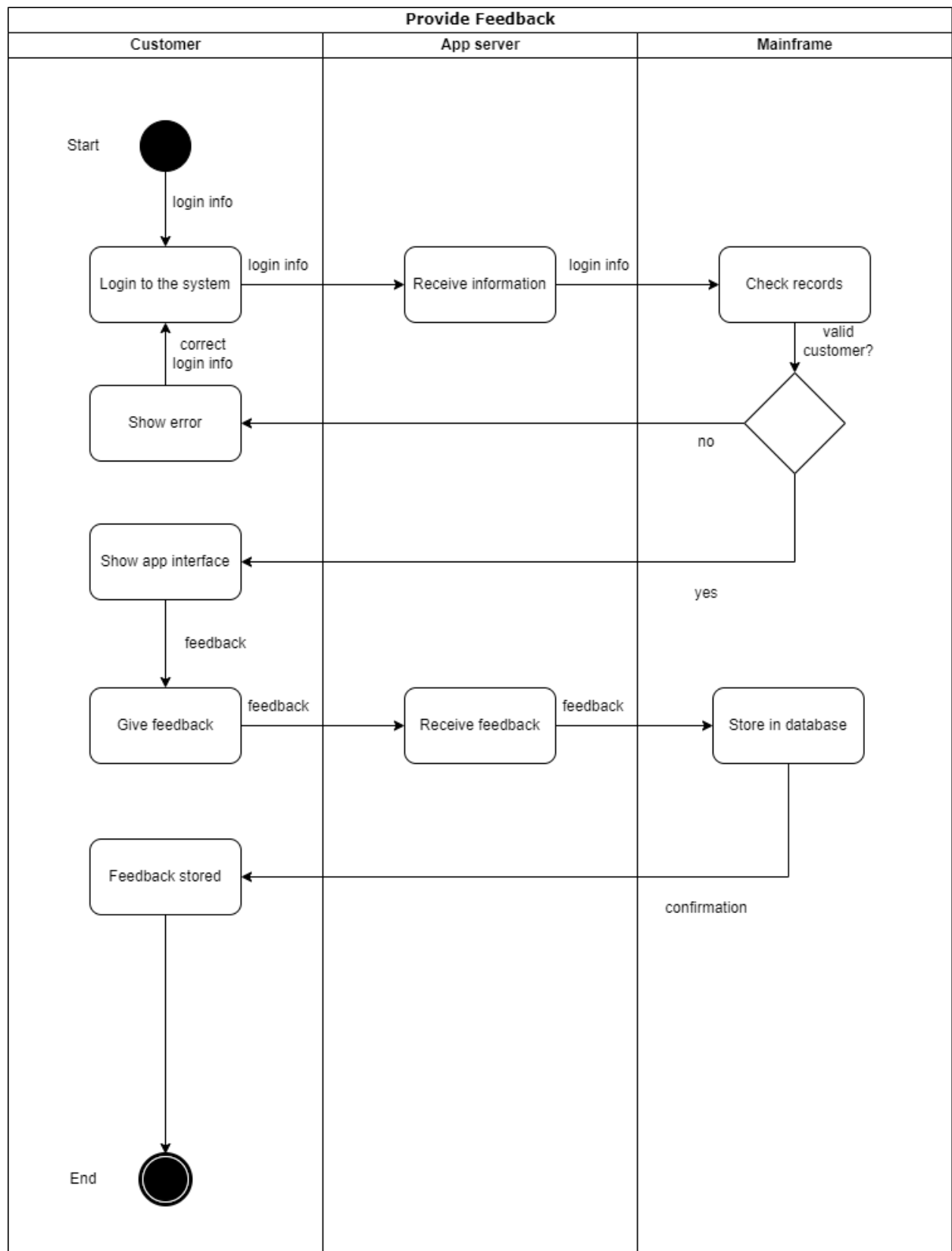


Fig 4.4d: Activity diagram for “Provide Feedback”

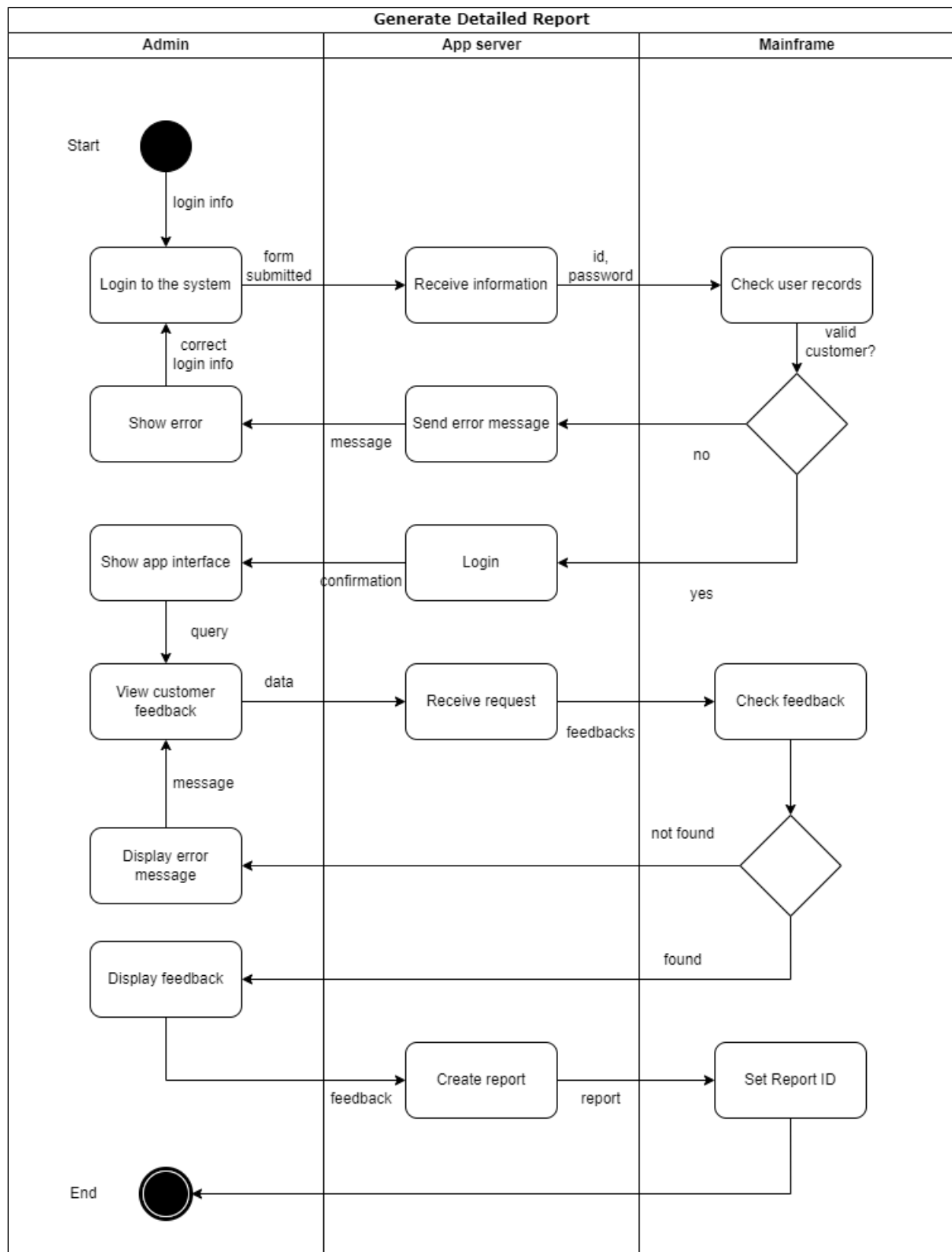


Fig 4.4e: Activity diagram for “Generate Detailed Report”

20. Sequence diagrams

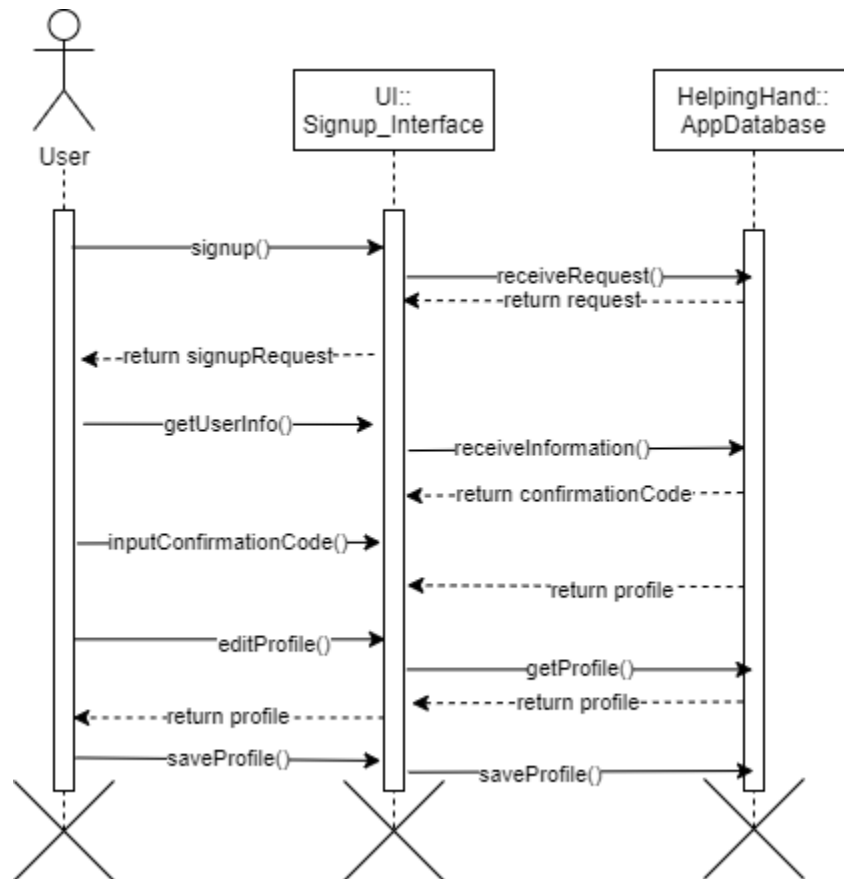


Fig 4.5a: Sequence diagram for "Registration Process"

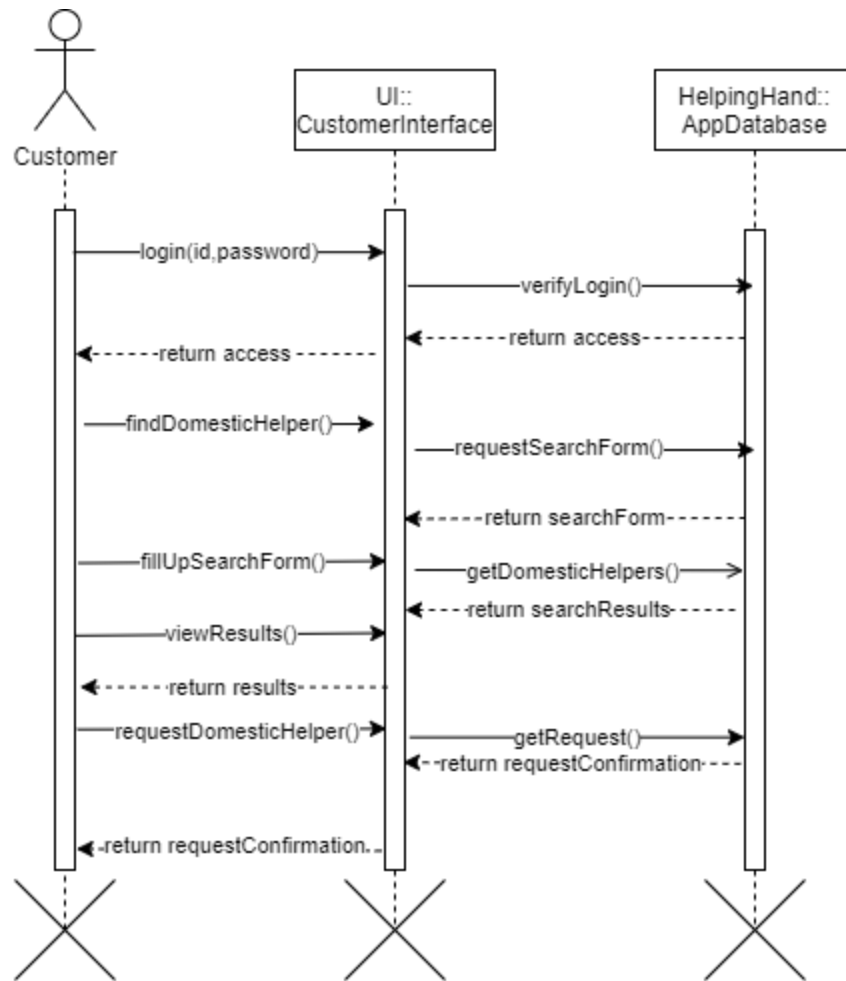


Fig 4.5b: Sequence diagram for "Get domestic helper"

21. Communication diagrams

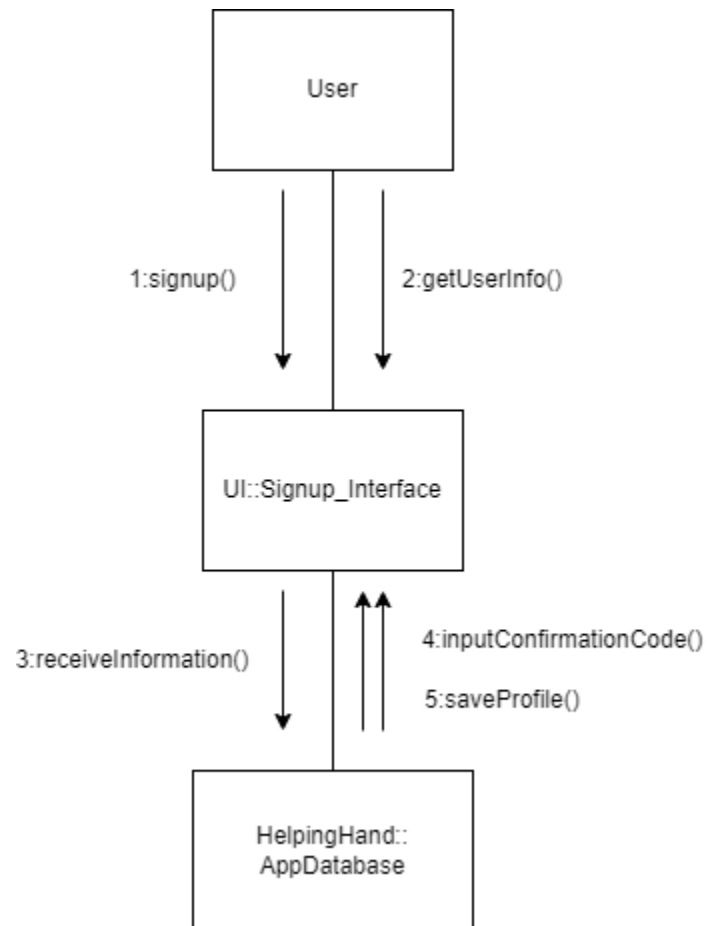


Fig 4.6a: Communication diagram for “Registration Process”

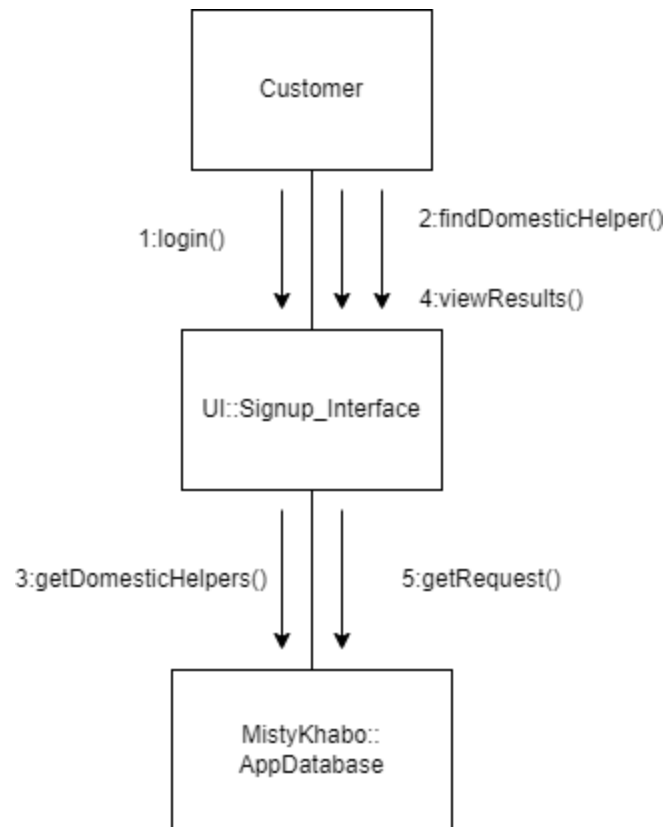


Fig 4.6b: Communication diagram for "Get domestic helper"

22. Class diagrams

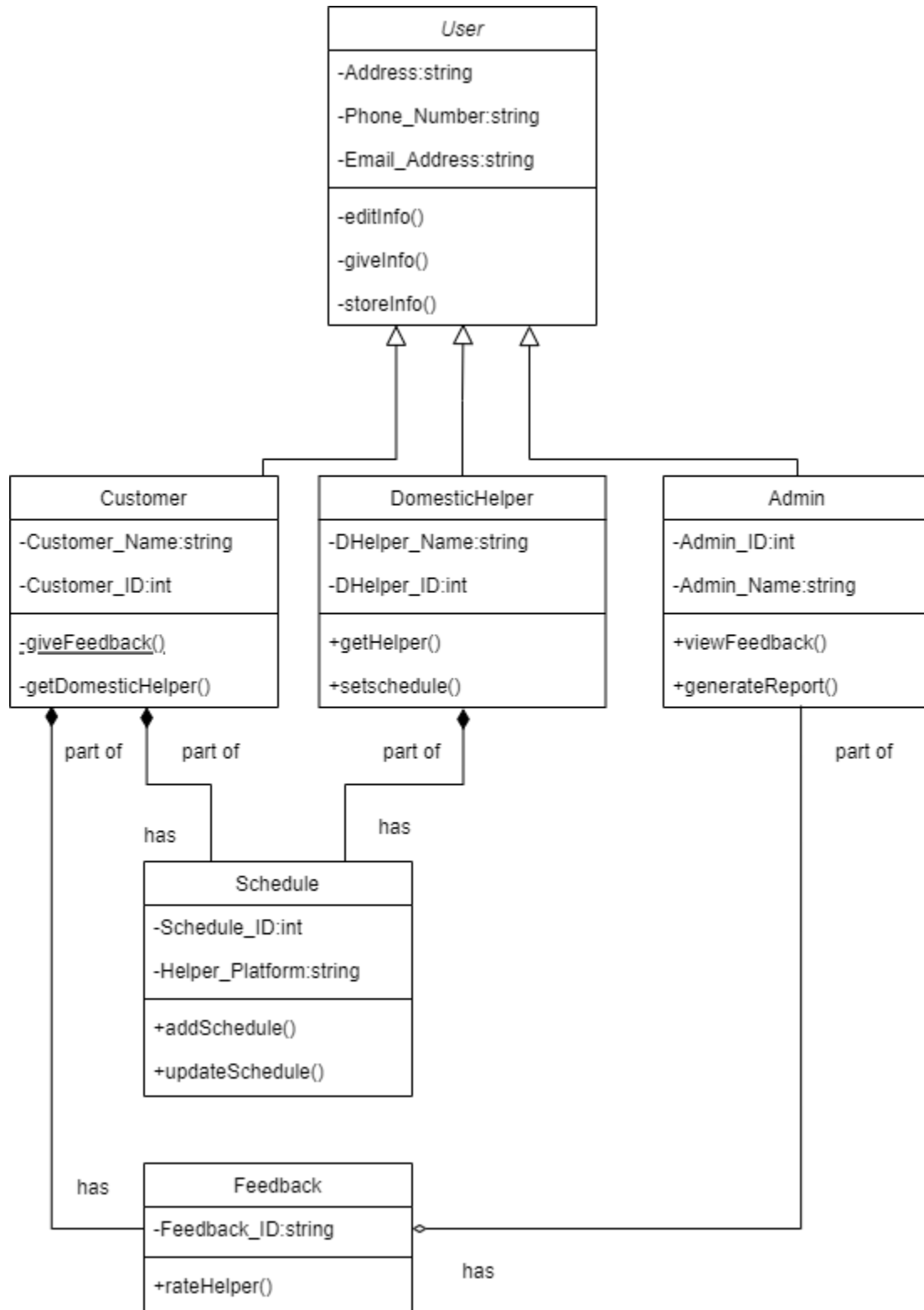


Fig 4.7: Class diagram

23. State-chart diagrams

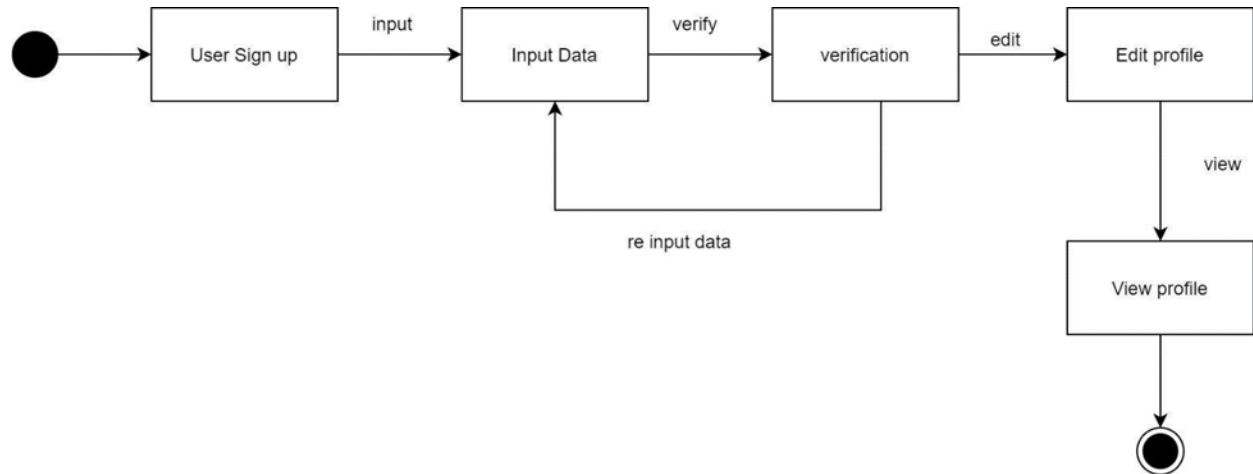


Fig 4.8a: State-chart diagram for “Registration Process”

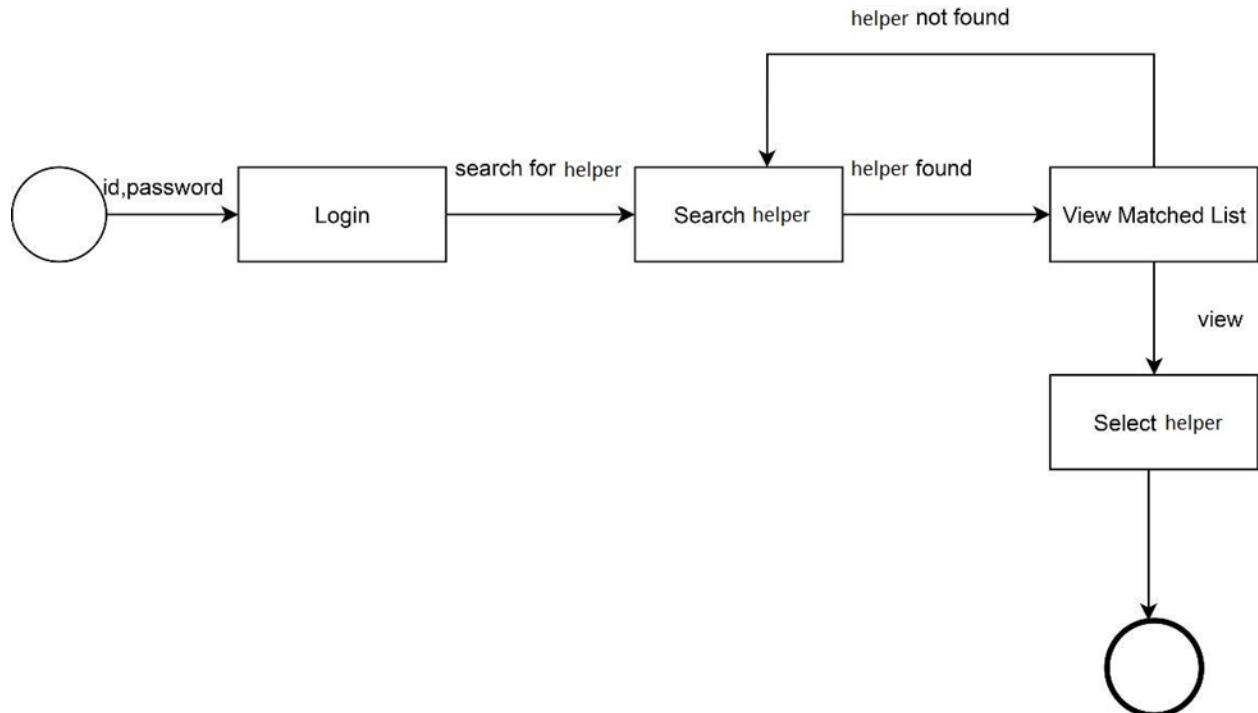


Fig 4.8b: State-chart diagram for “Get domestic helper”

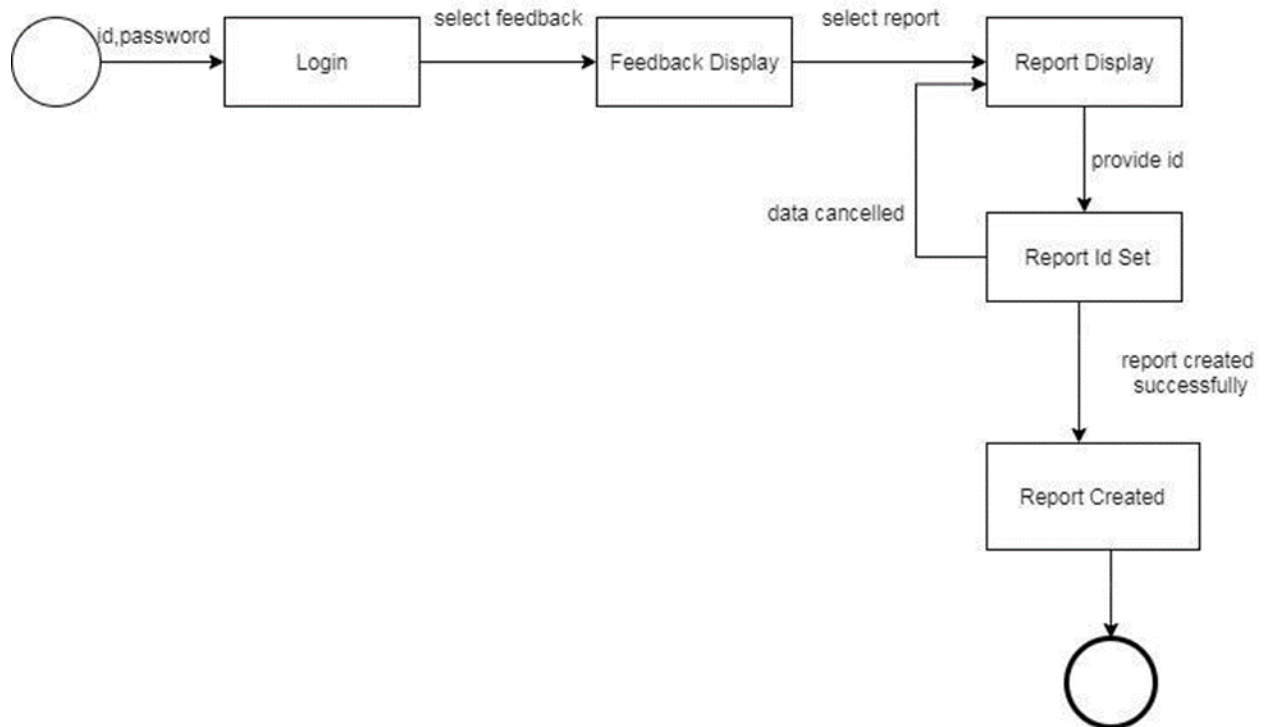


Fig 4.8c: State-chart diagram for “Registration Process”

24. CRUD matrix

Activity	Domestic Helper	Customer	Admin	Feedback Report
Register	C	C		
Login	R	R		
Edit profile	U	U	R	

Search Domestic Helper	R	R	U	
Contact	R	R		
Generate Report			RU	C
Give Feedback		C		U
Delete Report				D

Section 5

25. Structured English Pseudo code for the system

Finding Domestic Helper

Login to the System

IF login done successfully

 DO While customer is logged into the system

 IF not pressed in “Finding Domestic Helper” button

 THEN display Home page for customer

 ELSE

 Search in database for Domestic Helper

 IF Domestic Helper found in database

 THEN show results of domestic helpers and their information

 ELSE show error

 ENDIF

 ENDIF

 ENDDO

ELSE

 Show error

ENDIF

Finding work

Login to the System

IF login done successfully

 DO While domestic helper is logged into the system

 IF not pressed in “Finding work” button

 THEN display Home page for domestic helper

 ELSE

 Search in database for work in specific time

 IF work is found

 THEN display list of all work and their information

 ELSE show error

 ENDIF

 ENDDO

ELSE

 Show error

ENDIF


Edit Profile

```
DO While user is logged into the system
    IF User has filled all required input fields
        DO update old information with new input information in database
        DISPLAY Updated user profile.
    END IF
END DO
```

Give feedback


```
Login to the System
IF login done successfully
    DO While user is logged into the system
        IF work of domestic helper is done
            THEN
                DISPLAY feedback form for the user
                Store input from user
                DISPLAY Feedback recorded
            END IF
        ELSE
            Show error
        END DO
    END DO
```

26. Prototype the user interface

9:41 

Sign In

[Sign up](#)



Helping Hand

Email

Password [Show](#)

[Log In](#)

[Forgot your password?](#)

Fig 5.1: Login page

9:41

×

Sign Up

Login

Name

Email

Password

Show

Confirm Password

Show

Next

Fig 5.2a: Sign up (first page)

9:41



Sign Up

[Login](#)

Register as



Customer



Domestic Helper

Fig 5.2b: Sign up (second page)

9:41

×


Sign Up as a Customer

Login

Phone Number

Address

Upload photo



Send verification code to

Email

Phone Number

Sign Up

Fig 5.3: Customer Sign up page

9:41

×

Sign Up


Login

as a Domestic Helper

Phone Number


Address

Upload photo



NID number

NID photo



Send verification code to

Email

Phone Number

Sign Up

Fig 5.4: Domestic Helper Sign up page

9:41



[Back](#)

Verification

Enter the verification code sent:

Verify

Fig 5.5: Verification page



**Your account has been
successfully created!**

Fig 5.6: Account creation successful page

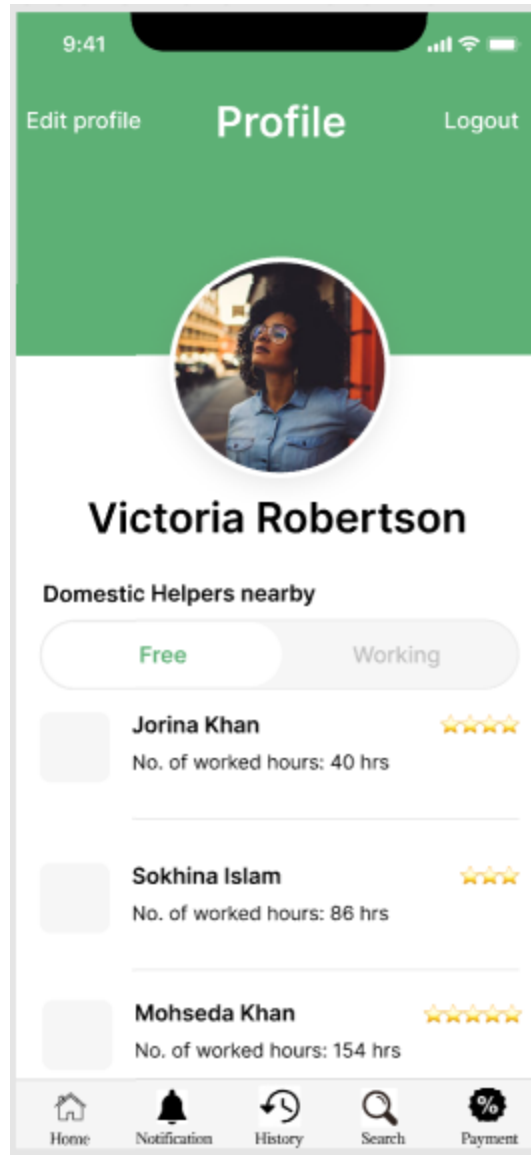





Fig 5.7:Customer Profile page

9:41   

Edit profile Profile Logout

Victoria Robertson

Hourly Monthly

Number of hours

How many works

Working time

Now ☒

Later ☐

Submit

Home Notification History Search Payment

Fig 5.8: Customer searches for domestic helper on hourly basis

9:41 Signal Wi-Fi Battery

Edit profile **Profile** Logout

Victoria Robertson

☐ Hourly ☒ Monthly

June 2020 < >

Time 09:41 AM Off

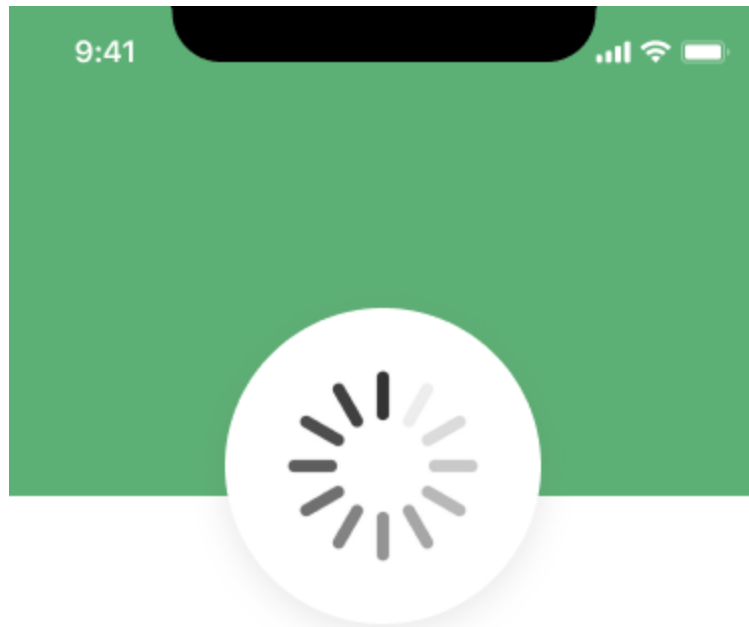
How many works

Types of work (part-time/full-time)

Submit

Home Notification History Search Payment

Fig 5.9: Customer searches for domestic helper on monthly basis



**Searching for
domestic helper....**

Fig 5.10: Searching domestic helper page

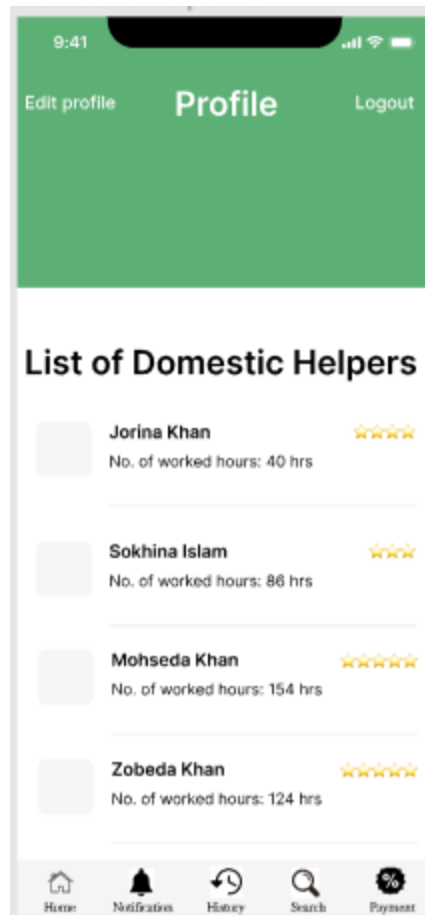


Fig 5.11: List of domestic helpers page

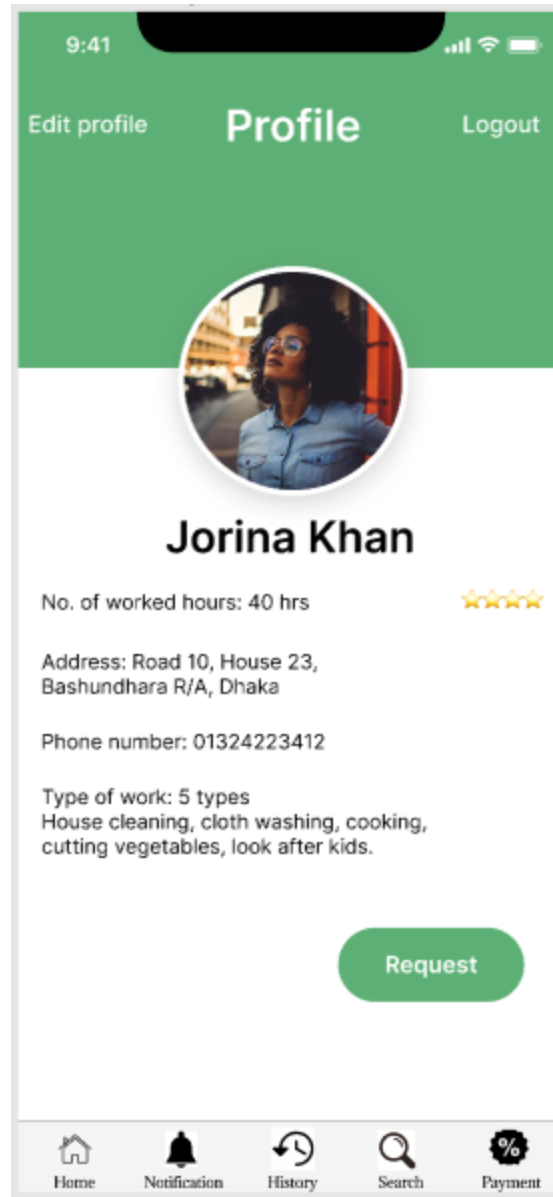


Fig 5.12: Domestic helper information page

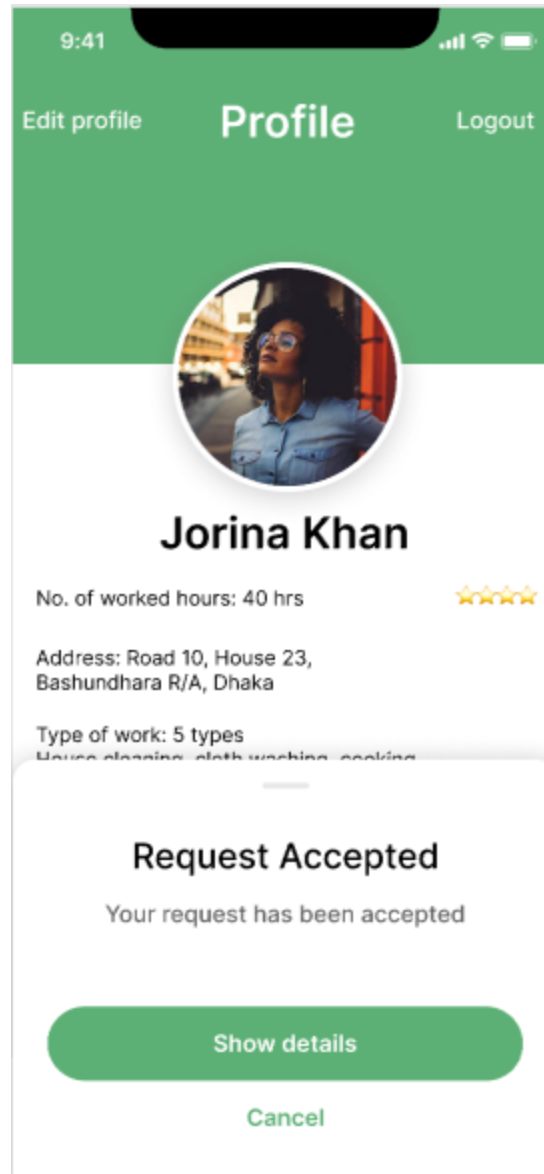


Fig 5.13: Domestic helper information page

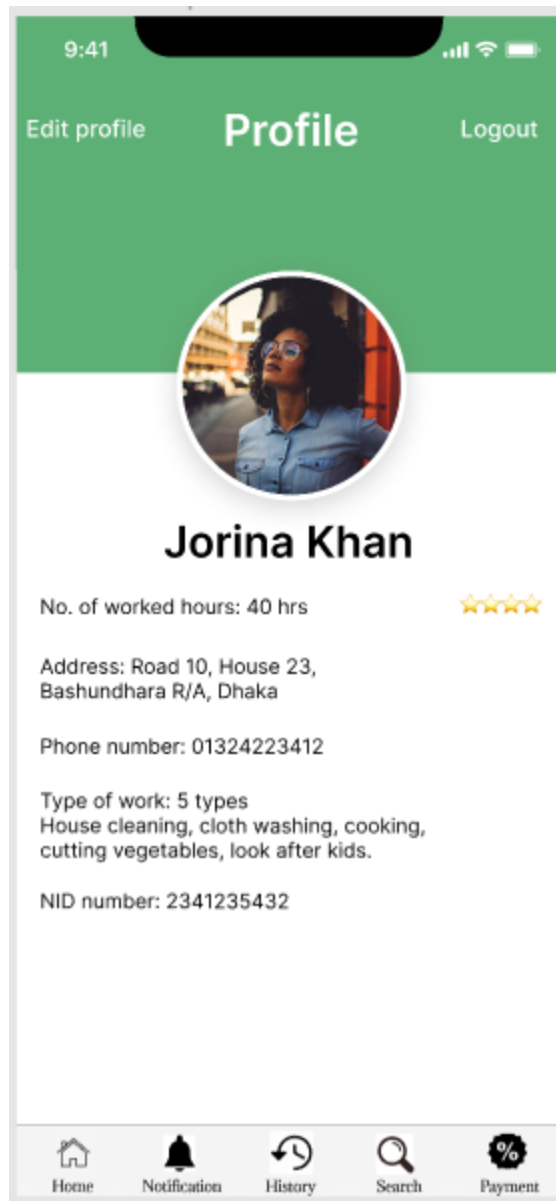


Fig 5.14: Domestic helper detailed information page

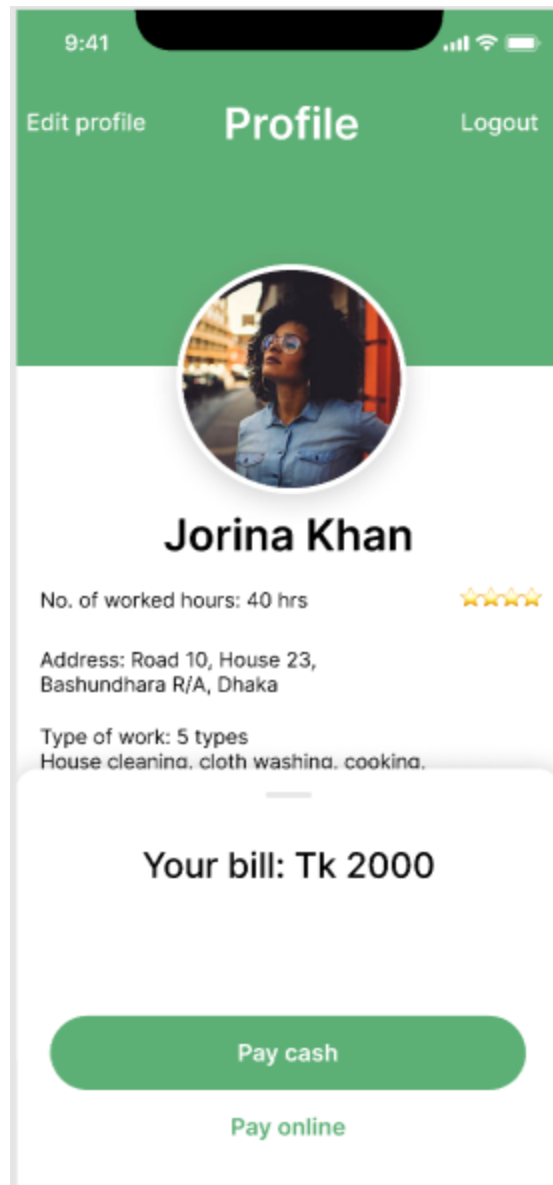


Fig 5.15: Payment page

9:41



[Back](#)

Payment Options

[Next](#)

Bkash



Nagad



Rocket



Proceed payment

Fig 5.16: Payment options

9:41



[Back](#)

Bkash

Enter your phone number:

Phone number

Next

Fig 5.17: Bkash phone number

9:41



[Back](#)

Bkash

Enter the verification code sent to
your phone:

Enter your Bkash PIN:

Verify

Fig 5.19: Bkash verification code and PIN entry



**Payment successfully
done**

Fig 5.20: Payment successful

9:41



[Back](#)

Feedback

Enter your feedback here...

Rating



Send



Fig 5.21: Customer feedback page

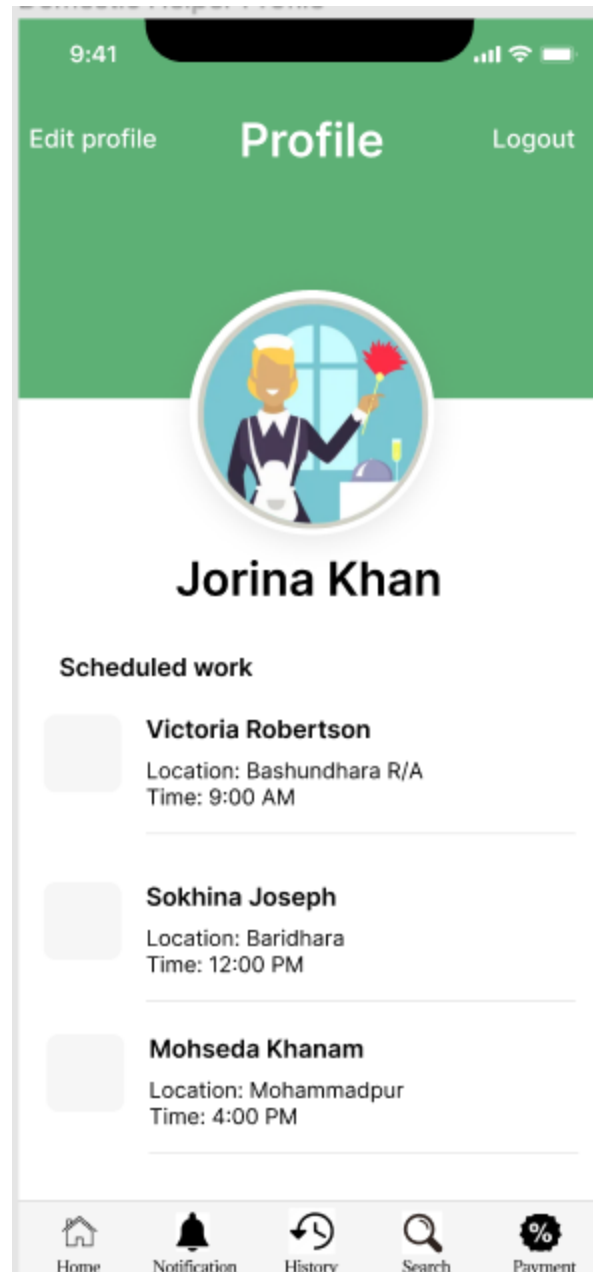


Fig 5.22: Domestic helper profile page

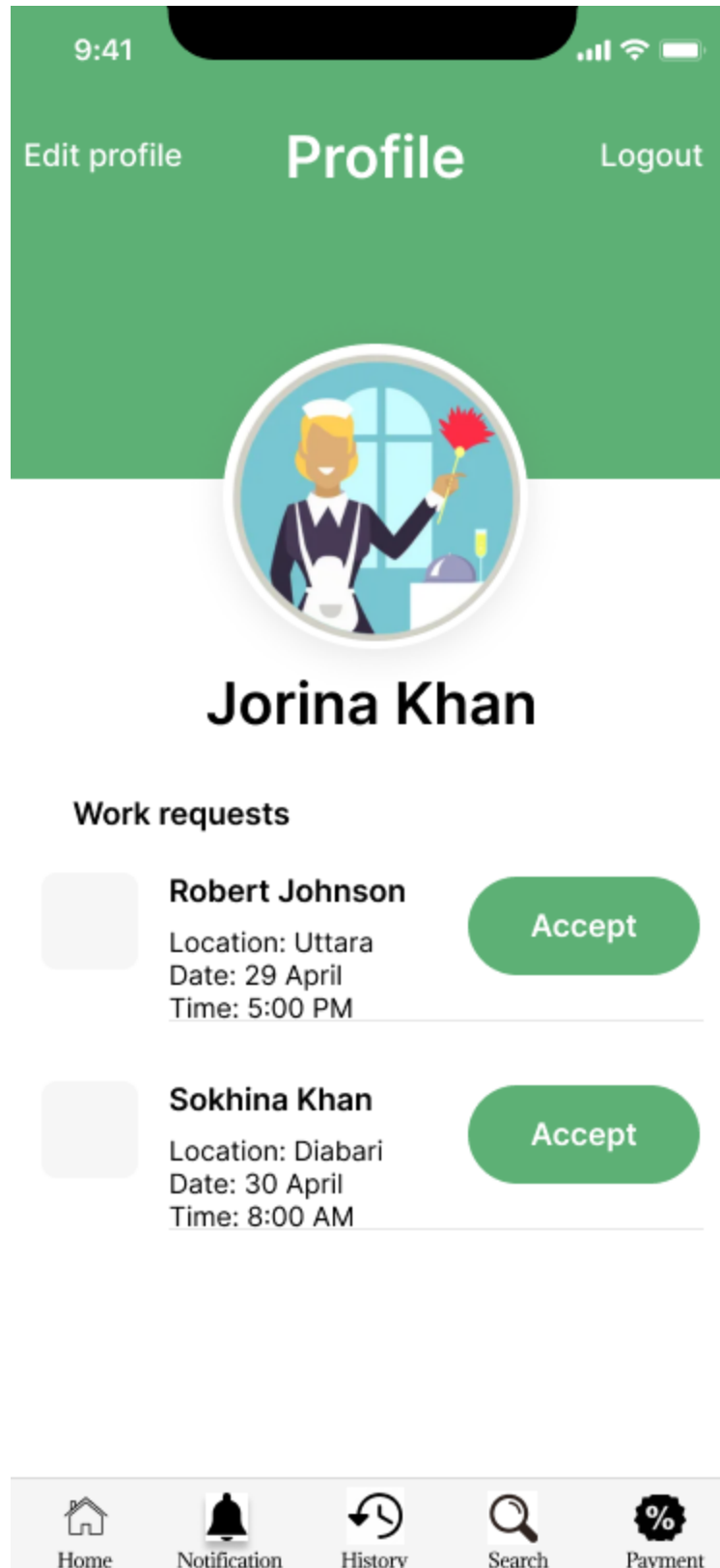


Fig 5.23: Domestic helper work requests page

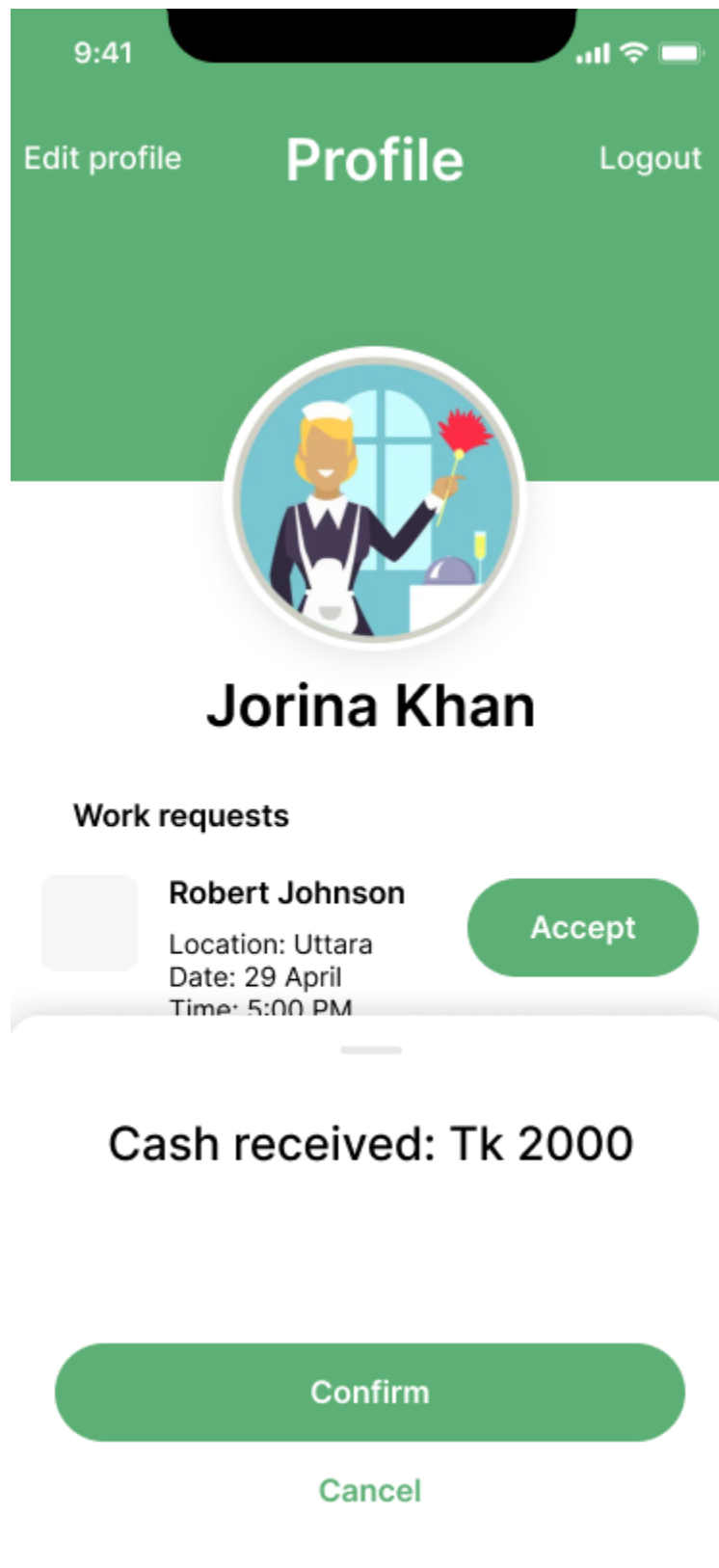


Fig 5.24:: Domestic helper work accepted page