HEALTH MAP

- ## **System request:**

Project sponsor: smart medical services, medical services company.
Business need: • Our participation in the project leads to increase in the company's reputation, which leads to an increase in the number of potential customers. • Cover many places for health services for customers.
Business requirement: • Provide access to hospitals, health centers and clinics by our application through the internet. • Clarify information about health services available in nearby, health centers and clinics.
Business value: • 20% increase the company's market share. • 25% increase the company's sales.
Special issues or constraints: • The project must be completed by deadline. • The project must not exceed the budget. • Our preferred vendors should be able to deliver our new workstations and.   servers on time without affecting the project schedule. • The project must include periodic updates. • Obtaining the approval of medical places to share their data and verifying its validity.

- **<u>Feasibility study:</u>**

  1.Technical feasibility:
  - **familiarity with application:**
    - We have employees in the marketing department who have the ability to train stakeholders on the use of the application**.**
  - **familiarity with technology:**
    - We do not have the qualified programmers to program the application, but it is possible to agree with programmers consultants to complete the task.
  - **Project size:**
    - The team will consist of about 9 persons or more.
  - **The compatibility:**
    - The company lacks some equipment to create the application, but it is available in the market and can be easily brought.
    - We have an internet infrastructure that serves the application.

2.Economic feasibility:

2.1.Benefits and costs:

Tangible benefits	Intangible benefits
-Increase the number of advertised clients- -Increase the number of customers who want to advertise their medical places.	-Increasing the company's share in the labor market. -Improved customer service. -Increase the company's fame.-
Development costs	**Operational costs**
-Purchase of equipment and software required to establish the project. -Gathering information. -Consulting software engineers.	-Hardware repair and upgrades. -Team salaries. -Software upgrade. -Upgrading equipment used. -Cloud storage fee.-

2.2 Cash Flow:

	2022	2023	2024	2025	total
Benefits :					
Adversing profits (500$ per month)		$30,000	$40,000	$60,000	$130,000
user subscriptions ($50 per person per month)		$2,500	$4,000	$5,500	$12,000
Total Benefits		$32,500	$44,000	$65,500	$142,000
present value total benefits		$29,545	$36,364	$49,211	$115,120
Development Costs:					
Hardware and Software fees	$35,000	$0	$0	$0	$35,000
Consultant engineer fees	$15,000	$0	$0	$0	$15,000
Data collection	$8,000	$0	$0	$0	$8,000
Total Development Costs	$58,000	$0	$0	$0	$58,000
Operational Costs:					
Update Software and hardware		$2,000	$2,000	$5,000	$9,000
Employees' Salaries		$8,500	$8,500	$8,500	$25,500
Cloud fees		$1,500	$3,000	$5,500	$10,000
Total Operational Costs		$12,000	$13,500	$19,000	$44,500
Total Costs	$58,000	$12,000	$13,500	$19,000	$102,500
present value total Costs	$58,000	$10,909	$11,157	$14,275	$94,341
Net Benefits:	($66,000)	$20,500	$30,500	$46,500	$39,500
Cumulative Net Cash Flow:	($66,000)	($45,500)	($15,000)	$31,500	
Return on Investment (ROI)=38.54%					
break-even point(BEP)=2.491803279 years					
NPV=$20,779					

3. Organizational feasibility:

- **Champion:**
  - - Arwa Syed Ibrahim is responsible for making a presentation, solutions to the objectives of each stage in the project.
  - - Ardina Asaad Amin: Responsible for presenting the results of each stage of the project.
  - - Al-Nakhili Mohamed Suleiman Sayed, Adham Ahmed Hussein Mohamed and Ahmed Ali Farhan are responsible for creating a prototype for the project.
- **Manager:**
  - Esraa Ahmed Abdel Ghafour is responsible for marketing the programs and following up on the team's work.
- **Users:**
  - Doctors
  - Community members of all ages and nationalities.

- **Work plan:**

  ### 1.task information:

Task Information	
Name of the task	Specify the goals, needs, requirements and results.
Start date	Feb 8, 2022.
Completion date	Feb 28, 2022.
Person assigned to the task	Ardina Asaad, Esraa Ahmed and Arwa Sayed.
Deliverable(s)	Requirements, Goals and Result.
Completion status	Complete.
Priority	High.
Resources needed	Sheet word.
Estimated time	20 days.
Actual time	15 days.

Task Information	
Name of the task	Work Plan.
Start date	Mar 1,2022.
Completion date	Mar 10,2022.
Person assigned to the task	Esraa Ahmed.
Deliverable(s)	Determining the tasks and their priority in implementation and those responsible for carrying out the tasks.
Completion status	Complete.
Priority	High.
Resources needed	Spreadsheet software.
Estimated time	10 days.
Actual time	8 days.

Task Information	
Name of the task	Feasibility study & budget.
Start date	Mar 1, 2022.
Completion date	Mar 10, 2022.
Person assigned to the task	Project sponsor: Smart medical services.
Deliverable(s)	Cost–benefit analysis and knowing the capacity of the institution to absorb the project.
Completion status	Complete.
Priority	High
Resources needed	Spreadsheet software.
Estimated time	10 days.
Actual time	10 days.

Task Information	
Name of the task	Writing code.
Start date	Mar 11, 2022.
Completion date	Aug 11, 2022.
Person assigned to the task	Ahmed Ali, Adham Ahmed and Al-Nakhili Mohamed.
Deliverable(s)	Writing code and review it.
Completion status	Open.
Priority	High.
Resources needed	Cross platform, Devices, Servers, Laps and Clouds.
Estimated time	5 months.
Actual time	

Task Information

Name of the task	Create a property intellectual document.
Start date	Aug 12, 2022.
Completion date	Aug 26, 2022.
Person assigned to the task	Project legal advisor.
Deliverable(s)	Creation and intellectual document to ensure ownership of the project.
Completion status	Open.
Priority	High
Resources needed	Project management knowledge guide and project documentation guide and legal advisor.
Estimated time	14 days.
Actual time	

Task Information

Name of the task	Test the application.
Start date	Aug 27, 2022.
Completion date	Sep 26, 2022.
Person assigned to the task	Ahmed Ali, Adham Ahmed, Al-Nakhili Mohamed and users.
Deliverable(s)	Improve project quality and user service.
Completion status	Open.
Priority	High.
Resources needed	Feedback from users and operating systems of all kinds.
Estimated time	30 days.
Actual time	

2. work breakdown structure:

Task ID	Task name	Duration(days)	Dependency	status
1	Specify the goals ,needs, requirements and results	20 days		complete
2	Work plan	10 days	1	complete
3	Feasibility study & budget	10 days	1	complete
4	Writing code	150 days	2 , 3	open
4.1	Write instructure	120 days	2 , 3	open
4.2	Design & logo	30 days	4.1	open
5	Create a property intellectual document	14 days	4.1 , 4.2	open
6	Test application	30 days	5	open

3. work plan:

Task id	Task name	Assigned to	Estimated			Actual			dependency	status
			Duration	Start date	Finish date	Start date	Finish date	Duration variance		
1	Specify the goals ,needs, requirements and results	Ardina Asaad, Esraa Ahmed and Arwa Sayed.	20days	Feb 8, 2022.	Feb 28, 2022.	Feb 8, 2022.	Feb 23, 2022.	15 days.		Complete
2	Work plan	Esraa Ahmed.	10 days	Mar 1,2022.	Mar 10,2022.	Feb 24, 2022.	Mar 4,2022.	8 days.	1	Complete
3	Feasibility study & budget	Project sponsor: Smart medical services.	10 days	Mar 1, 2022.	Mar 10, 2022.	Feb 24, 2022.	Mar 6,2022.	10 days	1	Complete
4	Writing code		150 days	Mar 11 , 2022.	Aug 11, 2022.				2,3	open
4.1	Write instructure	Ahmed Ali, Adham Ahmed .	120 days	Mar 11 , 2022.	July 11,2022					Open
4.2	Design & logo	Adham Ahmed and Al-Nakhili Mohamed.	30 days	July 11,2022	Aug 11, 2022.					Open
5	Create a property intellectual document	Project legal advisor.	14 days	Aug 12, 2022.	Aug 26, 2022				4.2 , 4.1	Open
6	Test application	Ahmed Ali, Adham Ahmed, Al-Nakhili Mohamed and users.	30 days	Aug 27, 2022.	Sep 26, 2022.				5	open

4.gantt chart:

id	Task name	duration	Start	finish	predecessors	Resource name
1	Specify the goals ,needs, requirements and results	20 days	Feb 8, 2022.	Feb 28, 2022.		Ardina Asaad, Asraa Ahmed and Arwa Sayed.
2	Work plan	10 days	Mar 1,2022.	Mar 10,2022.	1	Asraa Ahmed.
3	Feasibility study & budget	10 days	Mar 1, 2022.	Mar 10, 2022.	1	Project sponsor: Smart medical services.
4	Writing code	150 days	Mar 11 , 2022.	Aug 11, 2022.	2,3	
4.1	Write instructure	120 days	Mar 11 , 2022.	July 11,2022	2 , 3	Ahmed Ali, Adham Ahmed .
4.2	Design & logo	30 days	July 11,2022	Aug 11, 2022.	4.1	Adham Ahmed and Al-Nakhili Mohamed.
5	Create a property intellectual document	14 days	Aug 12, 2022.	Aug 26, 2022	4.2 , 4.1	Project legal advisor.
6	Test application	30 days	Aug 27, 2022.	Sep 26, 2022.	5	Ahmed Ali, Adham Ahmed, Al-Nakhili Mohamed and users.
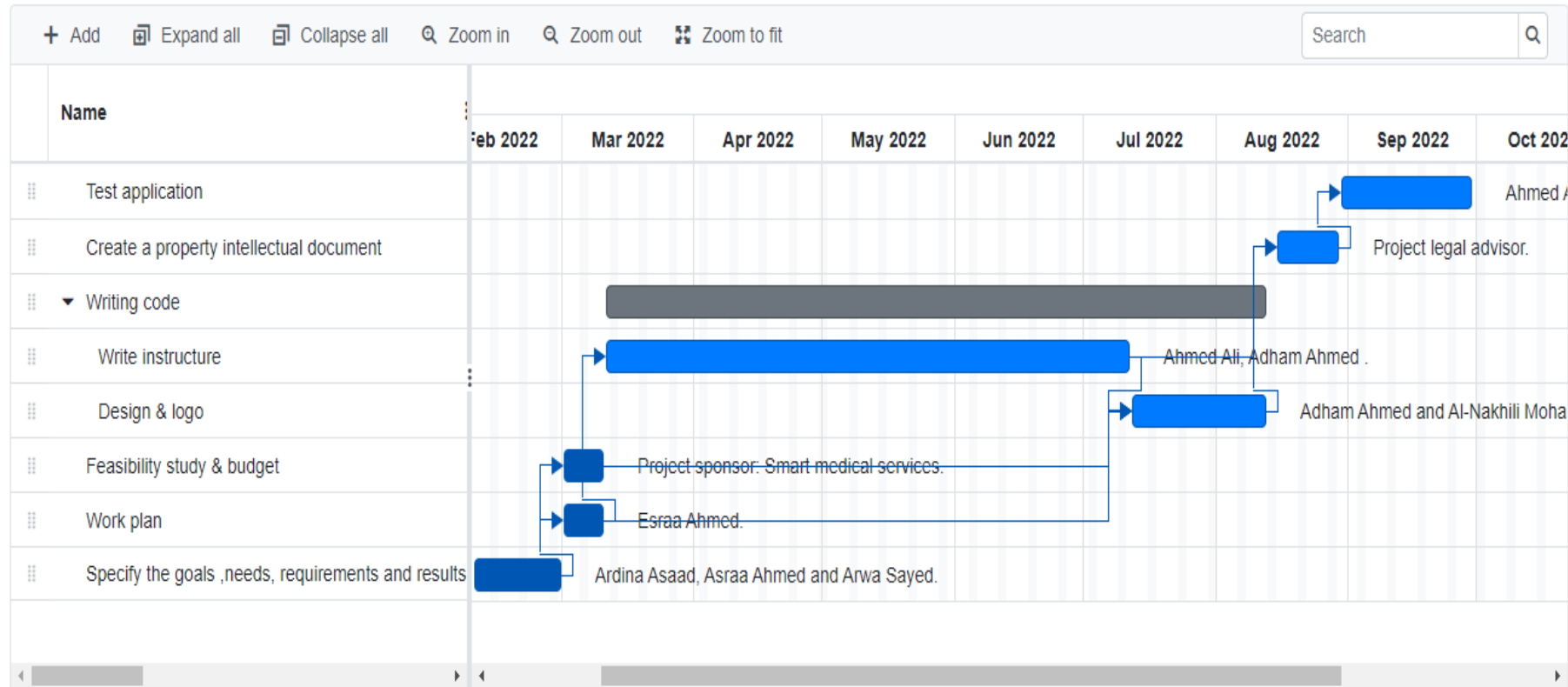
- ## INTERVIEWS :

Name	position	Purpose of interview	Meeting
Mohamed sayed	Company director and chairman of the board of directors	Create an initial concept of the application by: 1.Determining the objectives of the application and its importance. 2.Define app users. 3.Determine business requirements for the application.	Sat , January 1 9:00-11:00am
Ahmed shaban	-the head of marketing department -Responsible for marketing	Knowing information about app marketing and its importance	Mon , January 10 8:00-10:00pm
MR. Ahmed	The head of IT department.	• Determine technical requirements for future system. • Estimate the amount of time needed for writing the code. • Determine the best way to secure the application. • Get an idea about the disadvantages of the app. • Determine the best way to secure our application. • Get a general idea of what should be in the application and the most important things in building an app.	27/3/2022.
Hamada,	one of the users.	- Know the things that are preferred to be available in the application. - Know their needs from the application more clearly	January 16 8:00-10:00pm
Mohamed Kareem	Financial manager.	- Understand how the project is financially managed. - What are the organization's financial Services?	2/4/2022.
Dr. Mostafa Ahmed	Pharmacist.	- Find out if the project idea was successful or not. - Determine information requirements for future system. - Three biggest problems with the current	5/4/2022.

1. INTERVIEW MADE BY ARWA SAYED IBRAHEM:

Person Interviewed	Mohamed Sayed , Company Director and Chairman of the Board of Directors.
Interviewer	Arwa Sayed ibrahem.
Purpose of Interview	Create an initial concept of the application by: 1. Determining the objectives of the application and its importance. 2. Define app users. 3. Determine business requirements for the application.
Summary of Interview	• The company's desire to enrich its database with different medical places to be able to provide medical services to it and expand its field of work. In addition to increasing the fame of the company and its broker and improving its reputation. • Increasing the company's profits by increasing the number of medical places that want to advertise themselves in this application and the number of people subscribed to the application. • The idea of the application is to facilitate the access of any person to the nearest place that provides a medical service, wherever he is, by knowing his location only. It provides a special service for program subscribers, which is the possibility of booking and direct communication with these medical places.

Detailed Notes	❖ Q: What is the company's main activity?
	 ➢ A: The company's main activity is to provide some tangible medical services (such as providing medical devices to hospitals and clinics, as well as providing medicines in pharmacies) and intangible (such as providing training and various medical information) for both the medical sector and its employees and ordinary people.
	❖ Q: What is the idea of the application that you would like to create?
	 ➢ A: It is an application that aims to connect everyone who needs a medical service to the places that provide this medical service that are located in the vicinity of this person, where it is easy for this person to reach the places of providing medical service closest to him as soon as possible.
	❖ Q: Why do you want to create this application?
	 ➢ A: To increase the company's profits through:
	First: Providing the company's database with more medical services places, thus increasing the company's opportunity to provide more services to these places and increasing the scope of work.
	 Second: Increasing the company's reputation among members of different societies.
	 Third: Increasing the company's material profits by collecting sums of money in return for:
	  1- Announcing these medical places.
	  2- Subscriptions of some users who want some special services.
	❖ Q: What do you mean by some special services for users?
	 ➢ A: These special services are not only the user's knowledge of the nearest medical places that are located in his vicinity and the specializations of these places, but lies in knowing some more in-depth details about these places in addition to allowing the possibility of communication between the subscriber with the medical places directly. All this for a small fee, but knowing the places and their specialization is free for any user.

2. INTERVIEW MADE BY ESRAA AHMED ABD ELGHAFOR:

Interview note approved by::Ahmed shaban
person interviewed : Ahmed shaban , the head of marketing department -Responsible for marketing
Interviewer : Israa Ahmed
Purpose of interview : -Knowing information about app marketing and its importance -how to market
Summary of interview :   - The application will be marketed by :   1) E-marketing : this is by displaying the product on social media pages and displaying the product's features with all credibility and quality assurance methods 2) The internal marketing : this is subject to a feasibility study and selection of the best suppliers .   - The best way to market the application is to provide correct and to increase the popularity of the application is to provide that information in the shortest time   - The methods that will be used to market the application : Gs1.   - one of the most important features that most be shown about the application is to help the user to show the surrounding medical services wherever he goes
Open items: type of communication is lines for internal and external marketing   importance of Gs1 : provide application tracking feature
Detailed notes : Inventory of application and marketing places

3. INTERVIEW MADE BY ARDINA ASAD :

- Person Interviewed: MR. Ahmed.
- The head of IT department.
- Interview date: 27/3/2022.
- Interview location: cilantro café.
- Interviewer: Ardina Asad.

Purpose of Interview:

- Determine technical requirements for future system.
- Estimate the amount of time needed for writing the code.
- Determine the best way to secure the application.
- Get an idea about the disadvantages of the app.
- Determine the best way to secure our application.
- Get a general idea of what should be in the application and the most important things in building an app.

Summary of Interview:

- Get an over view of what the user would like to see in the application; Discover the essential factors for building a successful application; Find out about the essential technical requirements for the application; define which is better to do first, design the interface or write code; Get an overview of the time it takes to write the code; the flaws of the application, how to attract users to use the application, and the best way to secure the application.

Questions & answers given in the interview:

- (After explaining the project idea) what would you like to see in the app?
    - I would like to find the location of the nearest medical service, informations about where I am going, the doctors names, specifications and the opening and closing time, the cost of making an appointment with the doctor, the time it takes to get from my current location to the wanted location, high level of security and accuracy, good interface and easy to use and doesn't take a lot of space.
- From your point of view what is the most important things in building an app?
    - Concept Proofing, Know your audience, Design, Security, Database, Accepting payments, Future proofing, Supported Platforms and good coding skills.
- Which is better to do first, design the interface or write code?
    - First design UI, That will give you a clear picture of what your system will do, what type of data it displaying, and how users will interact with it. Show activity on this post. I usually design the project on the paper (or with diagrams tools), then write the code part and finally the user interface. GUI is the last.
- What are the technical requirements for the app?
    - Technical requirements vary depending on the product like accessibility, Authentication and authorization, Availability, Data quality, Human error, Information security, Internal controls, Interoperability, Maintainability, Performance Privacy, Productivity, Reliability, Serviceability, Standards, System errors and Vendor lock-in.
- How long would it take to write the app`s code?
    - On average 1 or 2 months.
- What is the best way to secure our app?
    - Write a Secure Code, Encrypt All Data, Be Extra Cautious With Libraries, Use Authorized APIs Only, Use High-Level Authentication, Deploy Tamper-Detection Technologies, Use

the Principle of Least Privilege, Deploy Proper Session Handling, Use the Best Cryptography Tools and Techniques and Test Repeatedly

- What is the disadvantage of the app as the head of the IT department?
  - Not be able to pay the cost of booking an appointment through the app, requires very good internet connection.
- How to attract people to use our app?
  - Promote the app on your website, Create email marketing campaigns, Lean on social media, Use in-app and online ads, Develop a PR Strategy, Think about Offline Ad Campaigns and Focus on App Store Optimization.

4. INTERVIEW MADE BY Ahmed Ali :

Person Interviewed: Hamada,

one of the users.

Interviewer: Ahmed Ali

Purpose of Interview:

- Know the things that are preferred to be available

  in the application.

- Know their needs from the application more

  clearly

Summary of Interview:

- We got what the user wants to see in the application, get some information that is important to be available in the application, and we got the three most important points that the user focused on their importance.

 1-The first point is the availability of

 evaluation of medical centers .

2-The second point is the availability of

 medical advice on the application .

3-The third point is to provide urgent

medical assistance .

-These points are of great importance in helping users to become more attractive to the application.

Some questions and answers given in the interview:

- (After explaining to the user the idea of   the project) What would you like to see in the application?
- I would like to find the location of the nearest medical service, know the distance between us and the estimated time to reach this place with various types of transportation, and to know the assessment about the place I will go to, the doctors' evaluation, their specialties, the time of their presence, the cost of the medical examination for this doctor, and for the application to be smooth in deal

- In your opinion, what are the most important things that should be present in the application?
1- Availability to evaluate medical centers.
2- Availability of medical advice on the   application.
3- The third point is to provide urgent medical assistance.
4- The distance between the user and the medical center
5- The estimated time to reach this place
6- Safety and priority

- From your point of view, what needs the application constantly?
1- The application needs constant updating .
2- continuous addition of new doctors.

5. INTERVIEW MADE BY Al-Nakhili Mohamed:

<table>
<tr><td colspan="2" align="center">Interview Notes</td></tr>
<tr><td>Person Interviewed</td><td>Mohamed Kareem, Financial manager.</td></tr>
<tr><td>Interview date</td><td>2/4/2022.</td></tr>
<tr><td>Interview location</td><td>Arab café.</td></tr>
<tr><td>Interviewer</td><td>Al-Nakhili Mohamed.</td></tr>
<tr><td>Purpose of Interview</td><td>- Understand how the project is financially managed.
- What are the organization's financial Services?</td></tr>
<tr><td>Summary of Interview</td><td>- The project costs $56,000 at the beginning, and the return from the project after 3 years will be $106,000.

-The budget has its advantages:
   1- Staff salaries are appropriate at the beginning of the   project.
   2- The costs are simple for financial management.</td></tr>
<tr><td>Open Items</td><td>- Get current employees roster report.
- Report on:
   1- The costs and benefits of the project.
   2- Salaries of employees during the project.</td></tr>
</table>

Details notes:

1- Is the budget appropriate for the project?

- The budget has been set after Economic feasibility and it was approved by the administration.

2- In your opinion, what are the most important things that should do to control the budget?

- we should follow the Economic feasibility and finish the project at its deadline.

3- In your opinion, Will the project idea be useful in the future?

- of course, it will helps many people to reach very quickly and safely to many hospitals and consult the doctors any time they want.

6. INTERVIEW MADE BY Adham Ahmed:

Interview Notes	
Person Interviewed	Dr. Mostafa Ahmed, Pharmacist.
Interview date	5/4/2022.
Interview location	Dr. Mustafa Pharmacy.
Interviewer	Adham Ahmed.
Purpose of Interview	- Find out if the project idea was successful or not. - Determine information requirements for future system.
Summary of Interview	- Three biggest problems with the current system are: 1- The data is very recent. 2- Unintegrated coverage of all available areas. 3- The data is larger than expected. - The idea of the project will help many people.
Open Items	Report on: 1- The best hospitals. 2- Perfect doctors.

Details notes:

1- What would you like to see in the application?

- That there are as many as possible of the best doctors in all fields and the best hospitals for all specialties.

2- In your opinion, what are the most important things that should be present in the application?

- Attention updates needed to improve the application.

3- From your point of view, what needs the application constantly?

- The application needs constant updating.

- continuous addition of new doctors.

4-What is the advantage and the disadvantage of the app?

- Advantage:

 1- There are as many as possible of the best doctors in all fields.

 2- There are as many as possible of the best hospitals for all specialties.

 3- There is a map to determine the location of the hospital or doctor's clinic.

- Disadvantage:

 1- The map has a short range around the area.

- ## SYSTEM REQUIREMENTS :

✓ **User requirements**
1.   Deliver everyone who needs medical service to the nearest place that provides this medical service. 2.   Providing a special service, which is the possibility of direct communication between the user and the places of providing various medical service .
✓ **System requirements**
1- A database that includes information about different medical places in all different parts of the country. 2- A server that allows the user to enter his data and communicate.

❖ Functional & non-functional requirement

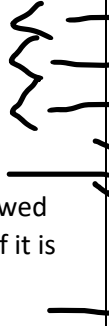| ✓ Functional requirements	
Process-oriented	1.1 The application must allow the user to create an account on it and enter his location and the medical specialty that the user needs. 1.2 The application must provide the user with the data of the medical places, the distance between him and them, and the time of the user's arrival to these places. 1.3 For subscribers, the application must allow them to communicate with medical premises. 1.4 It is important that the system checks users' requests to ensure that the medical service they want is available. 1.5 The application must allow subscribers & registered customers ,medical places, to review their own order history for the past year.
Information-oriented	2.1 The app includes data on medical places everywhere, and this data is updated every now and then. 2.2 The system must retain subscribers & registered customers ,medical places, order history for one year.

✓ Non-functional requirements	
operational	1.1 The application will run on Android & mac mobile. 1.2 The application should be compatible with the company database & server.
performance	2.1 The time for the user to obtain the results should not exceed one second. 2.2 The system should be available for use 24 hours per day, 365 day per year. 2.3 The system supports 1000 simultaneous users at all other times.
Security	3.1 The system includes all available safeguards from viruses, worms, Trojan horses, etc. 3.2 Account locking : after a certain number of login attempts , a security system may lock an account to protect a user's information from potential hackers . 3.3 The application does not grant access until the user creates a strong password that contains a certain number of letters, symbols and numbers. 3.4
Cultural and Political	4.1 Personal information is protected in compliance with the data Protection Act. 4.2 The default application language is Arabic, but the application allows changing the language according to the user's choice from the list of available languages, as the program allows seven different international languages.

- ## USE CASES :
  ### 1. USE CASE MADE BY ARWA SAYED IBRAHEM:

USE CASE NAME: Able to communicate	ID:1.3		Priority: High
Actor: Subscribers to the application & workers in medical places			
Description: Communication is made between the subscriber in the application and the medical places, after the subscriber creates an account on the application and pays the required fees, then chooses the type of medical service he wants, so he is allowed to communicate with the place that provides this service**.**			
Trigger: The subscriber needs urgent medical advice and to get some details about these medical places.			
Type: External			
Preconditions: 1- Download and install the app on your phone 2- Create an account on the application 3- Pay the required fees to obtain this feature			

Normal Course:	Information for Steps:

Availability of communication between the user and the medical body:
   1- Download the app from any store.
   2- Follow the steps to install the application on the phone.
   3- Create an account on the application by entering some required data about the user.
   4- The application asks if you have a bank account or not (Alternative Course 5.0)
   5- Specify a bank account number to pay the required monthly fees.
   6- The application verifies the fact that the user's bank account exists.
	1- Know the name of the application.
	2- Installation steps.
	3- User data.
	
	4- bank account number.
	
	5- Bank account information.

Alternative Courses: 5.0 The user does not have a bank account (branch at step 4). 5.1 Using someone else's bank account. 5.1.a Enter this person's information and his bank account number. 5.1.b Verify this bank account exists. 5.1.c Send a message to this person to verify his consent to use his bank account. 5.2 Choosing the manual payment feature through any ATM machine or any other means. 5.2.a Send a reminder every month to pay the fees. 5.2.b Cancellation of the feature in the event of late payment of fees.	1-Data about another person and his bank account. 2- Bank account information. 3- warning message. 4- reminder message.

Postconditions:
1- Allowing the user to communicate with the medical authority directly.

Exceptions:
Ex1 If the user does not want to subscribe to this feature.
   1- The application displays whether you want this feature or not.
   2-

Summary Inputs:	Source	Outputs	Destination
1- User data	1- user	1- Create an account	1- Application database.
2- a bank account number	2- user	2- Specify a bank account.	2- Application database.
3- Data of different medical authorities.	3- Application database.	3- Detailed information about medical authorities.	3- user

2. USE CASE MADE BY ESRAA AHMED ABD ELGHAFOR:

Use case name :collection data and update it	ID:UC-2		Priority : high
Actor: doctor and manager of medical place			
Description: Knowing, compiling and adding medical services data well			
Trigger: The system needs data on medical places			
Type : External			
Precondition: -Providing continuous information from medical places in order to facilitate continuous and elaborate updating -Identity authentication of data received from medical services			

Normal course:
- Finding medical places
- Determining the medical places from which we will collect data
- Conducting interviews with hospital managers and doctors to collect this data directly
- Hospital directors and doctors upload data
- Review this data to develop a good database
- Continuous communication with hospital directors and doctors, and with them these data are reviewed
- Hospital directors and doctors are contacted to provide information so that the system is updated if it is insufficient or has an error
- Continuous updating of the system and database
- Get rid of the data that the user did not benefit from

Information for steps :
- Medical place name
- Request confirmation
- request data about medical service
- Create a good database
- Continuously updating and correcting errors

Postcondition:
- Having a database
- Organize data
- About adding the ability to talk is updating

Exception:
- Insufficient data on specific medical locations
- There are errors in the data
- The database can be very organized and complex

Summary inputs	Source	Outputs	Destination
-Types of medical places, whether hospital, clinic or pharmacy -Need update -Data entry request	-study sites -software -medical place	-Get an organized data -know as many medical places as surrounded by the user -Having an updated process	- doctor and manager of medical place -users -software

3. USE CASE MADE BY ARDINA ASAD :

USE CASE NAME: creating an account, entering location and medical speciality.	ID:1.1	Priority: High

Actor: Application subscribers.

Description: After downloading the application, The user must create an account, And in order to start using the application the user must enter his location and the required medical specialty.

Trigger: The subscriber must have heard of the application before in order to download it, and in order to use the application, he must be in need of a medical service.

Type: External.

Preconditions:
1- Download and install the app on your phone.
2- Create an account on the app.
3- give the app access to your location.
4- enter the required medical speciality.

Normal Course:	Information for Steps:
How to download the app , create an account and start using the app	
1. Go to any app store and download the app from it.	1. Know the name of the application.
2. Install the app on the phone.	2. Installation steps.
3. Create an account on the app by filling the required data.	3. User's data.
4. After creating an account give the app access to your location.	4. User's location.
5. Enter the required medical speciality in the searching box.	5. Required medical speciality.

Alternative Courses:	
The user already has an account on the app (branch at step 3).	
4.0: using the old account.	
4.1: after opining the app choose to use an existing account	User's data.
4.2: enter the user name and password.	
4.3: press loge in.	

Postconditions:
1. The user will be allowed to use the services that the app provides.

Exceptions:
If the user doesn't want to give the app access to his location.
• The app will display all medical services locations in the user's country.

Summary Inputs:	Source	Outputs	Destination
1. User's data.	1. user	- services that the app provides.	- User
2. User's location.	2. User		
3. medical speciality.	3. user		

4. USE CASE MADE BY Ahmed Ali :

Use Case Name: Show medical places	ID: 1.2	Important Level : High
Actor: The user		
Description: How to display medical places and determine the separation distance		
Trigger: The user uses the application to display the medical places near him		

Pre-conditions:
1. The user must be logged into the application.
2. The user has the right to access the application.
3. The user must allow the application to access the location.

Main success scenario :
1. Show medical places .
    1.1. The user clicks on the button(Show medical places).
    1.2. The system displays the form data to show the medical places (user name, password, location...)
    1.3. The user writes his data into the form.
    1.4. The user click on button Save Data.
    1.5. The system make sure that the data is correct.
    1.6. The system displays success message "You are logged in successfully".

Post Conditions:
1. The system saves this user's data in the database.
2. The system collects medical places near it.
3. The system displays a success message and displays the places it has collected.

Exceptions:
1. Invalid data :
    - if the "Email" is invalid , an error message will be displayed "please use a valid email address "
    - if the "password" is invalid , an error message will be displayed "please use a valid password "

2. incomplete data:
    - If the user does not enter the location , an error message will be displayed " You have to set your own location "

Summary Inputs:	Source	Outputs	Destination
• User's user name. • User's password • User's location.	• User • User • User	• medical places. • The expected time • The distance between the location of the user and the medical place.	• User

5.USE CASE MADE BY Al-Nakhili Mohamed:

USE CASE NAME: The application must allow subscribers & registered customers, medical places, to review their own order history for the past year.	ID:1.5	Priority: High

Actor: programming team.

Description: The programming team is made up of people who develop or maintain computer software, so it should be a priority for the app to allow subscribers, registered customers, and medical places to review their order history for the past year.

Trigger: the subscriber needs to review their own order history for the past year.

Type: External.

Preconditions:
1. User wants to see order history
2. users should have the necessary information they need on the application.
3. The application data warehouse is up-to-date.

Normal Course:
1.0. Request review their own order history for the past year from the application.
1. The application determines the required service and whether it is available.
2. The system lists the orders available from the application data store.
3. If the order is not available, the user is notified.
4. The system gives the user some information about the order he wants to review.
5. The system stores the user order in the application order data store.

Postconditions:
1. The user's request is stored in the system.
2. Show the user his own order history for the past year.

Exceptions:
  The application may not save the order that the user wants.

Summary inputs:	Sources:	Summary outputs: Users	Destination:
1. User's data.	1. user.	can review their own order	User
2. the application data warehouse.	2. programming team.	history for the past year.	

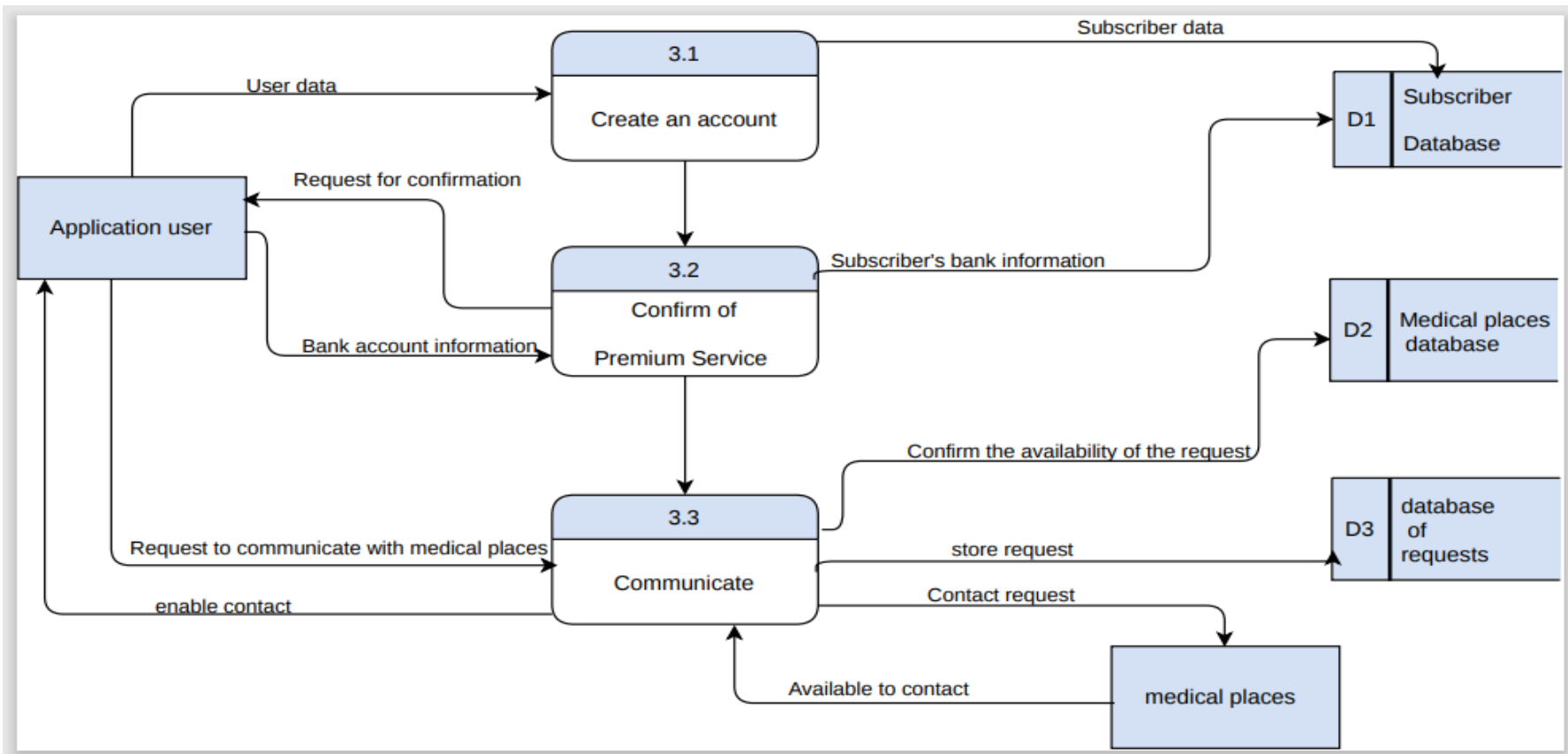### 6.USE CASE MADE BY Adham Ahmed:

USE CASE NAME: checking users medical service if it's available.	ID:1.4	Priority: High

Actor: Smart medical services.

Description: The Smart medical services specify medical services needed to help the user by entering its name. The system satisfies the request by reserving the Appointment requested or the medical services available and notifying the medical places of the pick-up.

Trigger: The user requests a medical service.

Type: External.

Preconditions:
1. The medical service request is accepted from users by smart medical services.
2. users have the necessary information and medical services on the application.
3. The application data warehouse is up-to-date.

Normal Course:
1.0. Request a medical service from the application.
1. The application determines the required service and whether it is available.
2. The system lists the medical services available from the application data store.
        3. If the medical service is not available, the user is notified.
4. The system gives the user some information about the medical service he wants.
5. The system notifies the medical places if the user wants to reserve an appointment there.
6. The system stores the user order in the application order data store.

Postconditions:
1. The user's request is stored in the system.
2. Providing medical services to users.
3.Medical places are notified of receipt of applications.
4.Users are notified of the unavailability of medical services.

Exceptions:
Some medical service locations may be closed for unexpected reasons or for maintenance reasons.

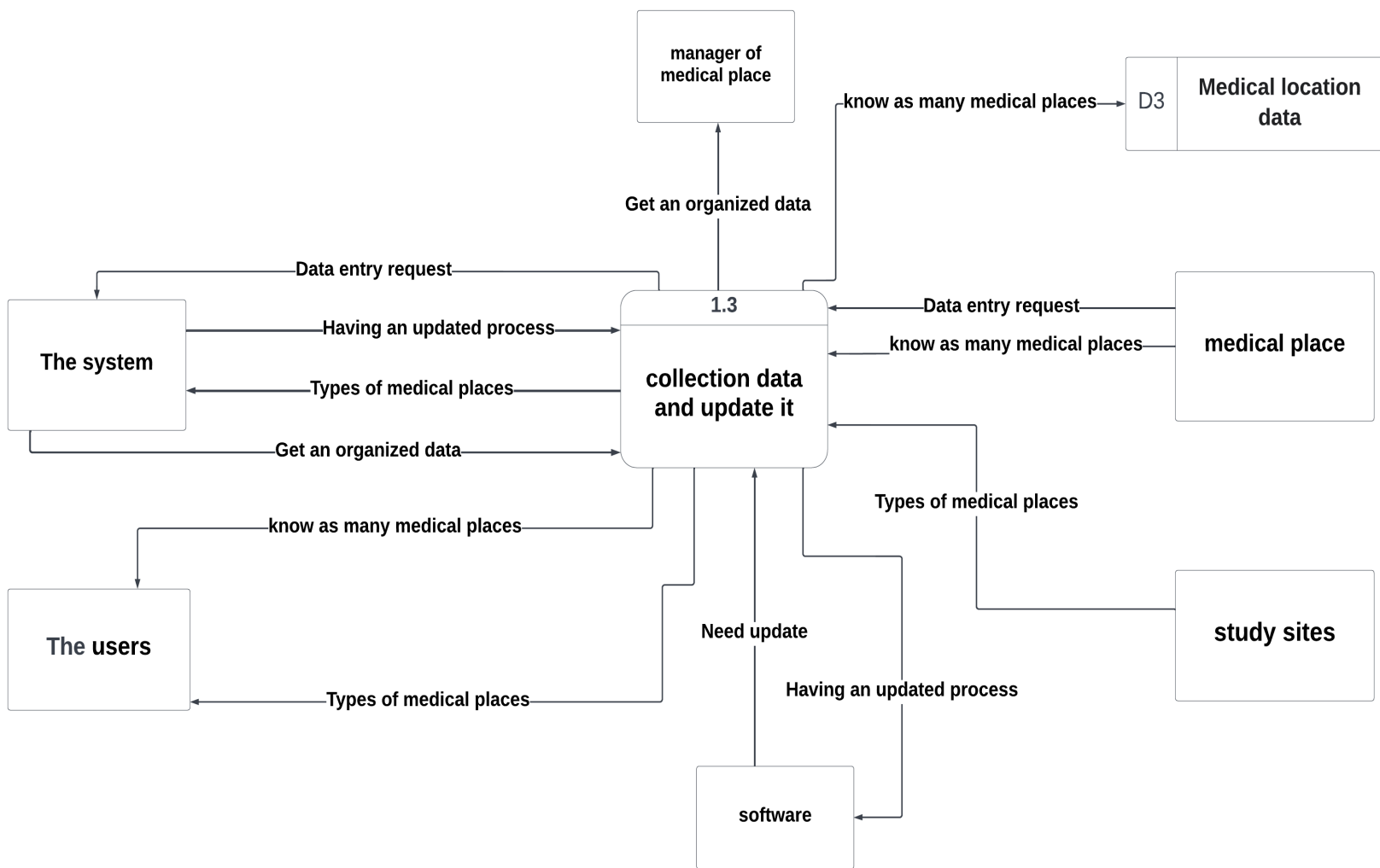| Summary inputs:	Sources:	Summary outputs:	Destination:
1. User's data. 2. User's location. 3. medical services.	**1. user.** **2. user.** **3.** Smart medical services.	services that are available.	User

• DATA FLOW DIAGRAM (DFD):
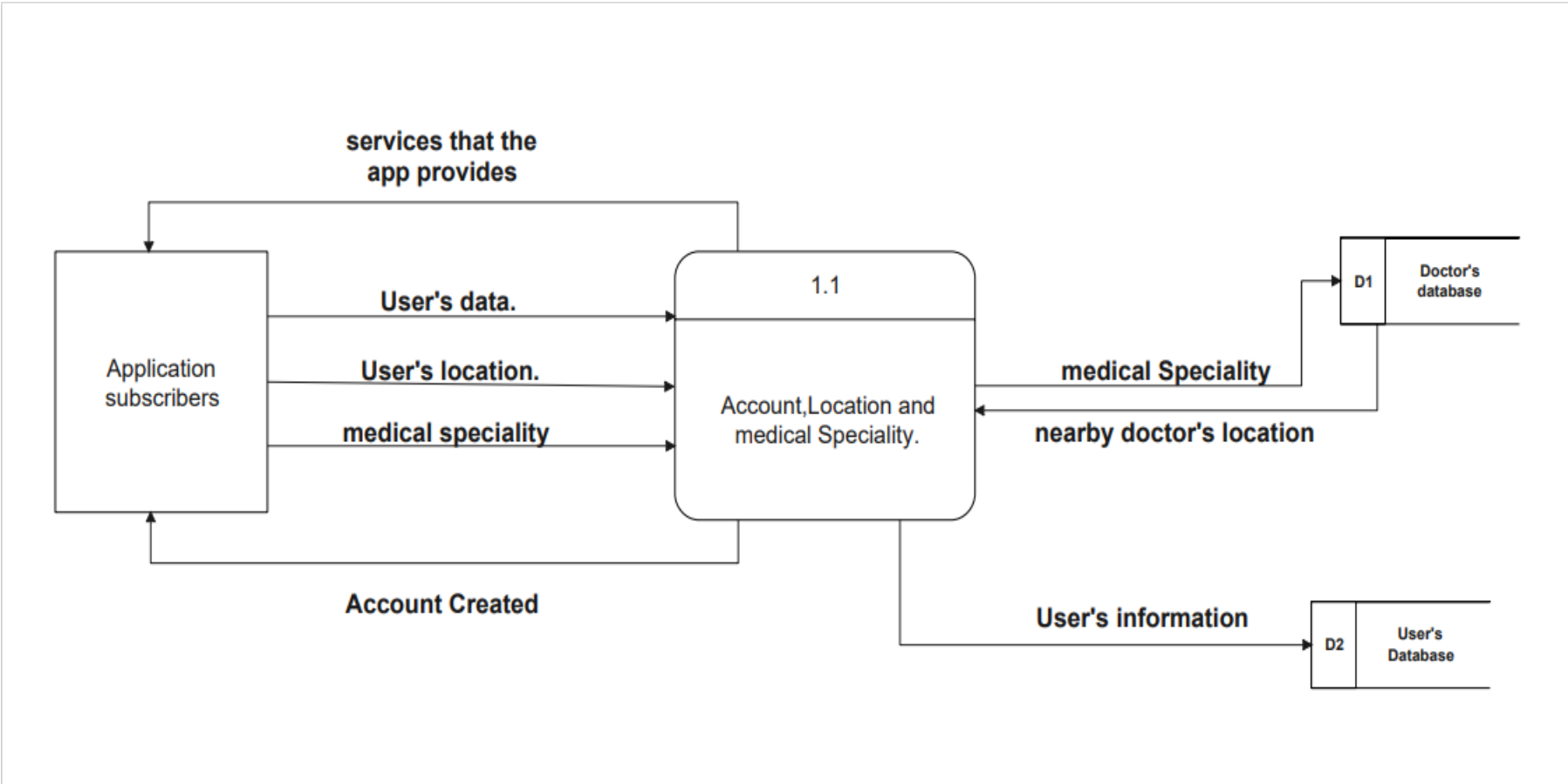
1. DFD FOR EVERY USE CASE:
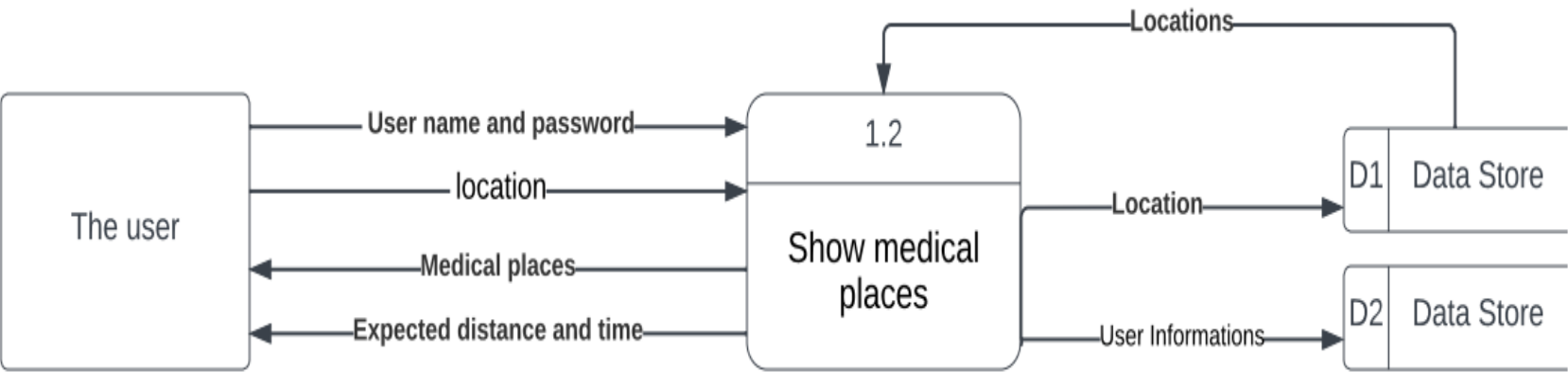
1.1 DFD MADE BY ARWA SAYED:

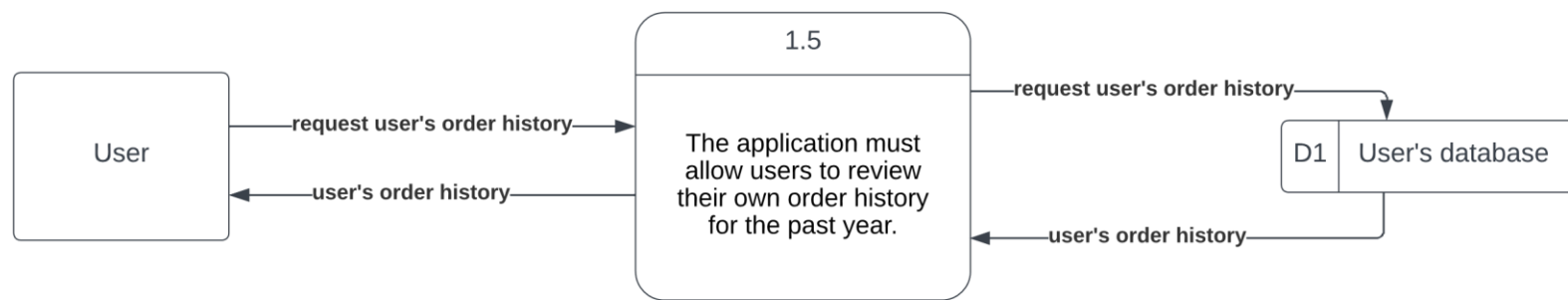#### 1.2 DFD MADE BY ESRAA AHMED ABD ELGHAFOR:

1.3 DFD MADE BY ARDINA ASAD :

1.4 DFD MADE BY Ahmed Ali :

1.5 DFD MADE BY Al-Nakhili Mohamed:

User → request user's order history → **1.5 The application must allow users to review their own order history for the past year.** → request user's order history → **D1 User's database**

1.5 → user's order history → **User**

D1 User's database → user's order history → **1.5**

1.6 DFD MADE BY Adham Ahmed:

Users — request's review
Users — User's request
Users — User's location
1.4 checking users medical service if it's available.
1.4 → User's request → **D1 services database**
D1 services database → request's review → **1.4**
Medical places — request's review — User's request

2. CONTEXT DIAGRAM:

Application user ↔ **0 health map** ↔ **medical places**

- Last requests done
- Data of medical places, distance and time to reach them
- user's data
- current user location
- medical service request
- bank data
- contact request
- Service confirmation
- Available to contact
- Medical Service Request
- Medical service confirmation
- Available to contact
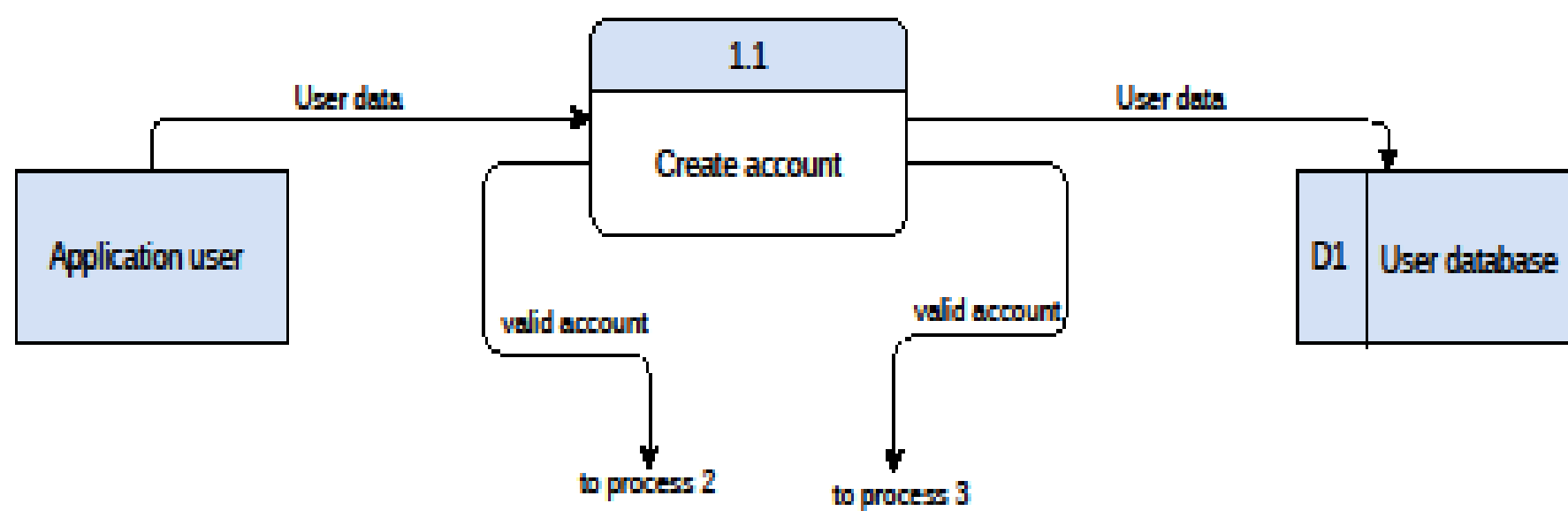- Medical location data
- data entry request
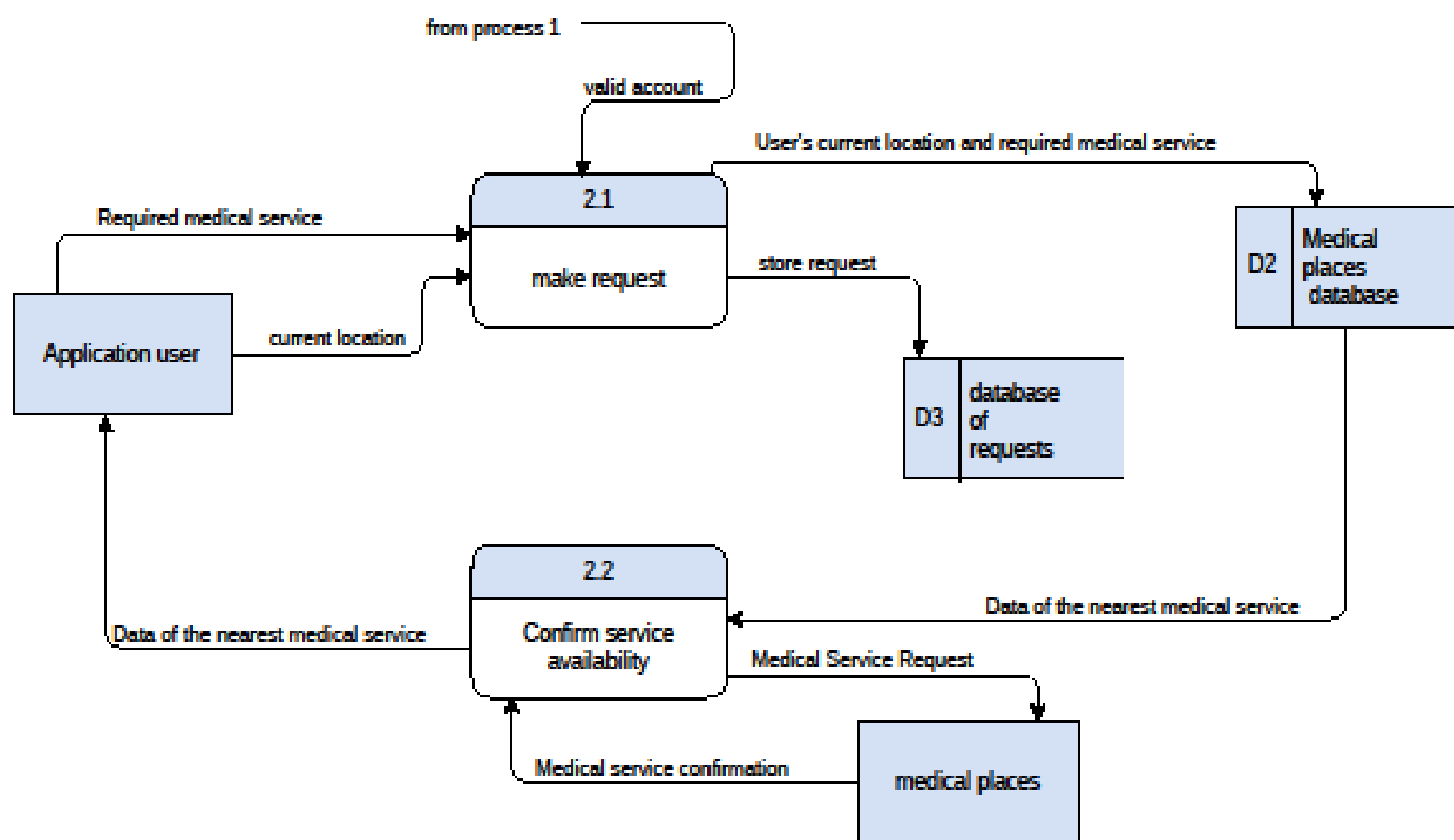- Contact request

3. LEVEL 0 DIAGRAM:

4. LEVEL 1 DIAGRAM:

4.1 PROCESS 1:

4.2 PROCESS 2:

4.3 PROCESS 3:
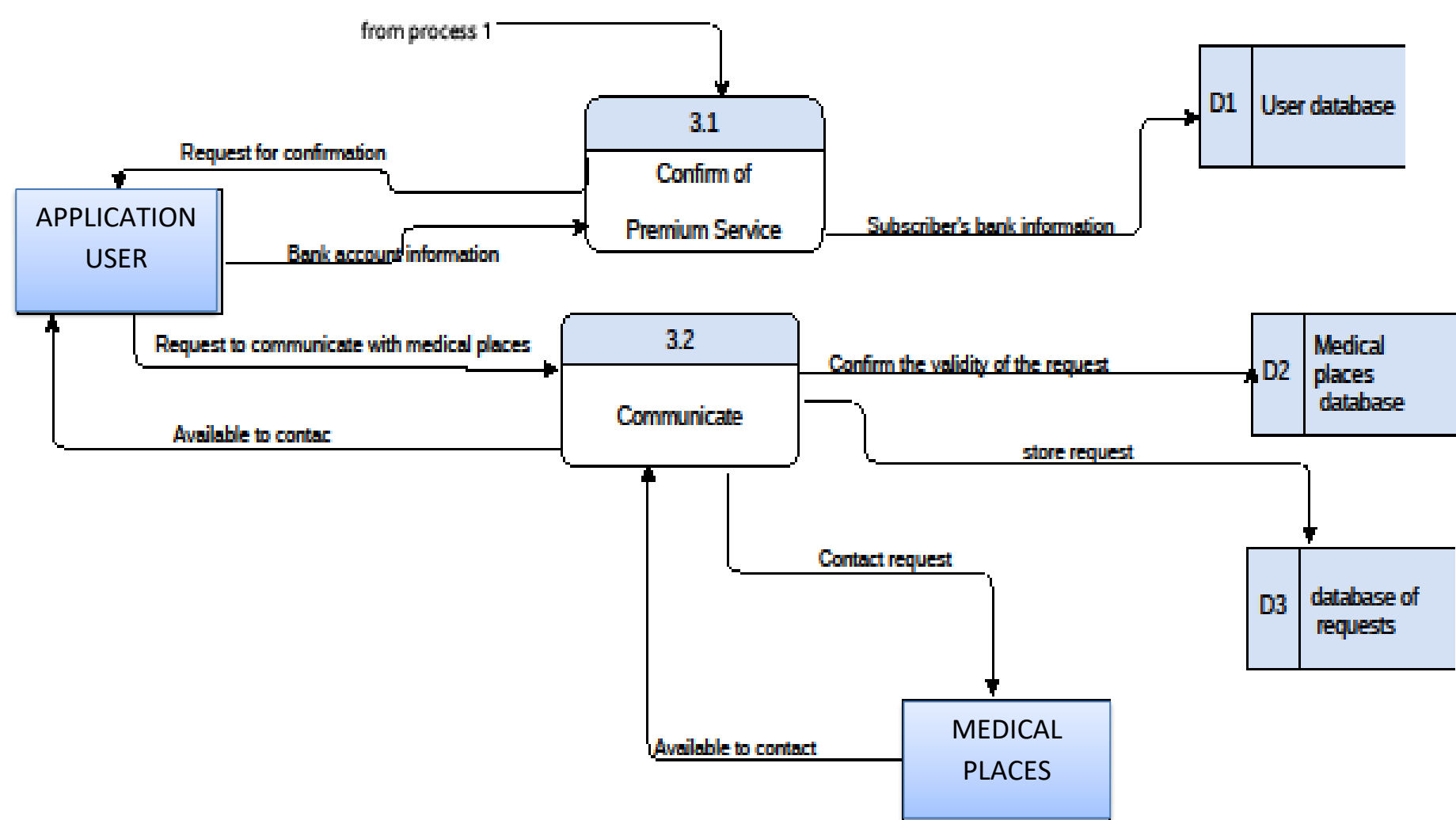
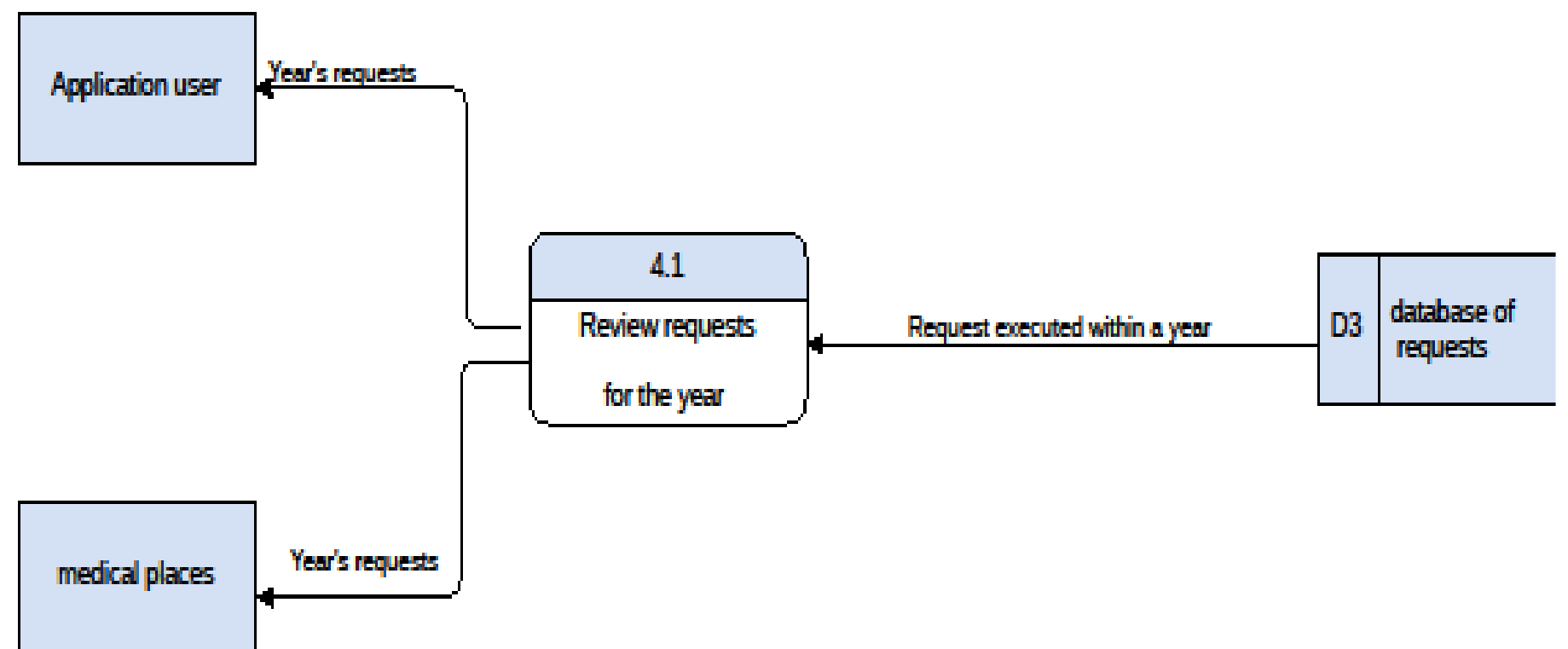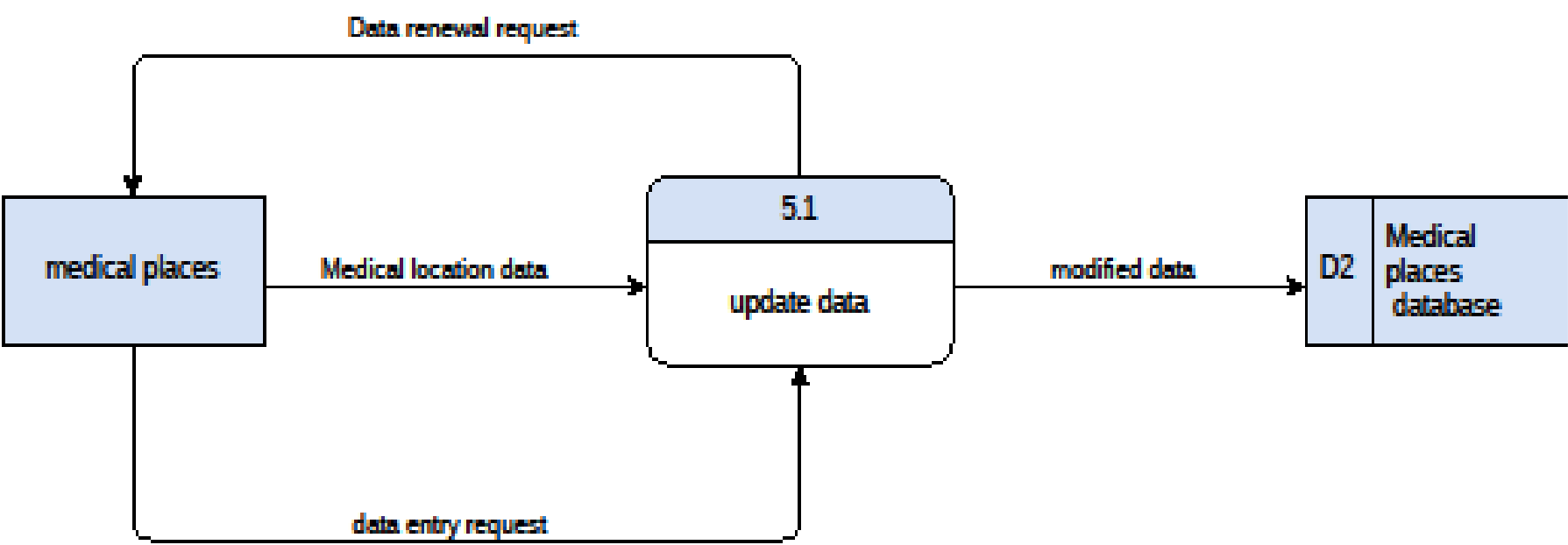**4.4 PROCESS 4:**

4.5 PROCESS 5:

- ## ENTITY RELATIONSHIP DIAGRAM: