Kingdom of Saudi Arabia
Ministry Of Education
Prince Sattam Bin Abdulaziz university
College Of Science and Humanities
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المملكة العربية السعودية
وزارة التعليم
جامعة الأمير سطام بن عبدالعزيز
كلية العلوم والدراسات الانسانية
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project about:

Sehhaty Application

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1.Feasibility Study &Project Proposal:

❖ Introduction:

Health is one of the most important things a person has in life, therefore a rational person always thinks about how to maintain his health and well being from the risk of contracting diseases.

❖ Problems that the app solves :

- ➢ Crowded Hospitals and health centers with patients and vistors.
- ➢ Not knowing the working hours of the medical staff.
- ➢ Medical result don't appear until you visit the health center.

❖ Background about the Ministry of Health:

Saudi Ministry of Health, it's the ministry responsible for citizens` affairs. It was establlished in 1370 and is located in the capital city of Riyadh. The ministry`s technical products include: sehhaty app, Mawared app, MOH Formulary app, and Anat app.

❖ Proposed solution of the problems:

- ✓ Organizing appointments for patients and visitors at specific times and days.
- ✓ Clarifying the working hours of the medical staff in the app.
- ✓ Sending the result of medical reports in the app.

❖ Work Plan:

Note: here is an explanation of the work plan that our team would follow if we will the ones implementing the app:

its use waterfall model, by doing each step individually and is plan driven as show:

(step1)specification:

- ➢ collect and analyze the requirments to be implemnted in the program.

- ➢ Determine the services required in the program:
- Available hospitals and health centers and their locations
- Book appointments
- Medical staff working hours
- Types of medications
- Medical reports

- ➢ Determine the program rules and restrictions:
- Types of passwords and username.
- it should only be used by citizens, residents, and visitors to the Kingdom.
- Select the supported languages in the app.
- ➢ Verify these requirements and services.

(step2)Design and implementation:

- use system design modeling languages to express specification specified in the first step.
- converting these models into an executable system.

(step3)Validation:

- Verifying that we are doing the system correctly and conforms to plan and specifications.
- Ensure that we have implemented the appropriate solution in the system.
- Reviewing processes and testing the system according to the presented specifications.

(step4)Evaluation:

- identifying new requirements.
- suggest possible changes to the app.
- Adding updates to the app from modren features.
- Test the system following these new requirements.

2: Project requirements:

Note: here we have mentioned 8 functional requirements and 4 non-functional requirements for the app:

❖ Functional requirements:

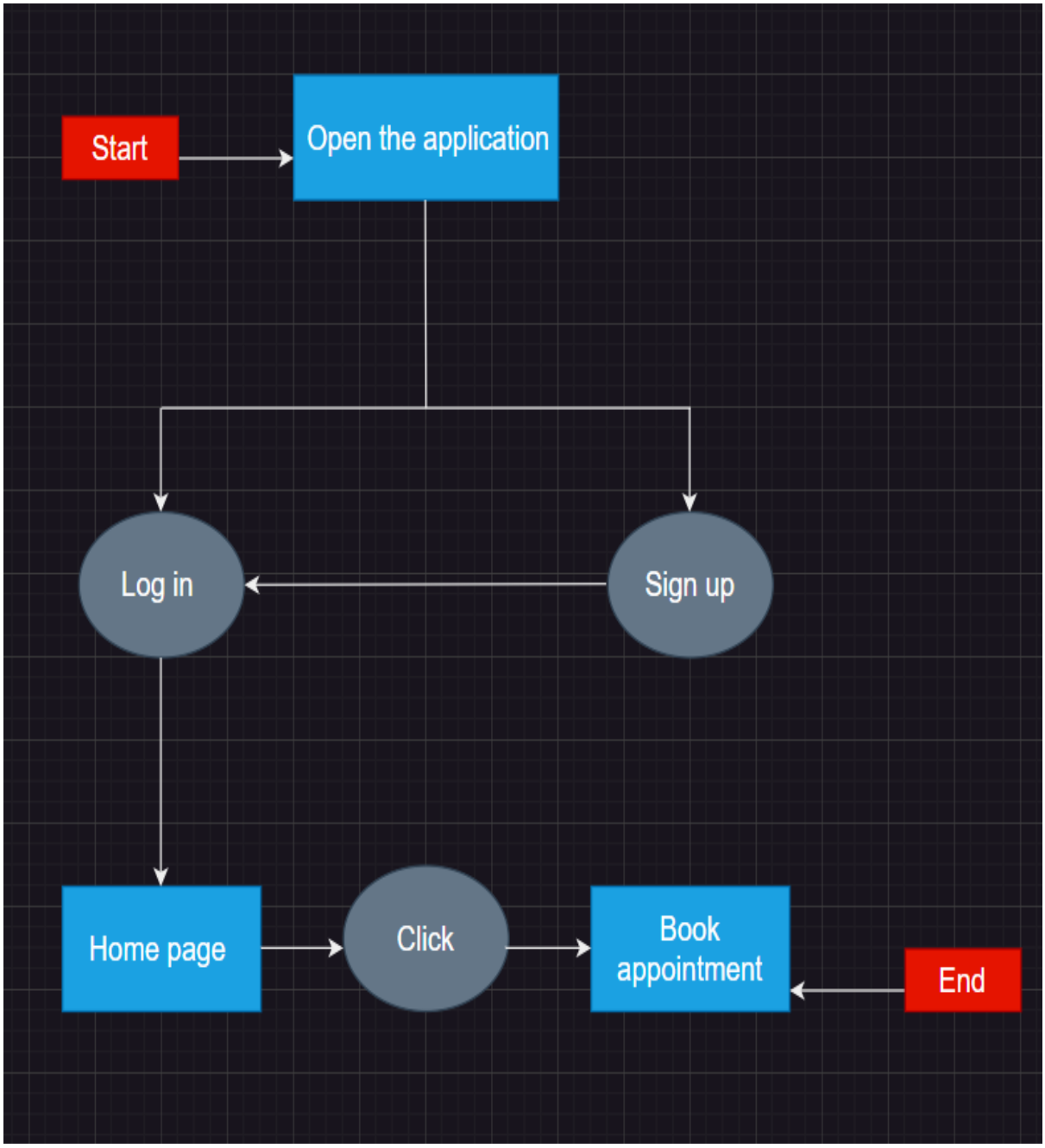
- Users must be able to search for the appointments list for all clinics.
- Users must be able to know the working hours of the medical staff.
- Users should be able to see medical reports.
- The users must be able to schedule medications.
- The user must be able to log in in the mobile app.
- The user should be able to add affiliate members.
- The user should be allowed to communicate with the ministry of health by mobile number or by the whatsapp application.
- The system must provide an ambulance request service.

❖ Non-functional requirements:

- App users must authenticate themselves using their ID card and password.
- The system must be able to modify data.
- The system must be used in accordance with the security and privacy regulations of the ministry of health.
- The system must protect users data.

3: Activity diagram:

Note: here is an illustration of the sequence of system states while booking an appointment through the app:



4: Project Use Case Modelling:

❖ Actors:

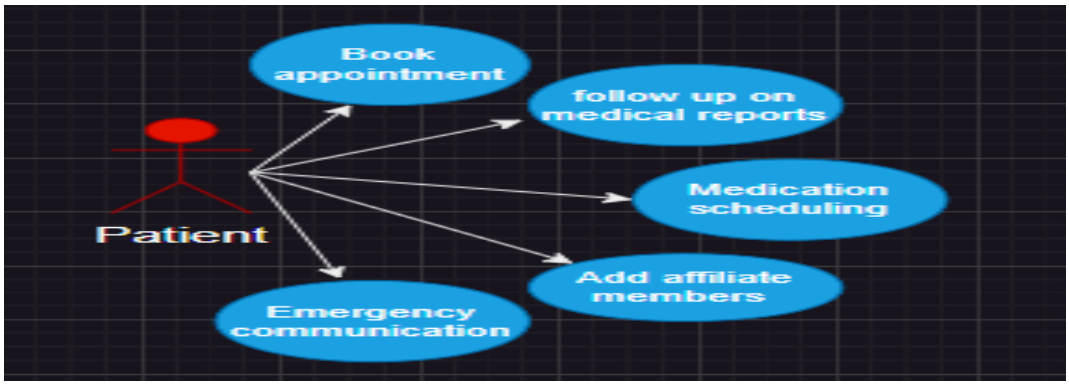
NOTE: At this point, we will explain the actors who have a role in the app and their function in the app based on the requirements mentioned previously.

Actors	Rules
Patients	▪ Book appointments ▪ Follow up on medical reports ▪ Medication scheduling ▪ Add affiliate members ▪ Emergency communication
Medical staff	▪ Detect the patient`s condition ▪ Providing prescriptions to the patient ▪ Follow up the patient`s condition ▪ Submitting medical reports ▪ Providing first aid to the patient
Support	▪ Amending patients` health records ▪ Update user data ▪ Protect users` data ▪ Modification of working hours ▪ Follow up on reports

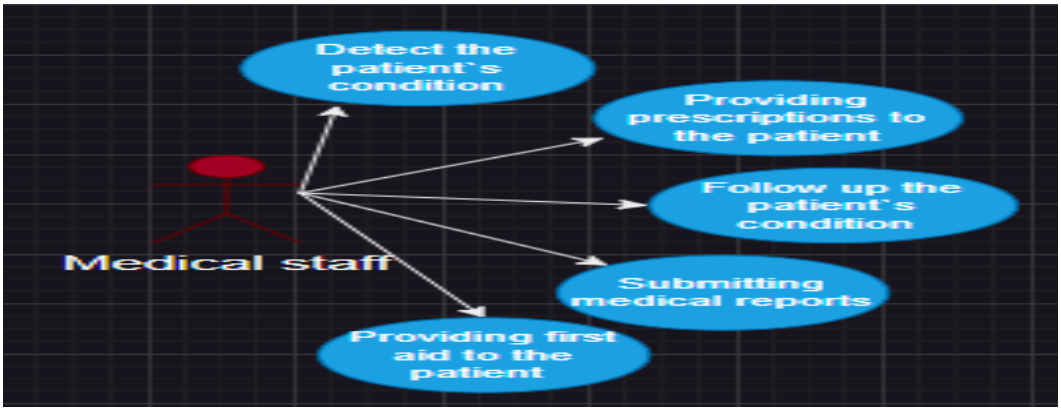
❖ Use cases &its related use cases:

Note: here we explanid for each actor we mentioned, their function in the app:

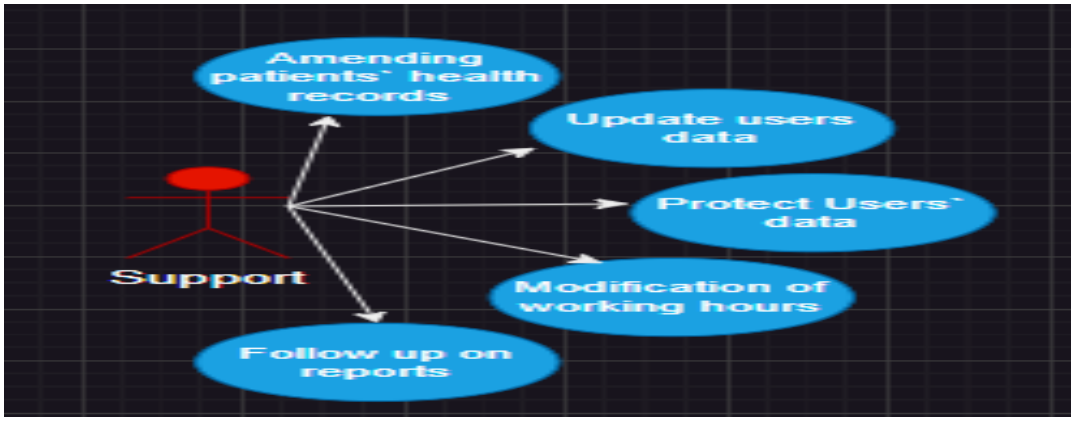
- Services that the patien can do in the app.



- Services that can be provided by the medical staff in the app.

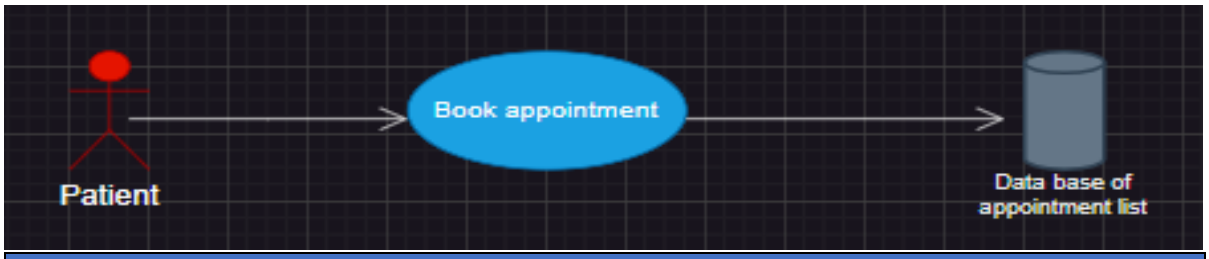


- Services that support can provide in the app.



❖ Table 1:

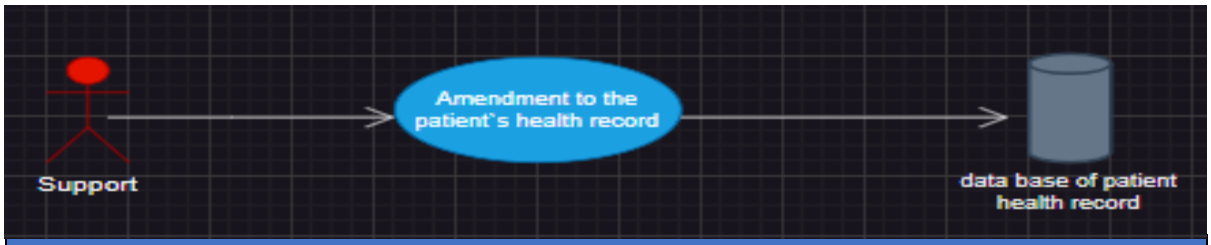
Note: here is an explanation of where the patient can book an appointment in the app and a detailed explanation of it in the table:



Patient: Book appointment	
Actors	patient and data base of appointments lists.
Description	This shows the interaction between patients who wants to book an appointment inside the Sehhaty app.
Data	Patient name and id, Appointment date and time
Stimulus	The patient wants to book an appointment.
Response	Review the appointment (time, date, clinic name, doctor's name)

❖ Table 2:

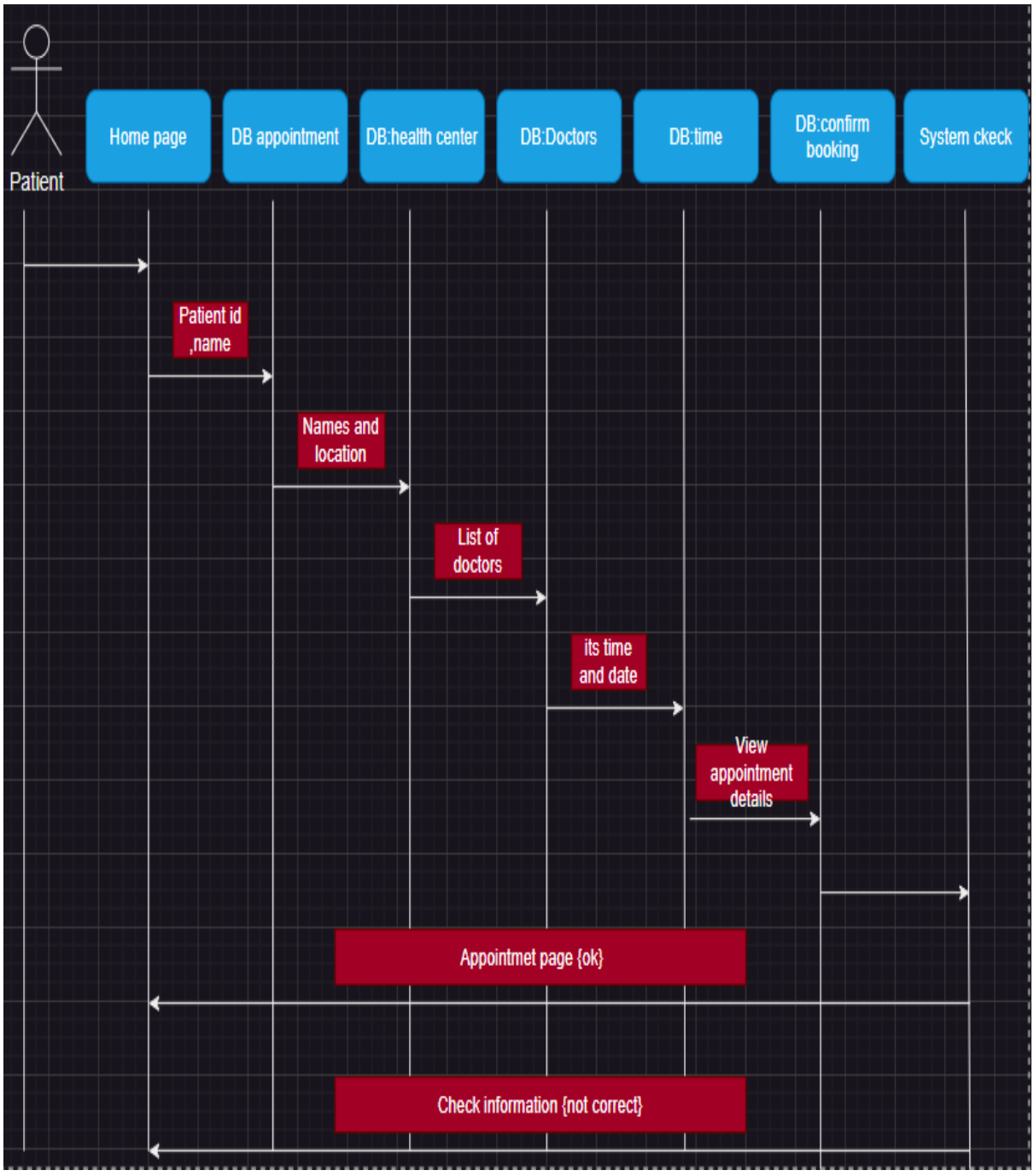
Note: here is an explanation of where support can modify the patient`s health record in the app and a detailed explanation of this in the table.



Support: Amendment to the patient`s health record	
Actors	Technical support with health record database.
Description	Explains the interaction between technical support and the patient's health record.
Data	Health record number and health record data (disease diagnosis – weight – height – vital indicators – name of treatment – medical tests)
Stimulus	Technical support amends the health record.
Response	Modify health record information.

5: Creating Sequence Diagrams:

Note: here is an illustration of the timeline during an interaction with an appointment booking through the app:



6: Creating a Class Diagram:

❖ Classes attributes + operations:

Note: below is an explanation of the attributes and operations of patient and ambulance services that can be provided in the app:

Patient class
• Id number (int) • Name (string) • Address (string) • Phone number (int)
○ New () ○ Search () ○ Update () ○ Delete ()

Ambulance class
• Phone number (int) • Name (string) • Type of report (string) • Description (string) • Address (string)
○ New () ○ Search () ○ Update () ○ Delete ()

❖ Associations:

Note: below is an illustration of the relationship between the patient and the ambulance in the app: