



SECP 1513 - SECTION 01

LOW FIDELITY PROTOTYPE PROJECT

GROUP 4

OUR CLIENTS

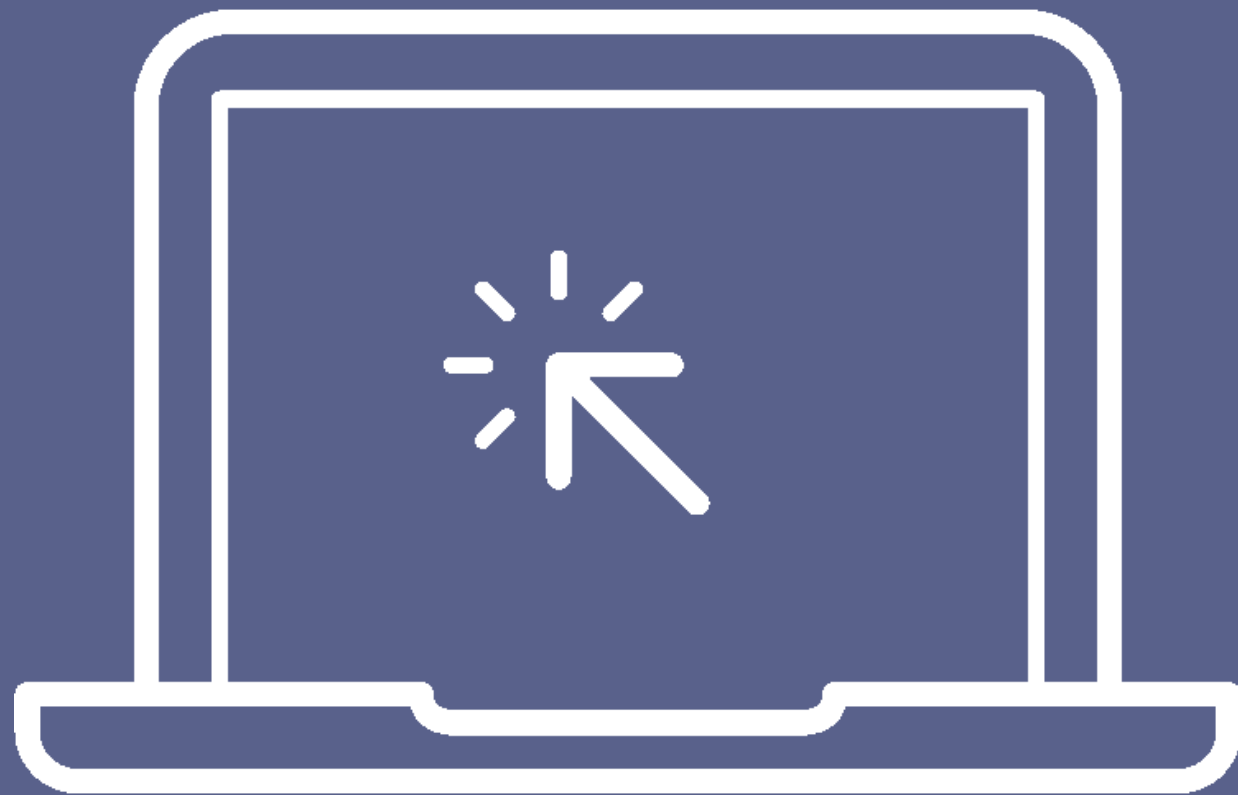


PROBLEM : This hospital does not have the ability to transfer all the patient's genome into datas and does not have enough equipment to store all the drugs datas. Thus, it takes too much time for the doctors in the hospital to diagnose the genomic disease of the patients and the hospital also needs much time to dispense (drugs) prescribe. This hospital wanted to have a technology that enabled the process of diagnosing the disease of patients and dispense prescriptions faster.

CLIENT : Hospitals that require a technology that can store data, help to diagnose the disease and dispense prescriptions in a short time

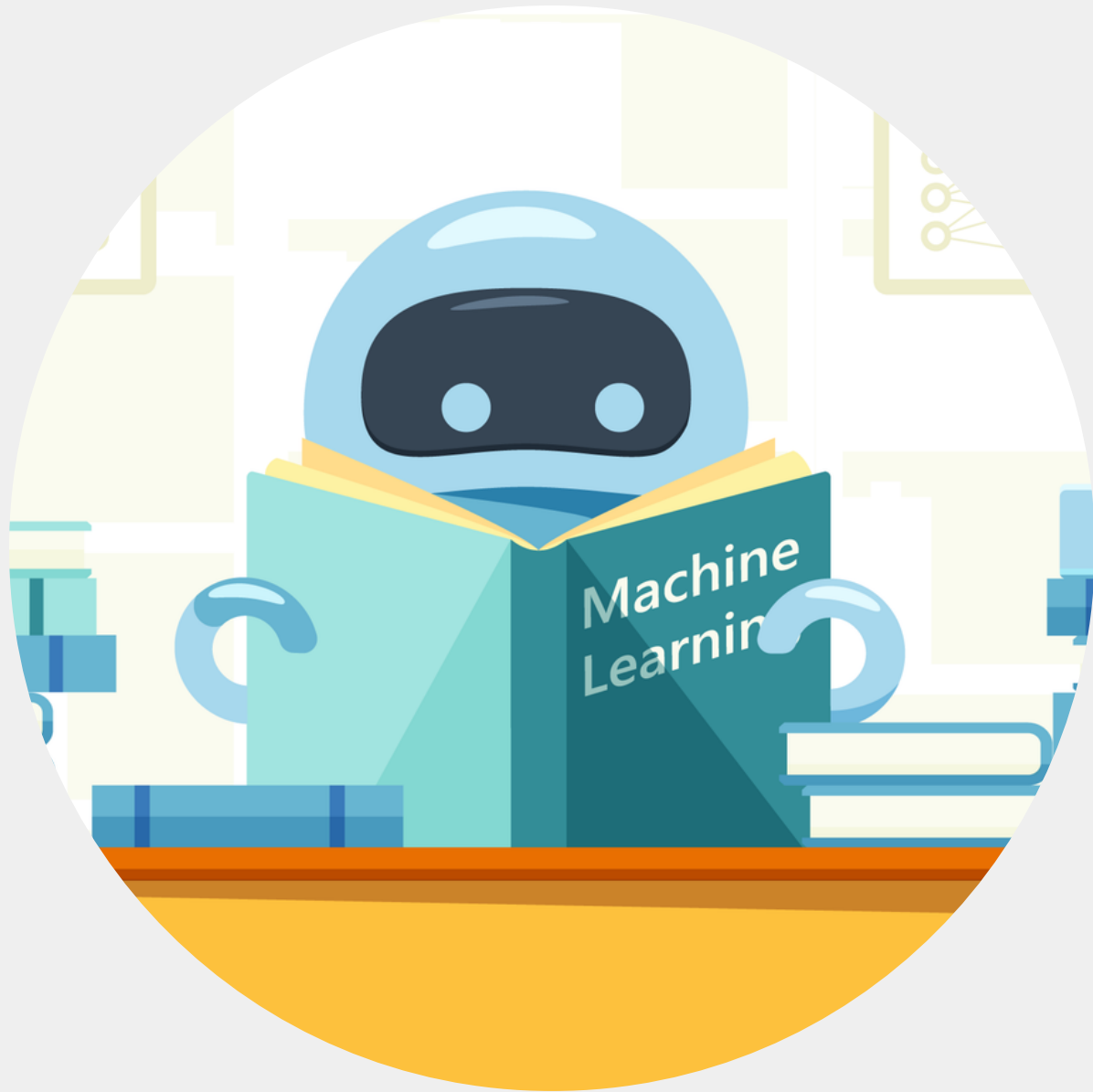


THE PURPOSE OF OUR TECHNOLOGY



- To be able to transfer all the patient's genome into data.
- To be able to store all the genomic datas and drugs datas.
- To be able to differentiate and analyse the patients health condition while being able to diagnose the genomic disease that the patients suffer from in a short time.
- To be able to dispense prescriptions based on the patients' condition in a short time.

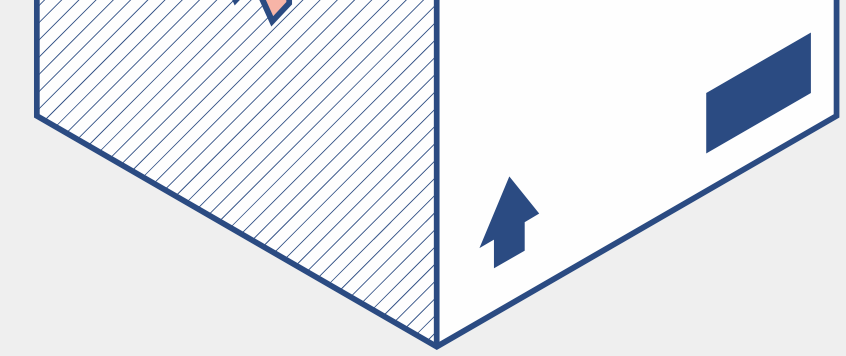
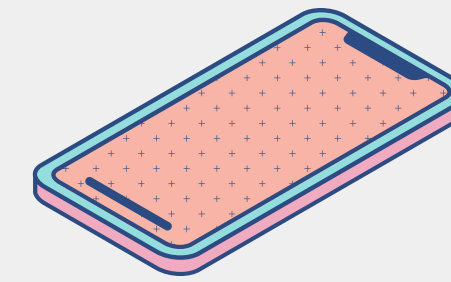
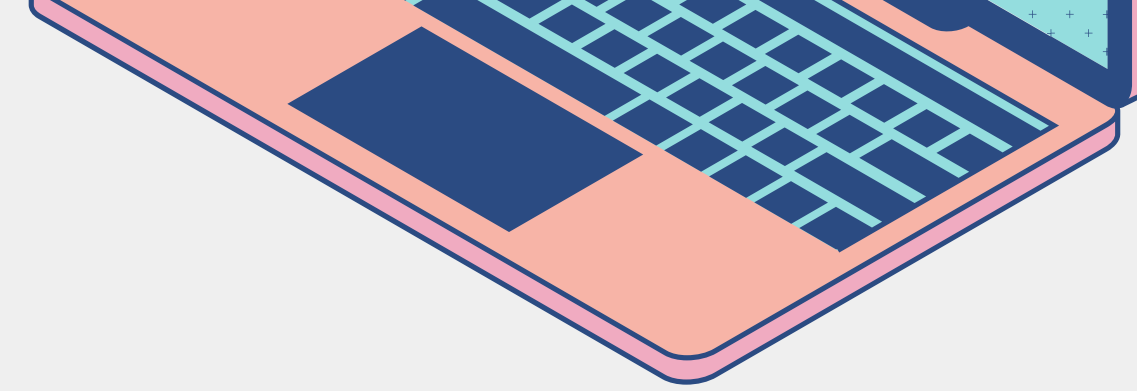
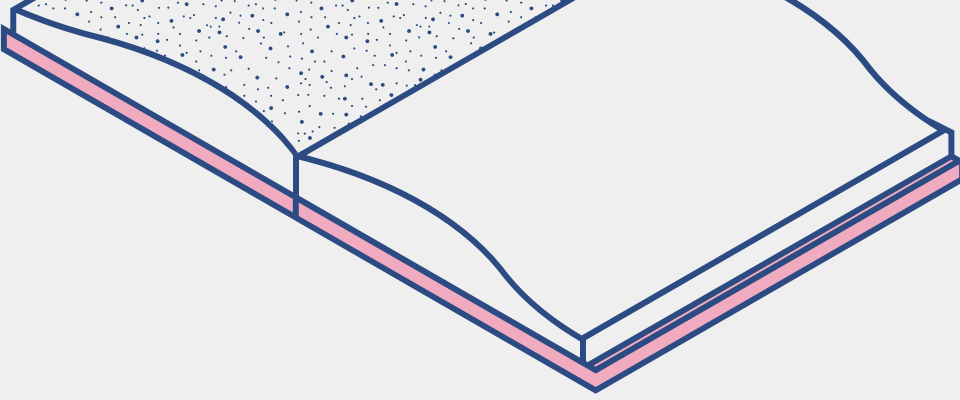
Machine Learning



- **Cost efficiency**
- **Easy to use**
- **No expertise required**



- **Ability to store data**
E.G. DRUGS DATA AND PATIENTS' DATA
- **Can predict and make decisions**
BASED ON DATA INSERTED, E.G.
HISTORICAL DATA
- **Results are accurate**
PREDICTIONS BASED ON TRUE DATA



 STORE
DRUGS AND
PATIENTS
DATA

Machine Learning
fits all the
requirements

HELP TO
DIAGNOSE
THE 
DISEASE



DISPENSE
PRESCRIPTIONS
IN A SHORT
TIME

THE APPLICATION OF AMAZON WEB SERVICES (AWS)

A CLOUD COMPUTING SOFTWARE THAT PROVIDES HIGH
ASSISTANCE IN PERFORMING BIOINFORMATICS PROJECTS



AWS FEATURES

&
THEIR CONTRIBUTIONS TO THE PROPOSED SYSTEM



AWS DATASYNC

- SIMPLIFIES RAW PATIENT DATA THAT HAS BEEN RECEIVED
- DATA BECOMES MORE ORGANIZED & STORABLE



AWS S3

- STORES DATA INTO SOURCES CALLED BUCKETS:
- BULKED PATIENT DATA
 - PARTITIONED DATA
 - OUTPUT DATA
 - CONFIRMED CASE FOR REPORTING



AWS LAMBDA

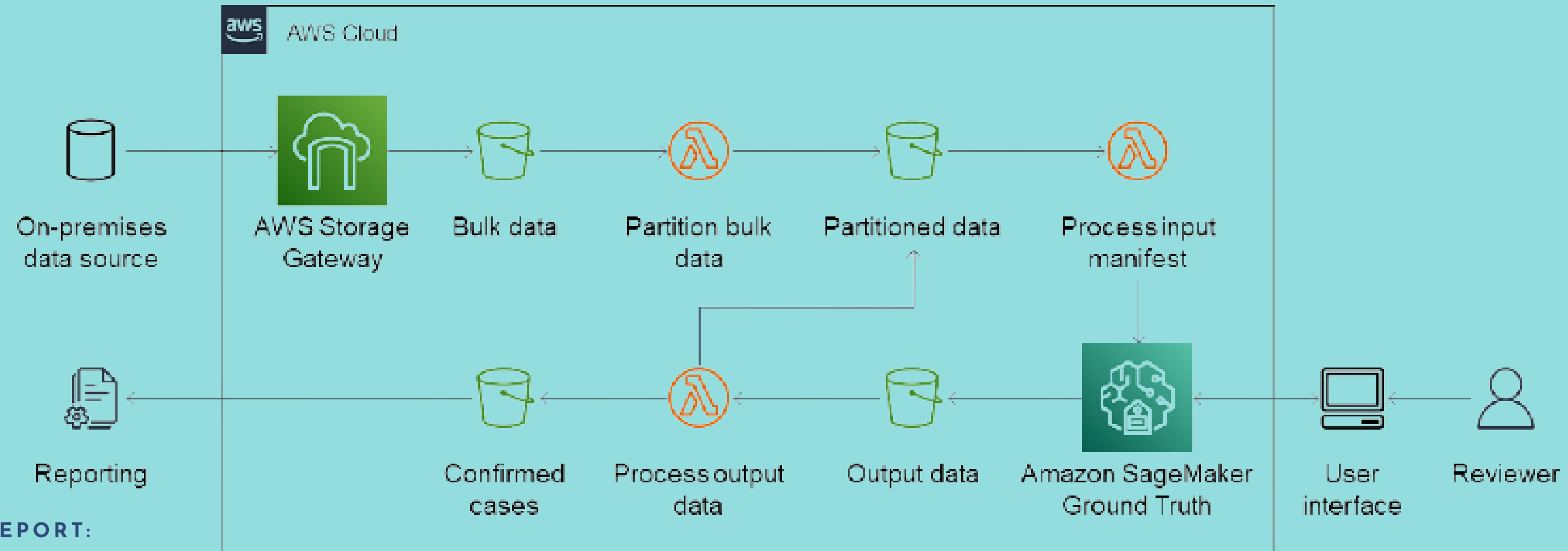
- UPDATES THE BUCKET SOURCE INTO A READABLE CASE FOR THE USER
- HELPS AWS SAGEMAKER TO PROVIDE A USER INTERFACE



AWS SAGEMAKER

- PROVIDES USER INTERFACE FOR THE USERS TO SEE THE OUTPUT
- DEPLOYS MACHINE LEARNING MODELS (DRUGS)
- AWS LAMBDA PROCESSES THE OUTPUT TO THE REPORTING AWS S3 BUCKET
- FINAL PART: CONFIRMED CASE BUCKET FOR REPORTING

THE FLOW OF CLOUD ARCHITECTURE & SYSTEM DESIGN:



MEDICAL REPORT:

IT HAS INFORMATION
NEEDED BY THE CLIENT
FOR THE MEDICATION
SELECTION

Detailed
descriptions
include
problem,
solution and
team working



We still had some troubles understanding the project

20 DECEMBER 2021

- Dr Azurah had a briefing earlier that day.
- The briefing was recorded by Aisyah.



Confusion among members

21 DECEMBER 2021

- Discussion and questioning was held.
- The confusion was slowly disappearing.



The problem created was "not simple"

24 DECEMBER 2021

- A meeting was held lead by Qi Yan
- Creates a new problem
- Using Google Docs as a medium

Members still have some doubts and hesitation

23 DECEMBER 2021

- Qi Yan shared a few info from other groups.
- Aisyah suggested a new problem as well as the solution to the problem.
- Messaged Dr. Azurah for closure.

Part 1 'finished'

27 DECEMBER 2021

- Last minute checking

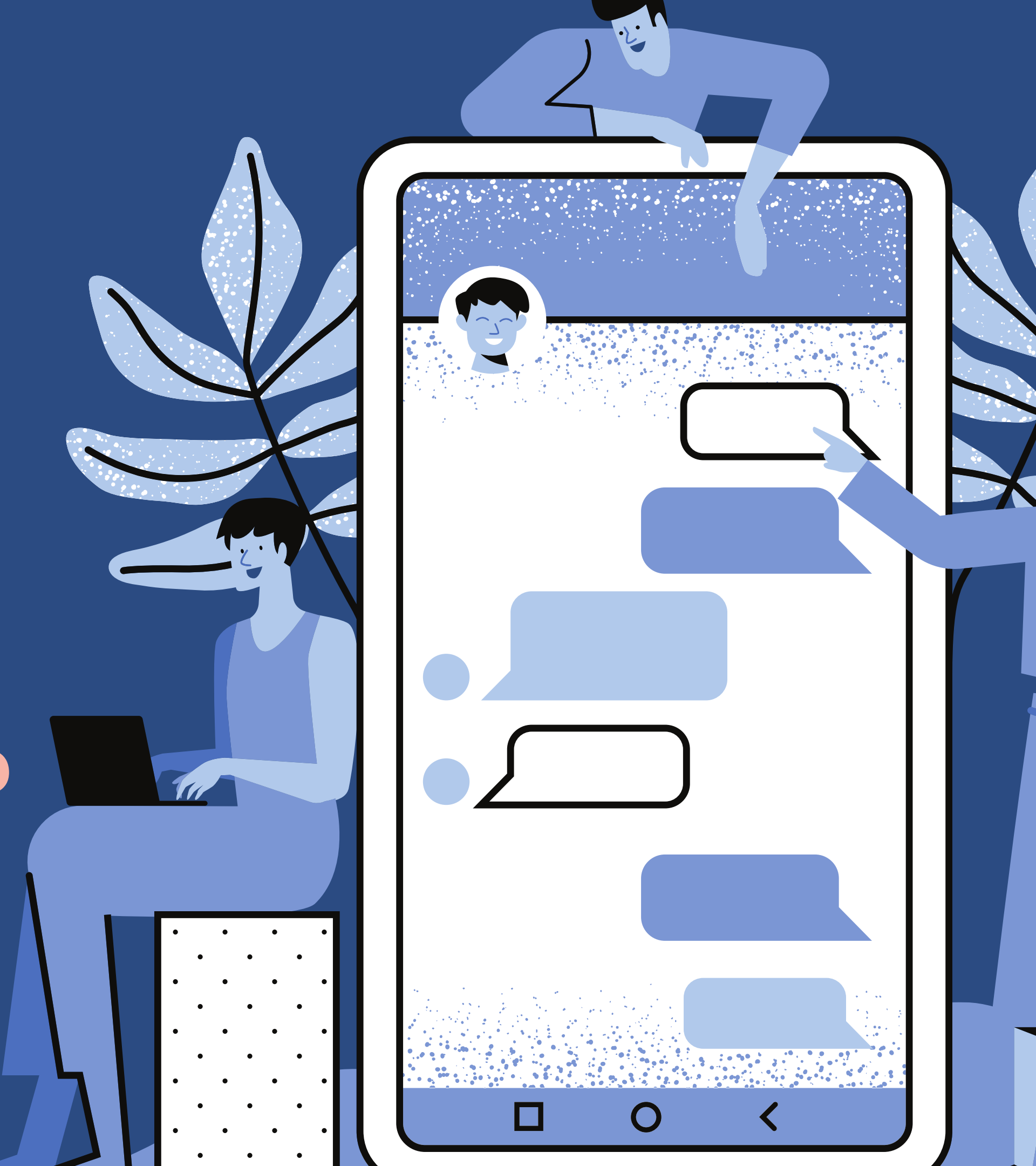




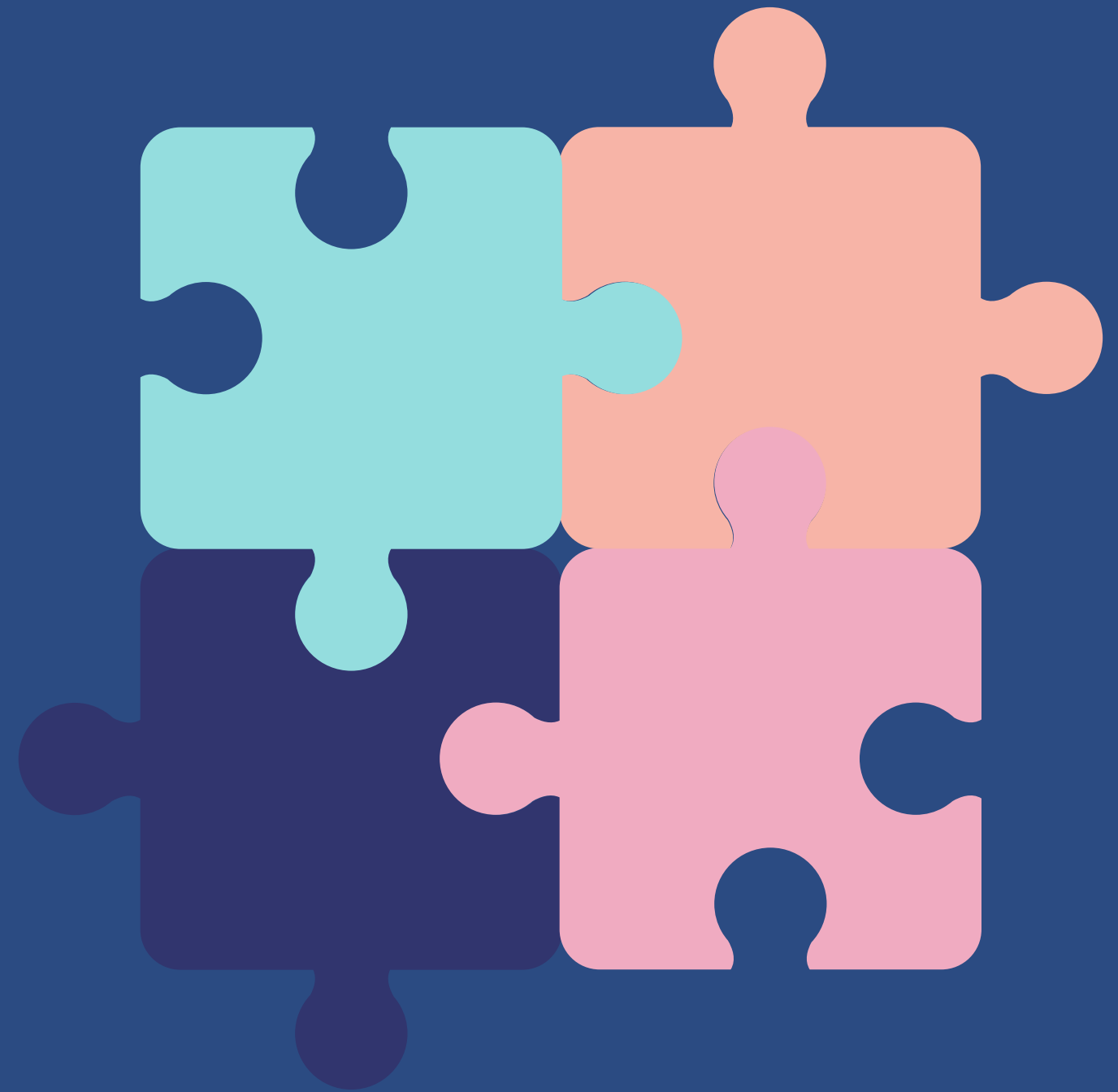
Images on the mockup

18 JANUARY 2022

- Created a meeting for the second part.
- Other members' gave responses and opinions
- Improve the image

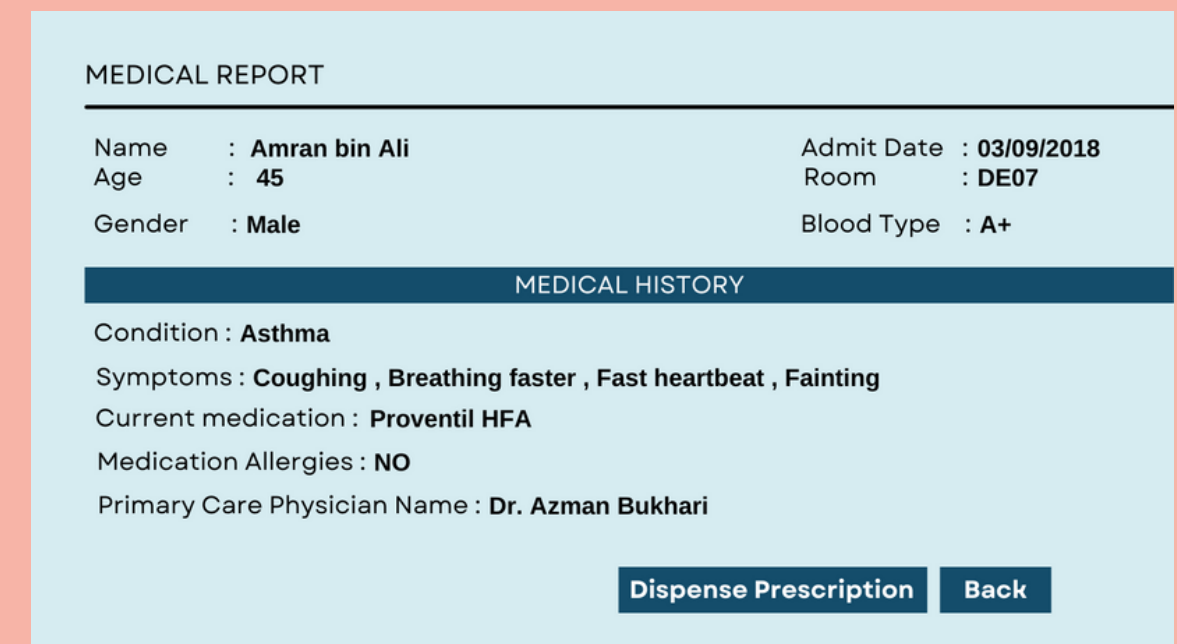
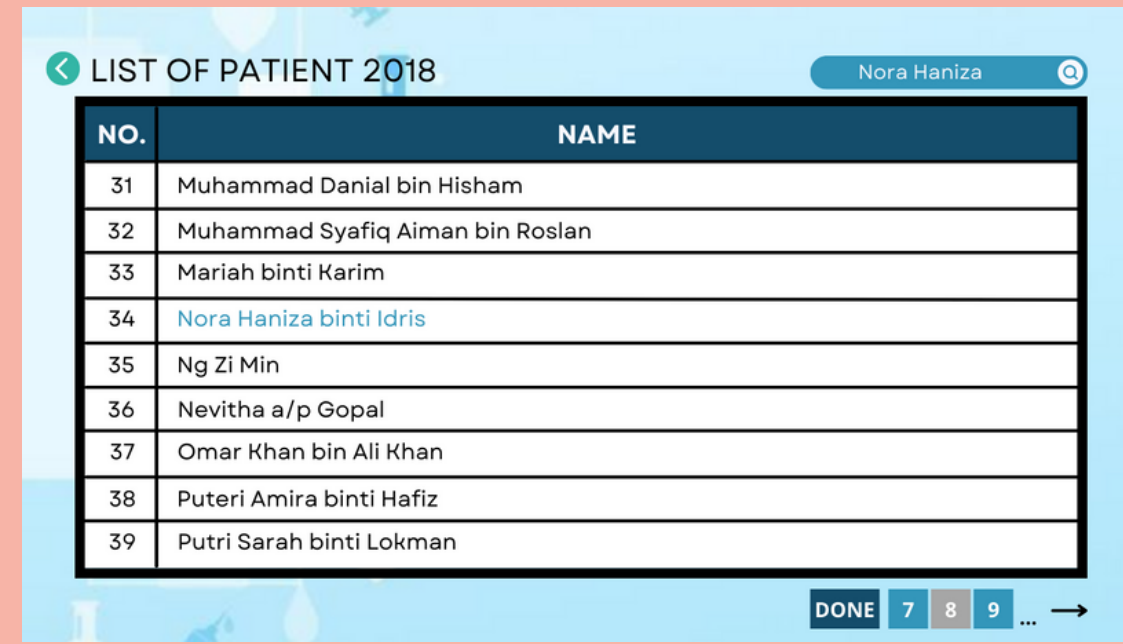
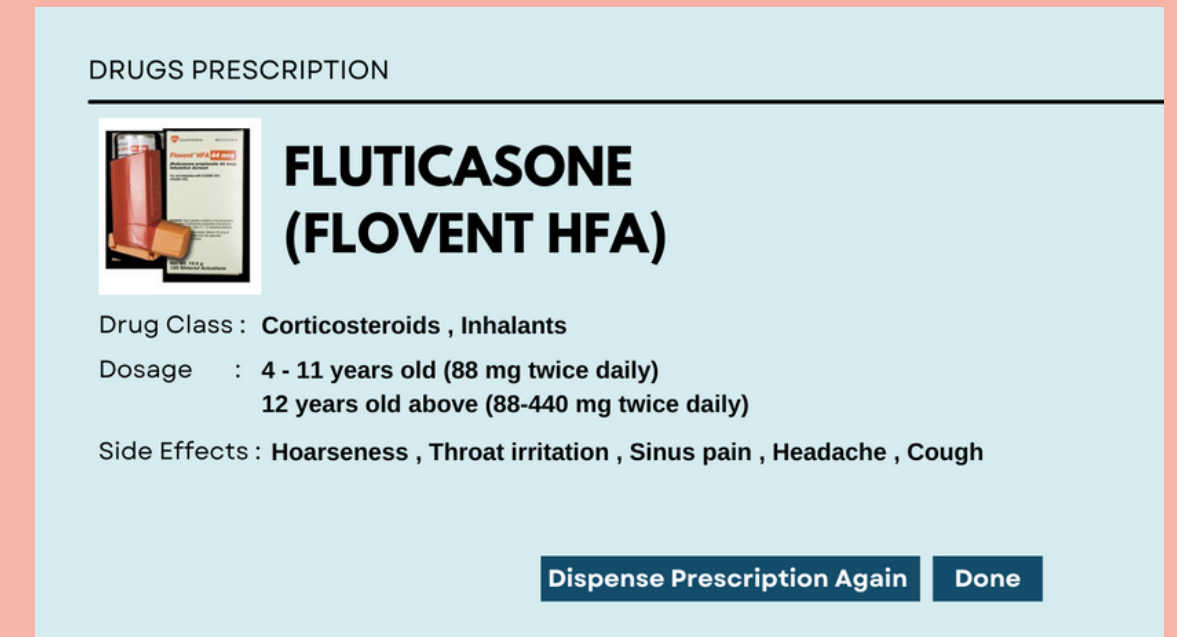
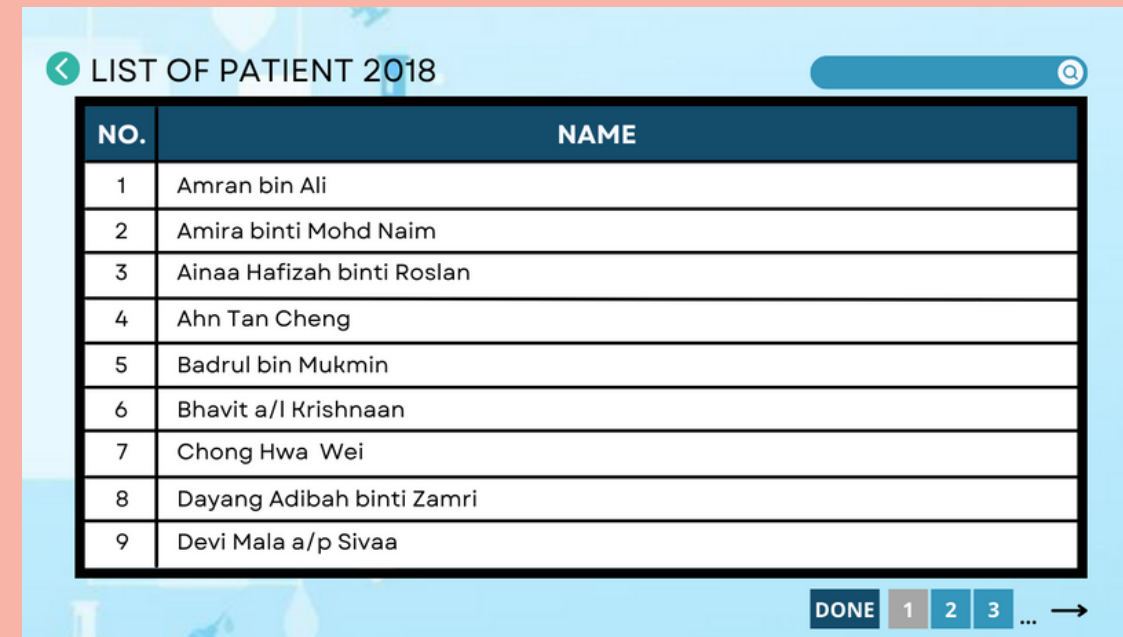
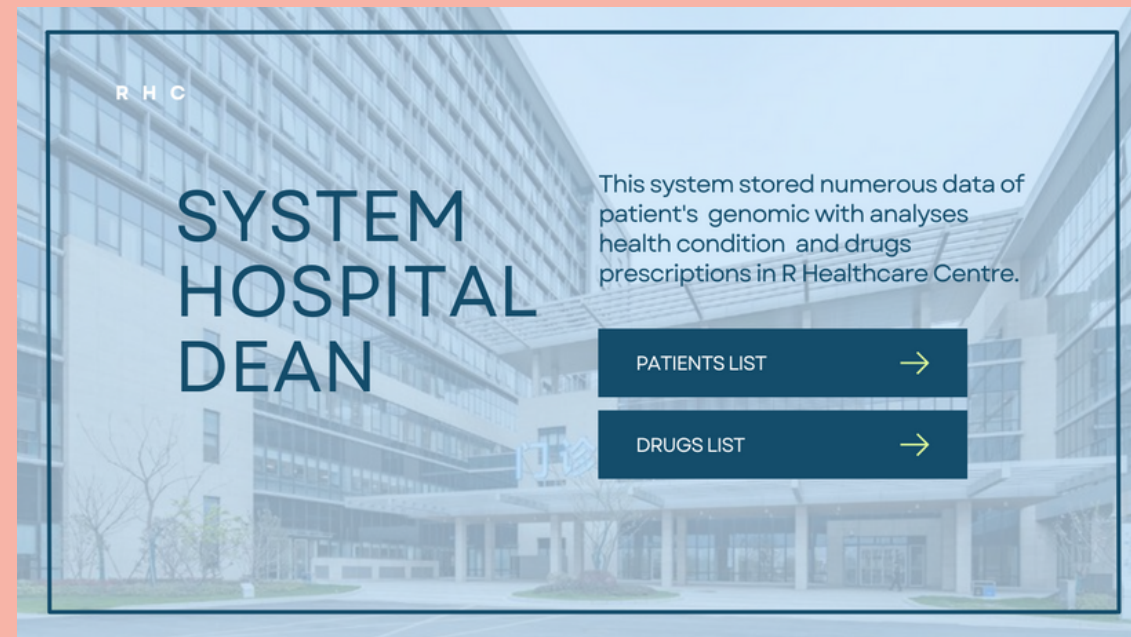


Project Mockup



MOCKUP IMAGE

MADE FOR PROJECT PROTOTYPE



MOCKUP IMAGE

MADE FOR PROJECT PROTOTYPE



DRUGS PRESCRIPTION



**BECLOMETHASONE
(QVAR REDIHALER)**

Drug Class : Corticosteroids , Inhalants

Dosage : 4 - 11 years old (40 or 80 mcg twice daily)
12 years old above (40,80,160 and 320 mcg twice daily)

Side Effects : Oral trush , Upper respiratory tract infection , Runny nose ,
Allergic rhinitis , Sore throat and Sinusitis.

Dispense Prescription Again

Back

Done

< LIST OF DRUGS

Lexapro

NO.	DRUGS
51	ADDERALL
52	AMITRIPTYLINE
53	SUBLOCADE
54	TRAZODONE
55	HYDROXYCHLOROQUINE
56	INVOKANA
57	LEXAPRO
58	XANAX
59	RYBELSUS

DONE

7

8

9

...

→

< LIST OF DRUGS

NO.	DRUGS
10	AMLODIPINE
11	BUNAVAIL
12	CEPHALEXIN
13	CITALOPRAM
14	NAPROXEN
15	ENTYVIO
16	FARXIGA
17	PANTOPRAZOLE
18	ZUBSOLV

DONE

1

2

3

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→

DRUGS DETAILS

FLUTICASONE (FLOVENT HFA)

Stock : 200

Ref. ID : EX2231009

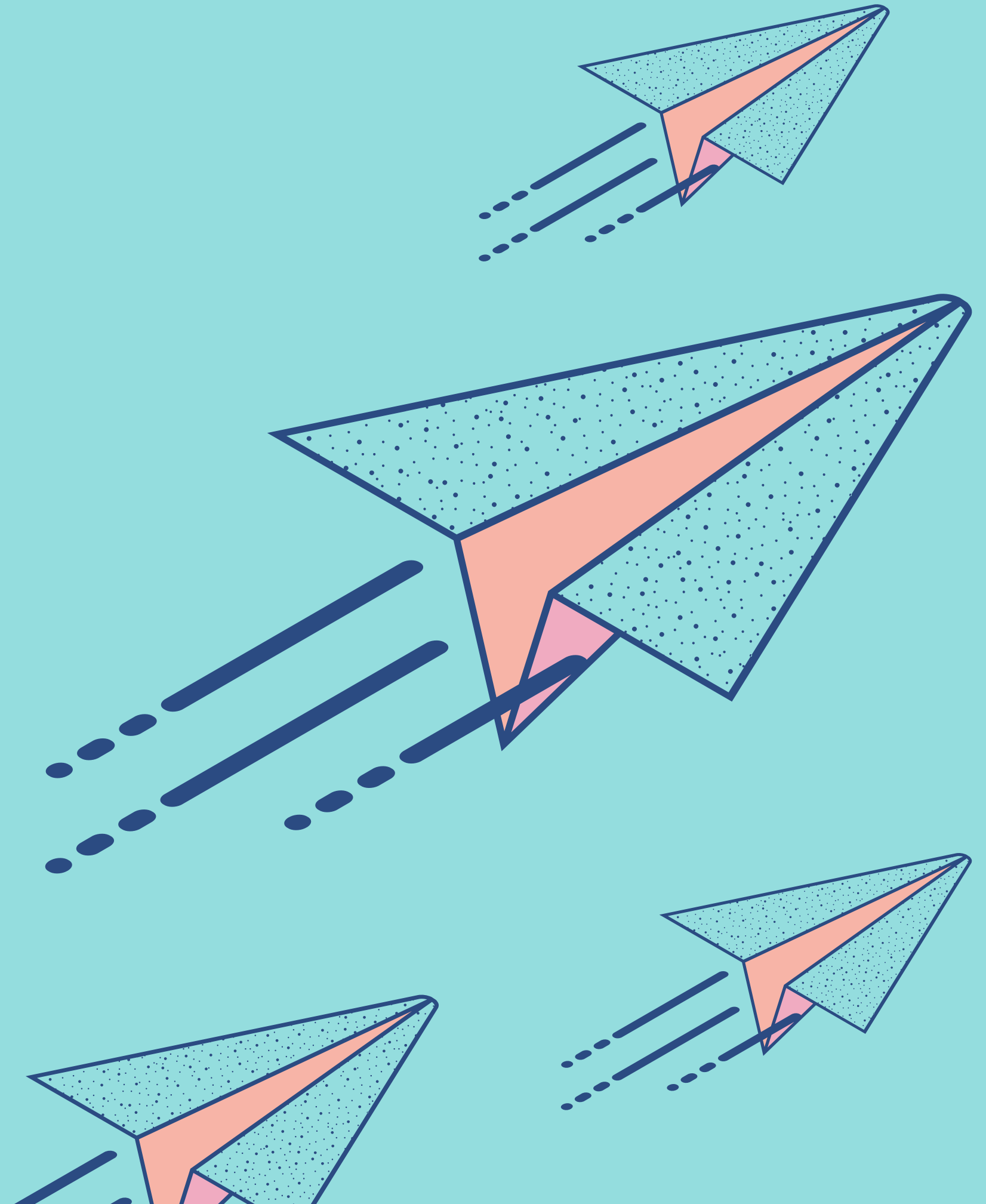
Expired Date : 22/10/2024

Location : Pharmacy 01



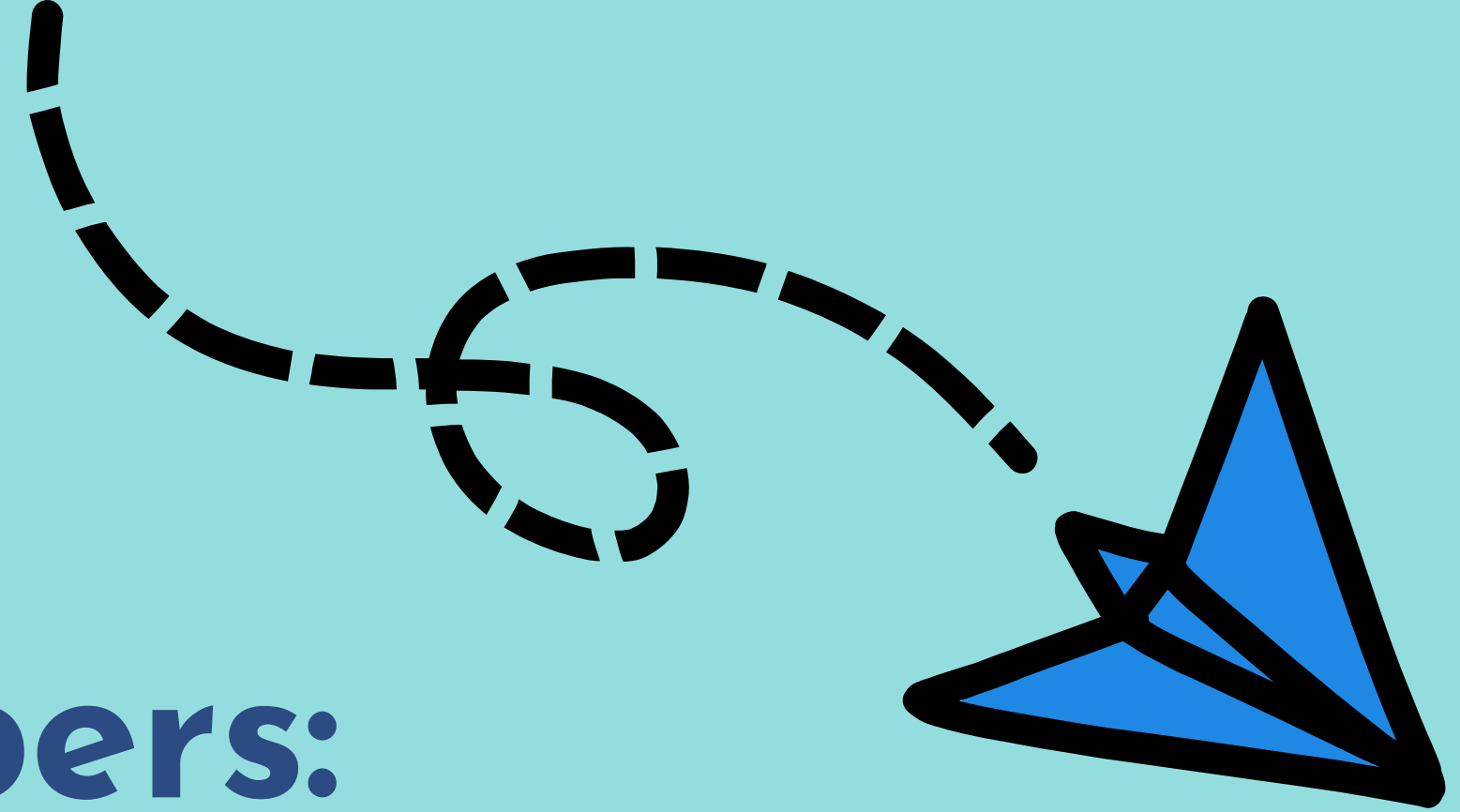
Done

**Lets Look For
Our Mockup !**





Group Members:



- MUHAMMAD IZAT BIN MD KAMIL (A21EC0082) - LEADER
- AISYAH BINTI MOHD NADZRI (A21EC0011)
- THUVAARITHA SIVARAJAH (A21EC0137)
- NUR IMMAL HAYATI BINTI HASMI ANUAR (A21EC0111)
- LU QI YAN (A21EC0049)

