BEEMATHON DEVELOPMENT CHALLENGE

TOPIC:

Stream-Lined Vaccination

MEMBERS:

1. **MURTADA MOHAMMED RASHID**
2. **MOHAMMEDABBAS YOUSEF**

Contents

INTRODUCTION

Beem Africa is an Application Programming Interface service provider that offers an omnichannel communication platform that could allow advanced functionality and features to be integrated into systems easily. **Beemathon Development Challenge** is a competition where developers are supposed to use Beem Provided APIs in their made systems.

As the west is working collectively against fighting the unseen virus by making the best use of allocated vaccination doses, we believe that a systematic approach should be followed in the upcoming vaccination campaigns in Tanzania. Being a developing country, there are several problem that could cause the campaign to fail if no software intervention is made.

There are certain main problems that could lower the campaign efficiency and eventually fail the entire process. Since there has been a huge demand and a remarkable world shortage in doses, that could lead to fraud as people would pay extra to get their jabs earlier. In addition to that, reluctant people due to all those false claims about vaccines would forge the certificate but not have the vaccine. Allowing this approach could eventually backfire catastrophically .

Not having a centralized system could cause wastage and misuse of valuable doses making the campaign inefficient in saving the maximum amount of citizens

Therefore, we have come with a live running designed system named **"Steam-lined Vaccination "** , which will also reduce the ques for the vaccine significantly and contain a record for future purposes.

FUNCTIONAL REQUIREMENT

1. Patient Registration

User would enter via the system URL and register into the portal , where the required information is entered and validated. If the provided information is according to the requirements the data is stored.

2. Date Allocation

Once the number of Patients reaches a certain number , an available vaccinating date is allocated to them automatically.

3. Sending Message

Once the date has been allocated , a SMS message is sent to every patient in that particular batch .

4. Email To Vaccination center

To reduce queuing time and increase efficiency , an email is sent to the vaccine center with all information of that particular batch .

NON FUNCTIONAL REQUIREMENT

1. ## Reliability:

   We have made sure that the system will perform without failure for a given period of time. To achieve that we have done the following:
   - Testing and tracking the percentage of operations that are completed correctly to ensure the software reliability.
   - Ensuring that the data communication protocol can handle fault tolerance.
   - In case of any failure, the database update process must roll back.
   - Ample Booking Dates to accommodate large audience.

2. ## Security :

   We have made sure that the system is protected from any unauthorized access while maintaining data privacy .
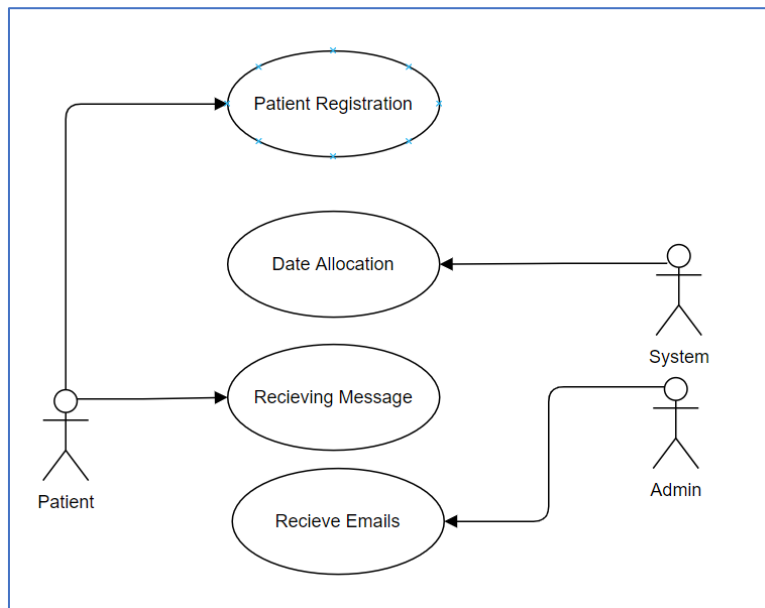
3. ## Scalability:

   We have designed the system using a very friendly environment for future expandability , with all the codes being easily readable .
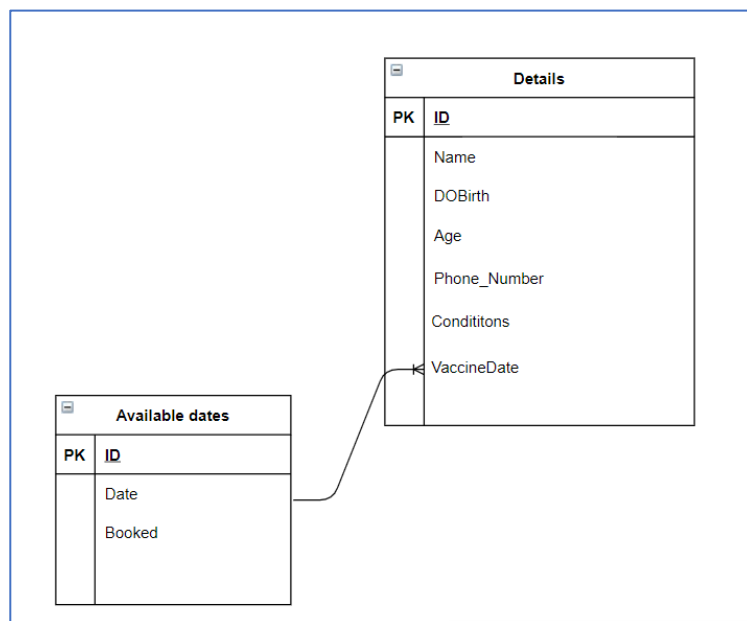
4. ## Availability :

   we have made sure that the system is and functional for all operations at least the most critical components if not all. To achieve that we deployed it on a running server .

DIAGRAMS

USE CASE DIAGRAM

ERD

UI SCREENSHOTS

Form UI

Please Fill in this form for COVID VACINNATION

Personal Details

Full-Name:* [User Name]

Date Of Birth:* [dd/mm/yyyy]

Age:* [40]

Phone Number :* +255 [example: 756001040]

Any Underlying Conditions:* [YES ⌄]

[Post Enquiry] [Reset]

Message

Hello murtda Mohammed Rashid, your Vaccine Appointment is on 2021−07−20starting 10am.

Hello ALI ABDO, your Vaccine Appointment is on 2021−07−20starting 10am. 12:48

Email

Please Find the Registered Vaccine Appointment.
ID:217 Name: Murtadha Mohammed Rashid DOB: 2021-07-25 Age: 33
Number: 255658000704 Medical Conditions: Yes Vaccine Date: 2021-07-18

ID:218 Name: Fatema DOB: 2021-07-25 Age: 33 Number: 255689464199
Medical Conditions: Yes Vaccine Date: 2021-07-18

ID:219 Name: ALI DOB: 2021-08-06 Age: 33 Number: 255658000704 Medical
Conditions: Yes Vaccine Date: 2021-07-18