RAPID RESPONSE SYSTEM

APPLICATION ENGINEERING DEVELOPMENT PROJECT – INFO5100

SPRING 2021

Presented By:

Rakshith Chandrashekar (001006556)

Sanjit Sateesh (001090471)

Sharan Chandra Shekar (001582721)

Problem statement:

The world as we know it has changed forever because of COVID-19. The pandemic has affected everything, starting from the health of the people to the Global Economy. This led all the pharmaceutical organizations in a race to find the vaccine first for COVID-19. This Pandemic took a toll on the front-line workers, the national economy, and almost everything that matters.

Managing this pandemic along with other emergencies especially for third world countries is a huge ordeal. Although vaccines have started to roll out, the number of COVID-19 cases has not dipped. Even In most developed countries, the number of COVID-19 cases is increasing day by day, and to handle this pandemic with other emergencies such as a crime/misdemeanor or a fire incident that occurs out of nowhere, it's rather strenuous to handle all of these at the same time.

Proposed solution:

The purpose of our healthcare and emergency response system is to manage both the COVID-19 situation as well as attend to the emergency situations that may arise during the ongoing pandemic. Furthermore, this application helps us to keep track of the number of COVID-19 cases and the number of people who have been vaccinated against COVID-19.

Key Functionalities:

- COVID-19 testing/result.
- Blood donation from healthy patients.
- Email Alerts to users regarding their registration and appointment status.
- Checking the temperature of person using the camera.
- Fire Department, Police department and Medical emergency will be part of 911 response system once user reports a particular type of emergency.
- Managing stock of blood donated.
- Managing stock of the medicines/drugs in the pharmacy.
- Government official viewing the report of number of COVID-19 cases.
- Government official viewing the report of number of people vaccinated against COVID-19.
- Doctor consulting and prescribing medicine to the patient if necessary.
- Register for vaccination.

```
Ecosystem
   │
   ▼
Enterprise DIrectory
   │
   ▼
Enterprise ──────────────────────────┐
   │                                  │
   ▼                                  ▼
Organization Directory          Hospital Enterprice
   │                            Non Profit Enterprise
   ▼                            Government Enterprise
Organization                    911/Emergency Enterprise
   │                            Pharmaceutical Enterprise
   ▼
User Account Directory
   │
   ▼
User Account
   │
   ├──────────────────────┐
   ▼                      ▼
Work Queue              Roles
   │                      │
   ▼                      ▼
Work Request          System Administrator        Doctor Association
   │                      │                        COVID-19 Testing Center
   ▼                      ▼                         Blood Bank
Book Doctor Appointment   Doctor                    COVID-19 Rapid Response
   │                      │                         Fire Department
   ▼                      ▼                         Police Department
Schedule COVID-19 Test   COVID-19 Testing Administrator   Ambulance
   │                      │                         Pharmacy
   ▼                      ▼                         Vaccination
Blood Donation          Blood Bank Administrator
   │                      │
   ▼                      ▼
Report Emergency        Government Official
   │                      │
   ▼                      ▼
Vaccine Registration    Vaccine Administrator
   │                      │
   ▼                      ▼
Request Blood           User
   │                      │
   ▼                      ▼
Prescribe Medicines     Police Department
                          │
                          ▼
                        Fire Department
                          │
                          ▼
                        Ambulance Driver
                          │
                          ▼
                        Pharmacy Admin
```