QBeacon

Smart Queueing and Social Distance Monitoring System providing Safe Proximity Marketing Services

- Life has changed a lot due to COVID-19 pandemic and it is essential for people to wear mask, sanitize their hands and maintain social distancing.

- According to a survey by BBC India more than 69% of country's population don't follow social distancing norms .

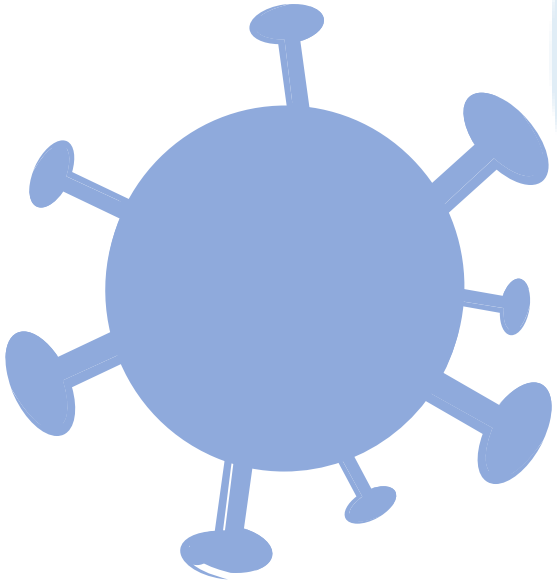
- Referring to an ICMR study, one COVID -19 positive person can infect 406 people in 30 days, if social distancing measures are not in place .

OBJECTIVES

- To provide a effective Social Distancing Monitoring (SDM) system.

- To provide Proximity marketing services while ensuring Social Distance norms and maintaining a Queue.

PROPOSED SOLUTION



Application that can monitor Social Distancing norms at public places and provide safe proximity marketing services.

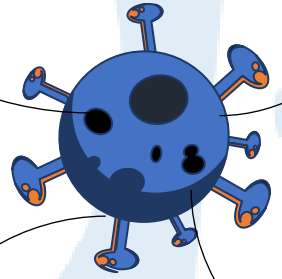
QBeacon

- QBeacon is a WiFi - Direct mobile application, which enables communication between peers in a same network.
- It uses Bluetooth to detect nearby devices and establish a social distance monitoring system.
- Based on the connection criteria, a internal queue is formed and the orders are displayed in the app.

APPLICATION FEATURES

01

AI SOCIAL DISTANCE ALERTER



02

CREATES A P2P NETWORK

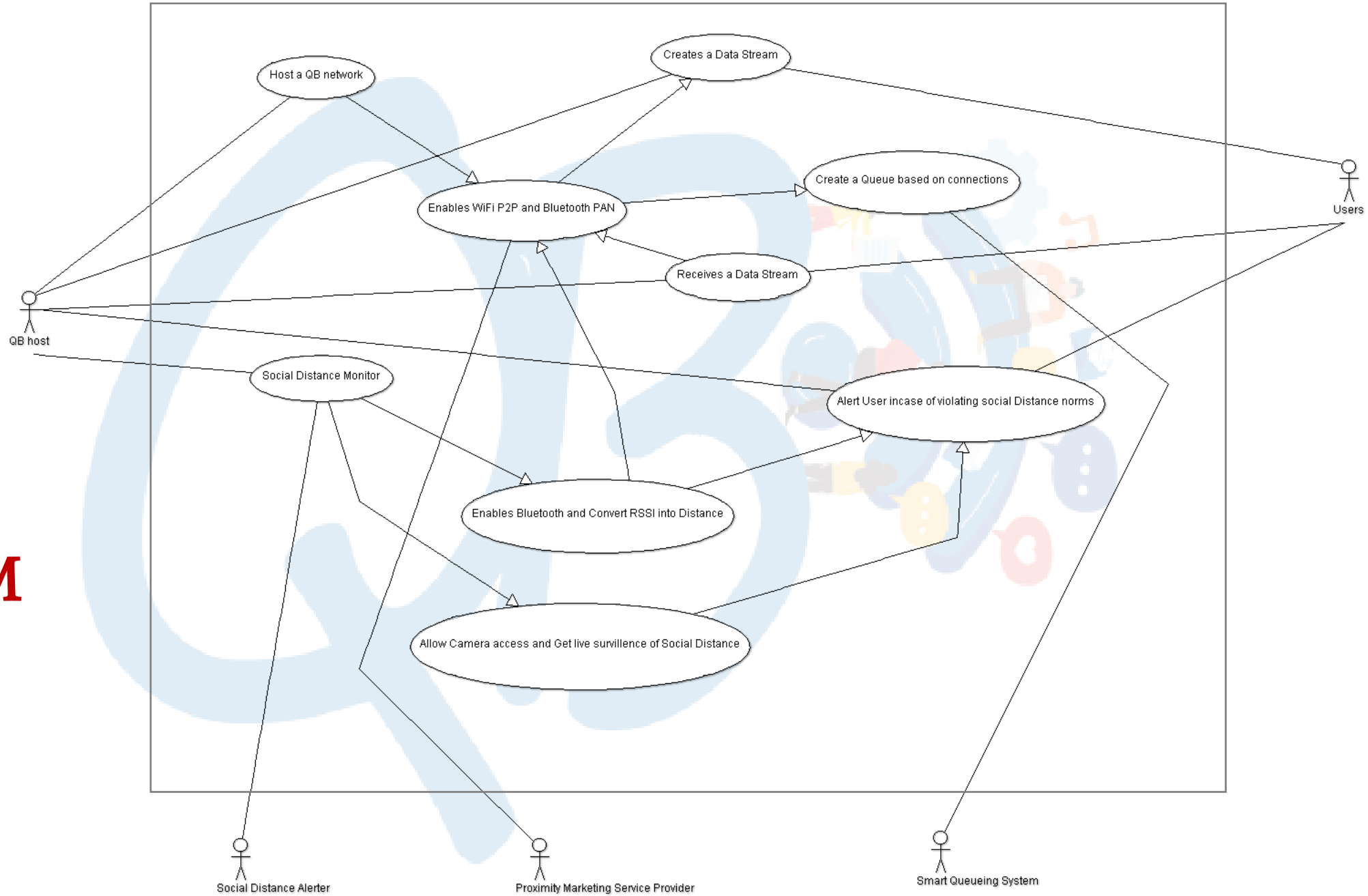
03

PROVIDES SAFE PROXIMITY MARKETING SERVICE

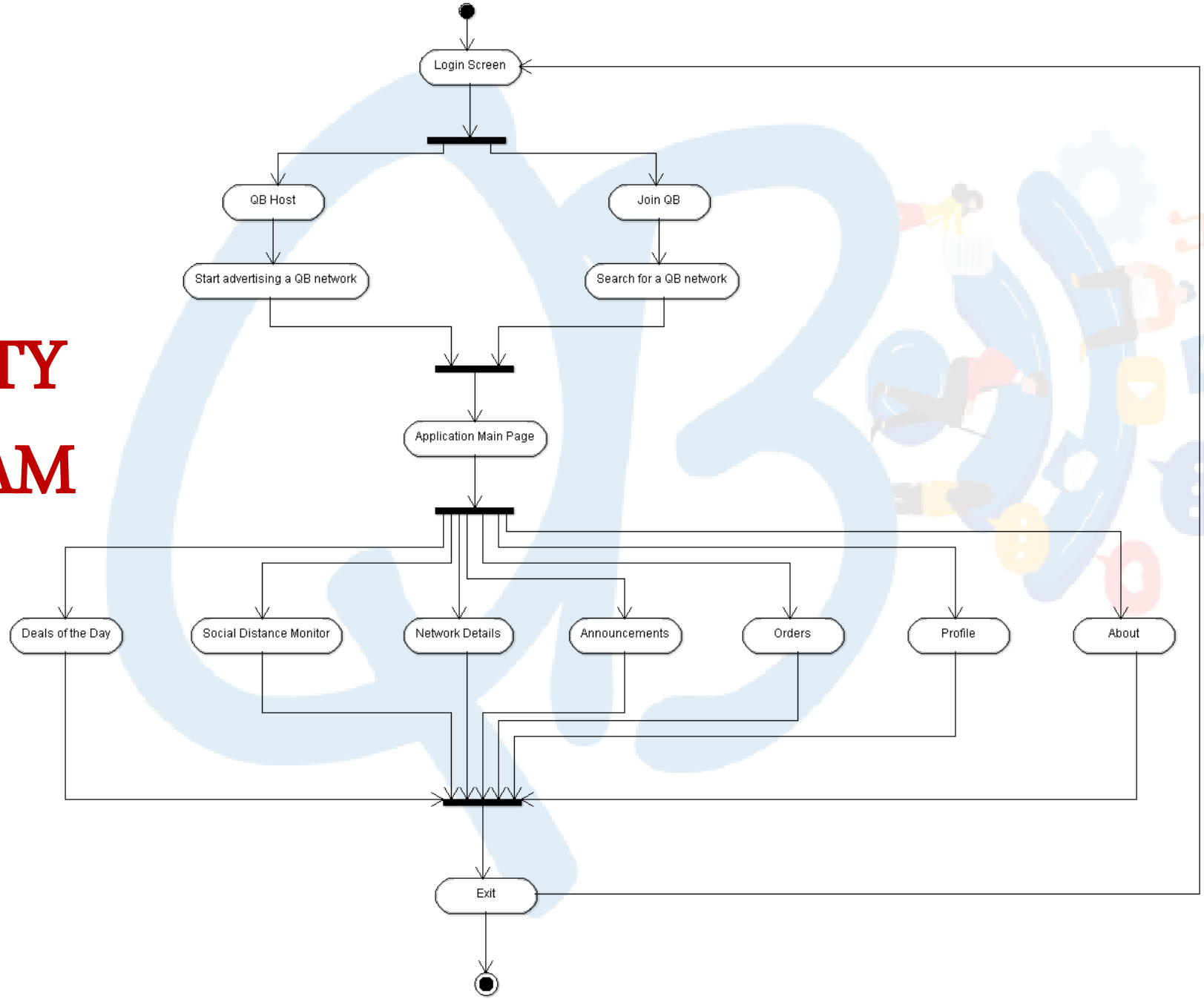
04

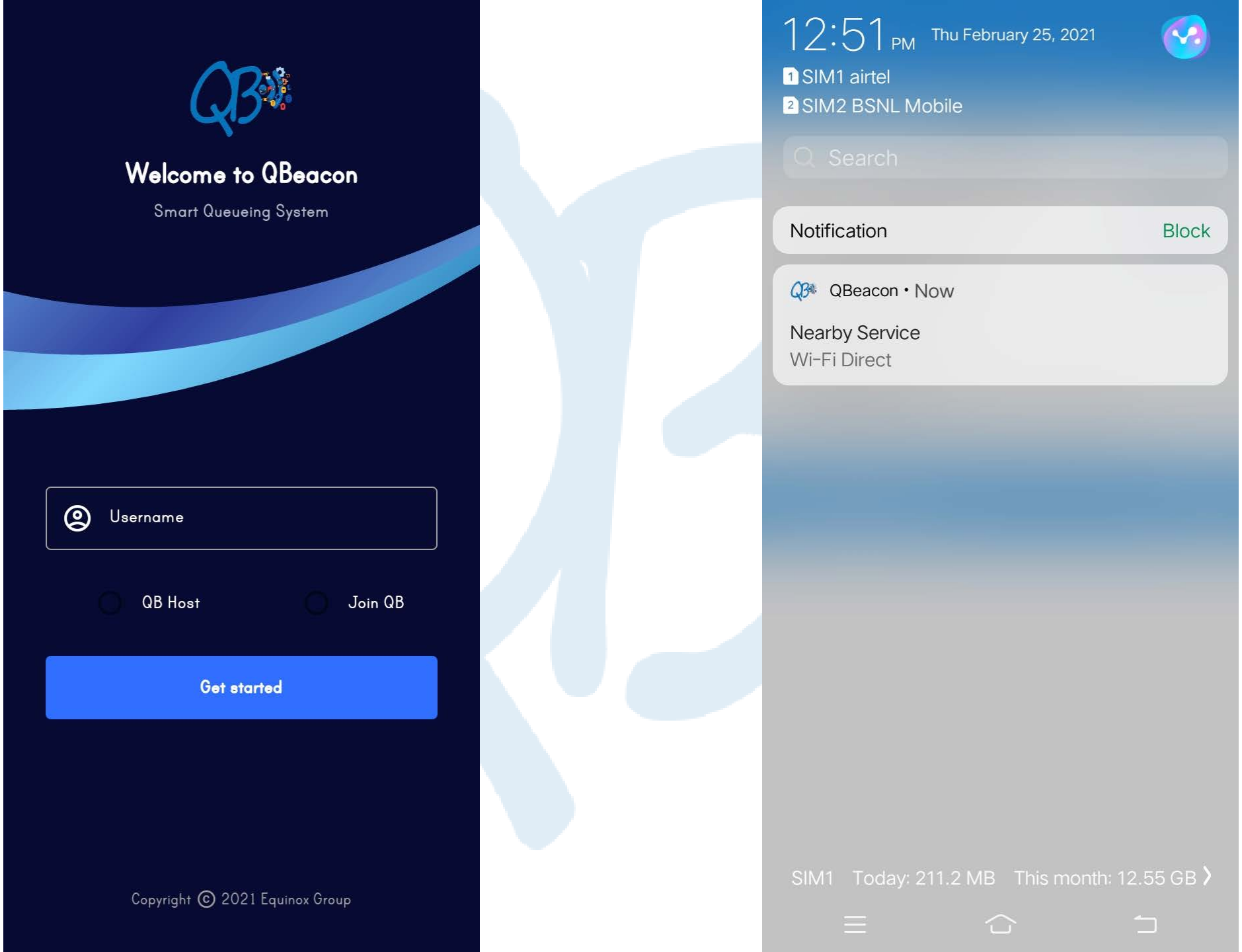
CREATES A SMART QUEUEING SYSTEM

USECASE DIAGRAM



ACTIVITY DIAGRAM




Welcome to QBeacon
Smart Queueing System
Username
QB Host
Join QB
Get started
Copyright © 2021 Equinox Group
12:51 PM
Thu February 25, 2021
SIM1 airtel
SIM2 BSNL Mobile
Search
Notification
Block
QBeacon • Now
Nearby Service
Wi-Fi Direct
SIM1 Today: 211.2 MB This month: 12.55 GB

Social Distance Monitor

My Device

Enable Bluetooth For SDM

Local adapter address
34:E9:11:C6:CF:67

Local adapter name
IVI2ZXWjSoQAAAAAAAAADnZpdm8gdmI2byAxNzE4

Near By Devices

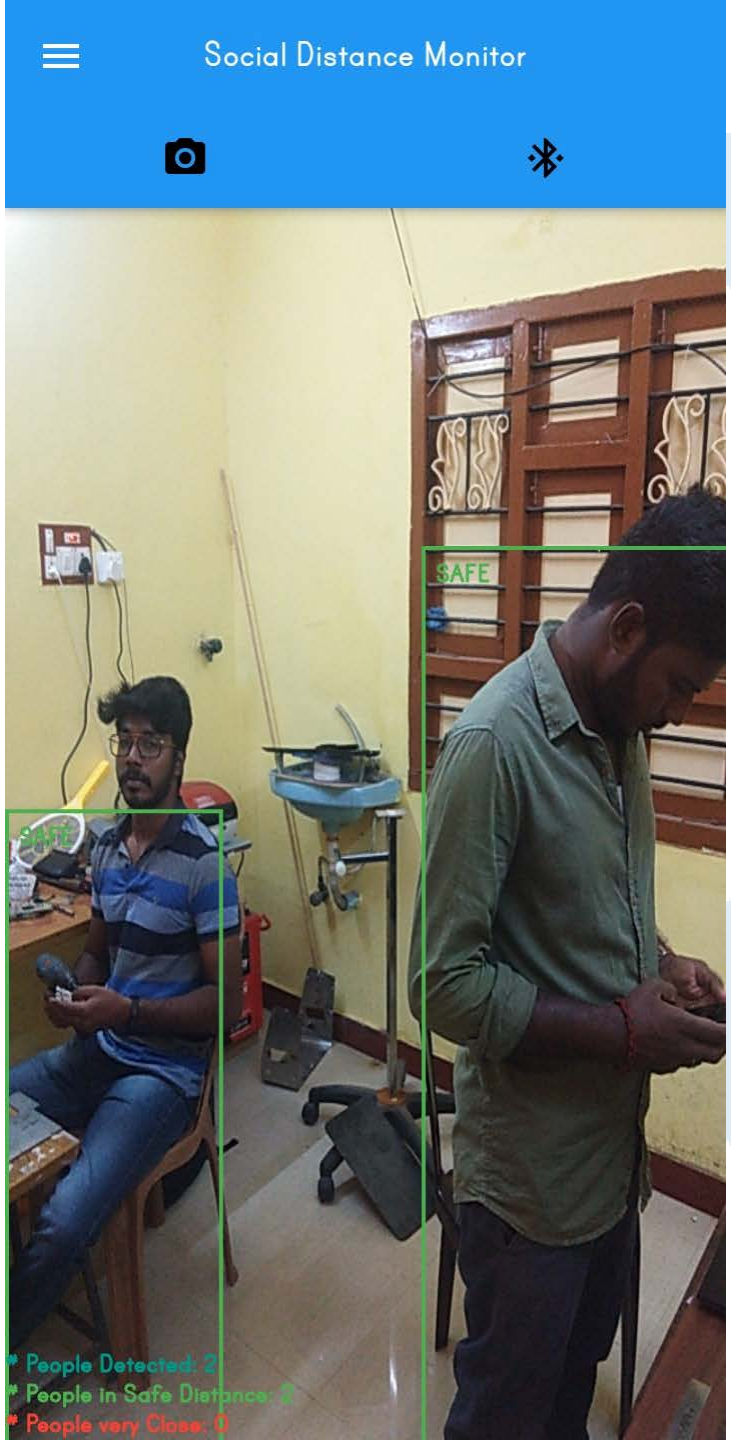
Galaxy Tab A
90:B1:44:40:53:DA
0.342 m

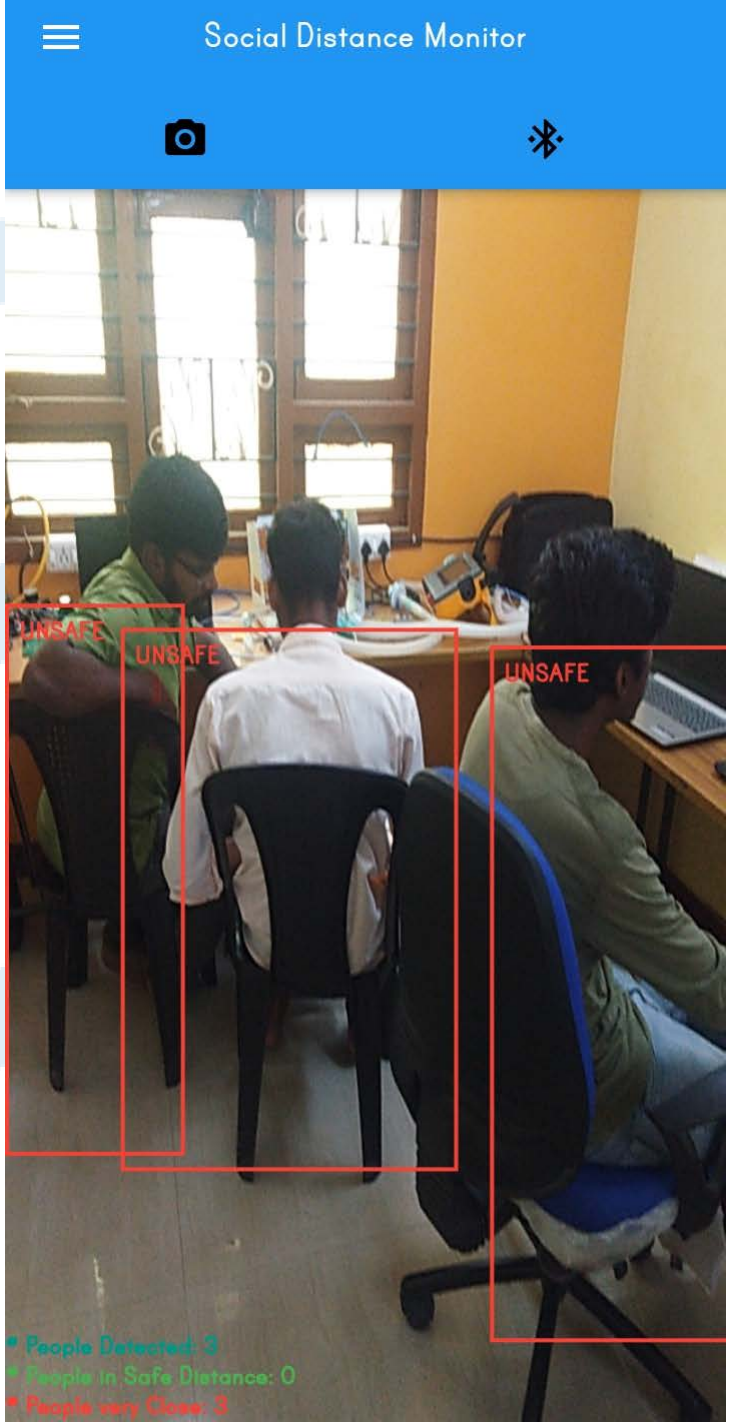
QB-SDM Alert: Galaxy Tab A is near you

Social Distance Monitor

Break the chain !

Start Monitoring


Social Distance Monitor
SAFE
SAFE
* People Detected: 2
* People in Safe Distance: 2
* People very Close: 0


Social Distance Monitor
UNSAFE
UNSAFE
UNSAFE
* People Detected: 3
* People in Safe Distance: 0
* People very Close: 3

4G 3G 4.1K/s ··· 12:55 PM 53% LTE1

My Profile

Username

Gowthamaan

Enable Host mode

Announcements

Maintain Social Distancing

Milk sold out

Type the Announcement

About

QBeacon, 1.1.0

Application name and version

Contact Information

Equinox

Developer

equinoxgroup258.com

END-USER LICENCE AGREEMENT

TECHNOLOGIES USED

Bluetooth PAN and UDP

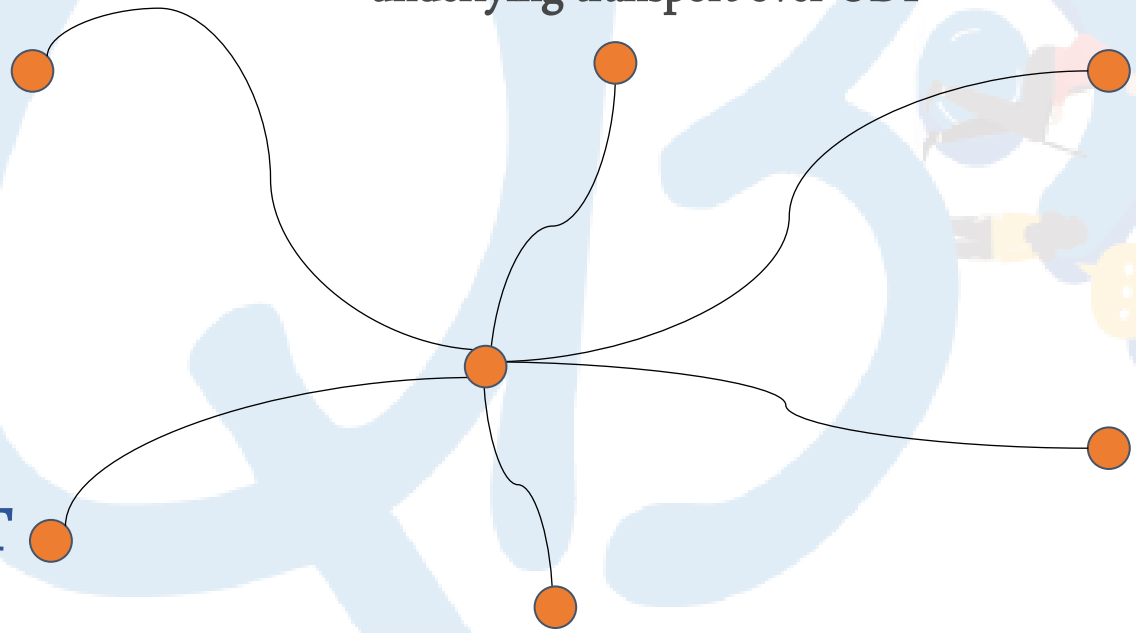
P2P Wi-Fi and Bluetooth Personal Area Networks are used for underlying transport over UDP

FLUTTER

Software Development Kit used to make mobile apps for android and IOS

ARTIFICIAL INTELLIGENCE

SSD-MobileNet object detection model to monitor social distancing



DART

Programming language used to make apps using flutter

ANDROID STUDIO

IDE for Android app development with fast and feature-rich emulator

NEARBY CONNECTIONS API

To establish a P2P network over WiFi Direct

PROJECT OUTCOMES

- Alerting people whenever social distancing norms are violated to halt the spread of corona virus.
- Enable mom and pop shops to have a proximity marketing system in a low cost and attract customers in a most effective way.
- Stores data and helps in determining the travel history of an infected person thus, easing the tracking process of the primary and secondary contacts.
- Stored data and advertisements broadcasted through QBeacon helps the customers easily locate the availability of the needs and services.
- Provide effective queuing system and order handling system.

QBeacon V2.0 – Future Enhancements

- QBeacon networks can be interconnected and a fully local P2P communication can be established.
- Can be used as local location based guide or a navigation system inside a local infrastructure or a tourist place, thereby giving better user experience on the services offered or provided earlier.
- Broadcast awareness messages through QBeacons, in Health centres, hospitals, other Government offices and public places.

Thank You!

- KRITHI.A
- DHARANIDHARAN.S
- GOWTHAMAAN.P

BTech III-year ECE