



CONTAINMENT ZONE ALERTING APPLICATION

TEAM ID: PNT2022TMID21330

Category: Cloud app development

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PROBLEM STATEMENT

With COVID-19 alarming surge of affected cases throughout the world, lockdown and awareness (social distancing, use of masks, etc) among people are found to be the only means of restricting community transmission. In a densely populated country like India, it is very difficult to prevent community transmission even during lockdown without social awareness and precautionary measures taken by the people. It will be helpful to safeguard the people if we have some application that will tell us about the condition of the locality regarding COVID



Skills Required:

IBM Cloud, HTML, JavaScript, IBM Cloud Object Storage, Python-Flask, Kubernetes, Docker, IBM DB2, IBM Container Registry

Project Description:

Project Idea:

This application is intended to provide information about containment zones in a particular region by alerting people, through continuous monitoring of an individual's location. Key benefits of the application are monitoring people's activity and alerting them of their safety movements.



Solution Requirement:

The project aims at building an application that provides information about the containment zones of a particular region by continuously monitoring an individual's location. Location of the individual must be stored in the Database. Alerts are sent using the notification service.

Features of the Application

Admin App (portal):

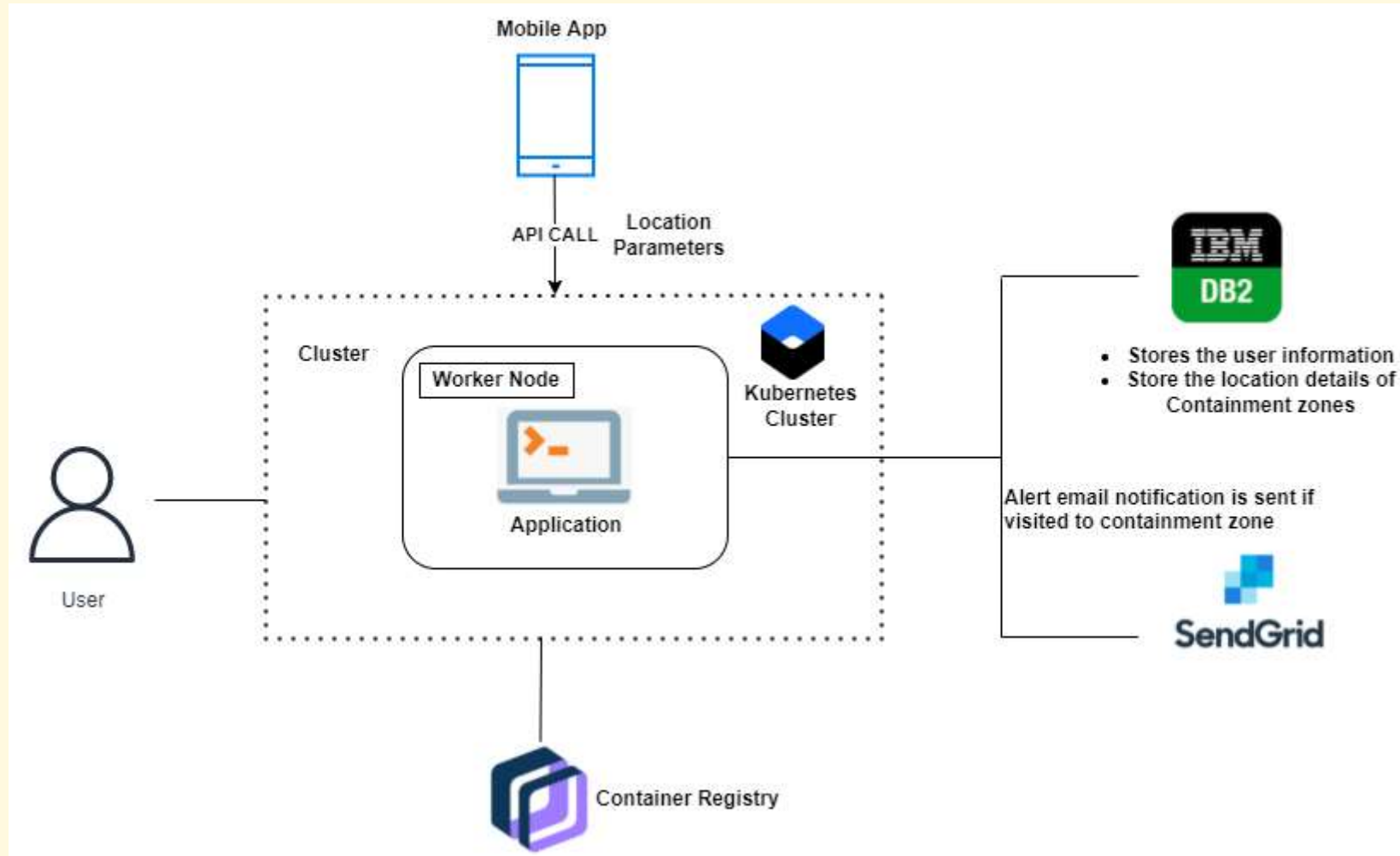
They should login to the app and update the containment zones locations in the portal. Based on the location a Geofence will be created within a 100 meters radius. They should be able to see how many people are visiting that zone.

User App (Mobile App):

The app should have a user registration and login. After the user logged into the app it will track the user's location and update the database with the current location. If the user is visiting the containment zone he will get an alert notification.





Technical Architecture:





IMPLEMENTATION: ADMIN WEB APP:

 Contrack Sign Up



Log in to the Containment Zone App

Login

[Don't have an account? Click here](#)



Contrack

Login



Sign Up to create an account with us

Name


Email address

Password

Signup

Already have an account? Login Here!

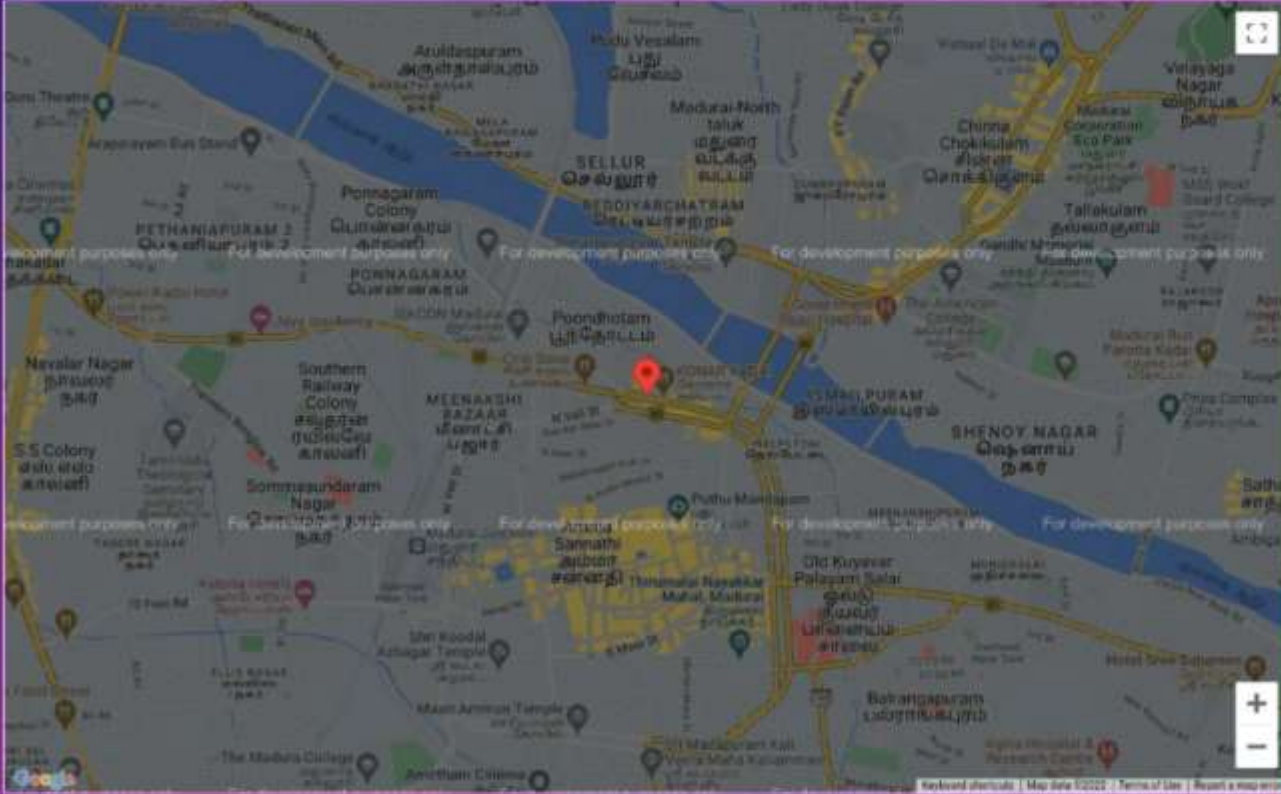
DECLARING CONTAINMENT ZONE

 Contrack

Log Out

Declare Containment Zone

welcome:ajithtonya@gmail.com



Latitude: 9.9252007

Longitude: 76.187754

Get current Location: Current Location

Declare Containment Zone

Steps To be Followed

1. Select The Location By Clicking the Current Location Button
2. Drag the Pin to change the location
3. Click on Declare Containment Zone to save the location to the database

Click Here To View The Containment Zones and Number of people visited

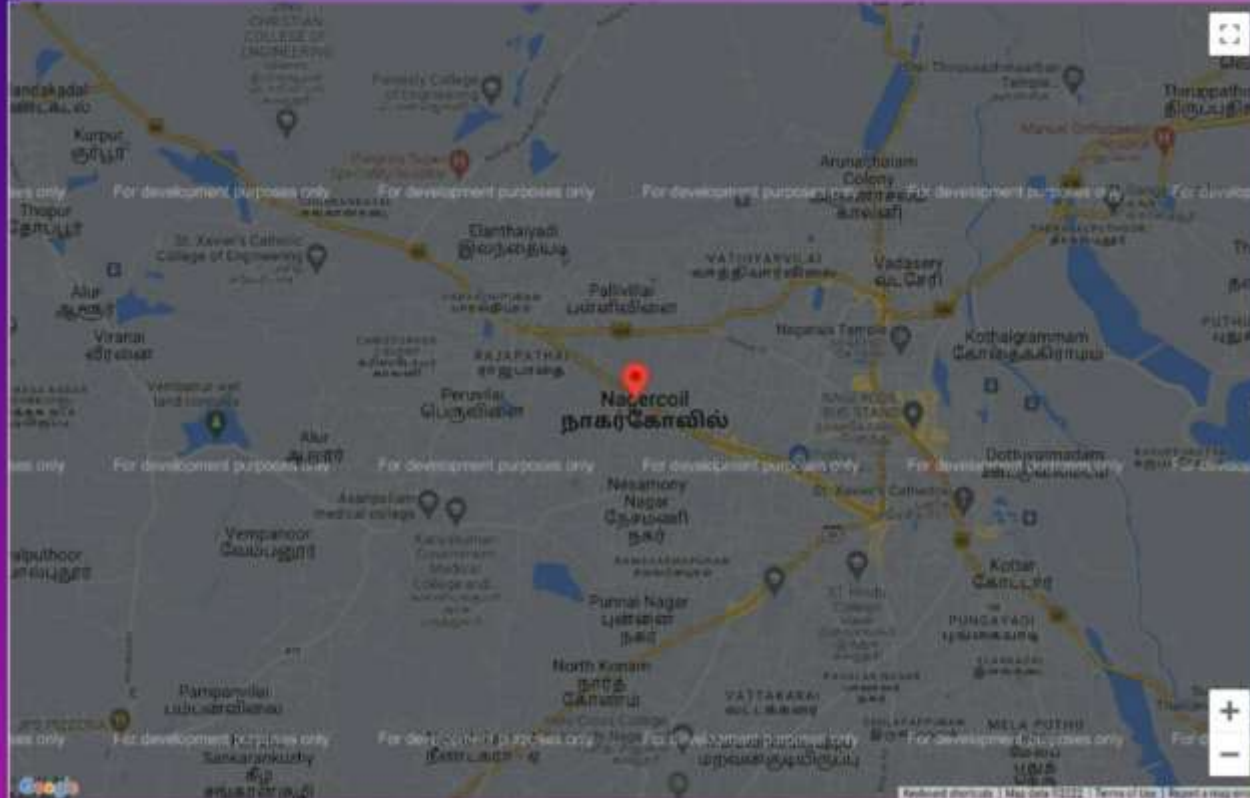


Contrack

Log Out

Declare Containment Zone

welcome:ajithtonya@gmail.com



Latitude:

8.183953221617355

Longitude:

77.4111572358375

Get current Location:

Current Location

Declare Containment Zone

Steps To be Followed

Click Here To View The
Containment Zones and
Number of people visited



2 on Cloud

Data objects

Saved objects

Filter objects

GPZ48320

Tables

GEODATA

USERS

Views

MQTs

Aliases

Nicknames

*Untitled - 1

*Untitled - 2

+

SQL

↩

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Syntax assistant

Run all

```

1 SELECT "LAT", "LONG", "VISITED"
2 FROM "GPZ48320"."GEODATA";
3

```

History

Results

GEODATA

Result set 1

Details

Filter table

Total:6

🔍

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LAT	LONG	VISITED
9.919071049449975	78.11084900839843	0
9.919071049449975	78.11084900839843	0
9.925454338240636	78.12059079154052	0
8.183853221617355	77.4111572359375	0
79.324724	77.234729384	234
89.3554	72.234229384	744



HISTORY OF PEOPLE VISITED TO A SPECIFIC ZONE



Log Out

Location data and Visited People

S.No	Latitude	Longitude	No Visited	Actions
1	9.919071049449975	78.11084900839843	0	Delete
2	9.919071049449975	78.11084900839843	0	Delete
3	9.925454338240636	78.12059079154052	0	Delete
4	8.183853221617355	77.4111572359375	0	Delete
5	79.324724	77.234729384	234	Delete
6	89.3554	72.234229384	744	Delete

Go to location update Page



MOBILE UI User app

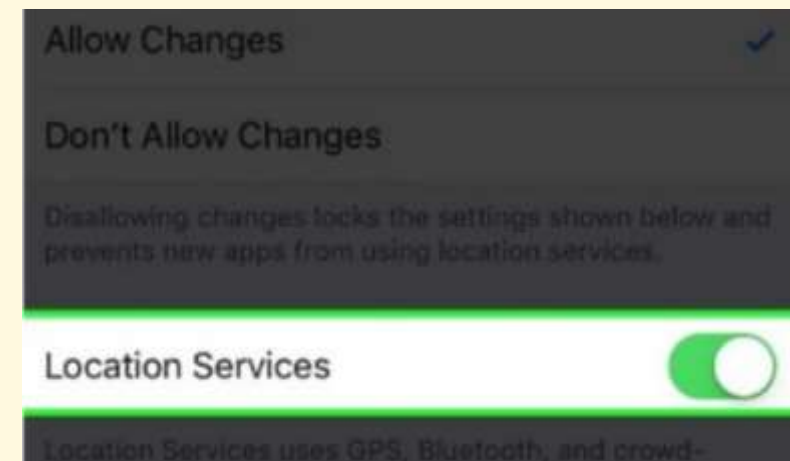
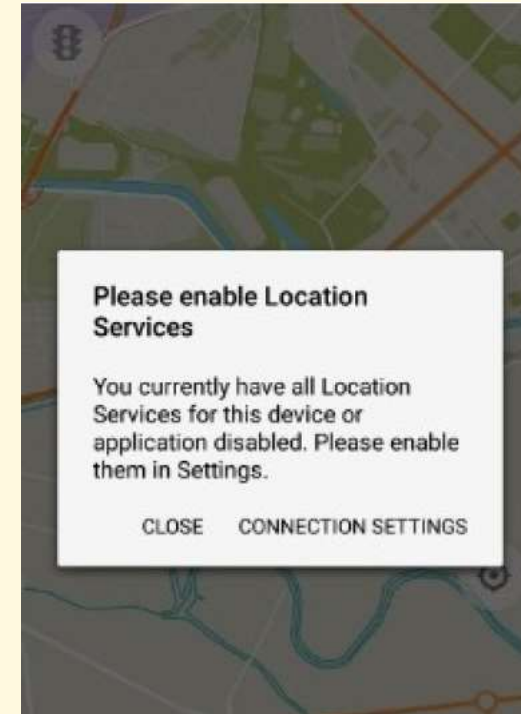
Sign Up

Name

Email

Password

SIGN UP





SENDGRID INTEGRATION

RAMYA VINAYAGA

Dashboard

Email API

Marketing

Design Library

Stats

Activity

Suppressions

Settings

Twilio SMS NEW

Welcome, RAMYA!

To get up and running quickly, please follow the steps outlined below.

Send your first emails with Twilio SendGrid

Create a sender identity

Before sending email, you'll need to create a sender identity. There are [two ways](#) to do this, but we recommend creating a Single Sender to get set up quickly and test your email integration.

Create a Single Sender

Authenticate a domain instead

Your sender identity is the "from" email address your recipients will see in their inbox. [Learn more](#) about this.

Your Business

<jane.doe@your_business.com>

to me

Send your first email

Please create a sender identity before sending your first email.



NOTIFICATION

Containment Zone Alert

Inbox x

ajithtony@student.tce.edu

via sendgrid.net

6:19 AM (13 minutes ago)

☆

↶

⋮

to me ▼

Alert!! You are currently entering a Containment Zone. Please turn back immediately

↶ Reply

↷ Forward



GitHub uploads:

IBM-EPBL / IBM-Project-24796-1659948926 Public Watch 2

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[main](#) 1 branch 0 tags [Go to file](#) [Add file](#) [Code](#)

	ramyavm2704 Delete Report submission	5d4a6c2 8 hours ago	🕒 197 commits
	Assessments	updated to standard templates	3 days ago
	Final Deliverables	updated to standard templates	4 days ago
	Project Design & Planning	Add files via upload	8 hours ago
	Project Development	Delete Report submission	8 hours ago
	Setting Up Environment	Add files via upload	2 days ago
	README.md	first commit	2 months ago

GitHub LINK:

<https://github.com/IBM-EPBL/IBM-Project-24796-1659948926>



IBM STATUS

Guided Project

Project Workspace

Chat with Mentor

Project Title

:

Containment zone Alerting Application

Team

:

RV

N

H

AT

Industry Mentor(s) Name

:

Vasudeva Hanush

Faculty Mentor(s) Name

:

N.Shivakumar

Overall Project Progress

92%

Assigned Tasks Progress

100%

GENERAL INSTRUCTION

SHOW

Git Repo

Project Doc

Demo Link

0

View Mentor Comments

0

View Industry Mentor Comments



RESULT

- We have created a mobile application that will notify the people registered with the app when they enter a containment zone with a red alert
- This will help people to safeguard themselves and help to get details about a particular zone.
- As of now, the app is used for COVID-19 disease, but in further days this can be used for any kind of pandemic or can be proceeded for seasonal diseases also.