PROJECT REPORT FORMAT

1. INTRODUCTION
    a. Project Overview
    b. Purpose
2. LITERATURE SURVEY

    a. Existing problem
    b. References
    c. Statement Definition

3. IDEATION & PROPOSED SOLUTION
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    3.2 Ideation & Brainstorming

    3.3 Droposed Solution

    3.4 Solution fit

4. REQUIREMENT ANALYSIS
    a. Functional requirement
    b. Non-Functional requirements
5. PROJECT DESIGN

12. APPENDIX

TEAM ID	PNT2022TMID05182
Project Name	CONTAINMENT ZONE ALERTING APPLICATION

1. INTRODUCTION

1.1 Project Overview:

1.2

Currently there are several research works undergoing in the country to Prevent Covid-19 cases from rising. Previously our country was importing medical kits like PPE (Personal Protection Kits), mask from outside, but now it has been successful in developing these Kits. Along with taking initiatives to fight this disease, our country has also taken steps to make People aware of the disease. The news and media have a great part in creating this awareness by Informing the public about the preventive measures that can keep them away from infection. Awareness among the people to carry out all the preventive measures can immensely help to reduce Spread of the virus. The country has created containment zones throughout the cities wherever Covid-19 cases have been reported to prevent further spread of the virus. These containment zones Have been kept isolated from the outside public to ensure no contamination occurs outside. After More than 2 months of the lockdown, the government has relaxed some of the lockdown rules and Has permitted reopening of government offices, bus and other road transportation facilities and Shopping markets. People can move inside the city for work and other purposes. But the Containment zones are still being kept isolated, and

new containment zones are being formed Wherever Covid-19 cases have been reported. These zones are highly contagious as droplets with Virus coughed out from an unscreened asymptomatic patient can travel up to 8 m (Bahl et al. 2020). Though these containment zones are guarded by policemen, still there remains a chance that people Might unknowingly step into them. In this situation where people can move in the city, these Containment zones pose a risk of infection to these city dwellers. Therefore, informing people about The location of the containment zones can help them bypass and avoid these zones and thereby Reduce the chance of community transmission. In this paper, we focus on developing a mobile based Application to provide information regarding the Covid-19 containment zones in West Bengal. The Application further tracks the user's location and provides notification alert if the user has entered a Containment zone. The application also provides daily Covid-19 case statistics to the users to keep Them updated. The application is developed on Android SDK and uses Firebase Cloud Firestore to Store the location data. Android's geofencing client is used to create geofences around the Containment zones and notification manager is used to provide notifications. The application also Uses RESTful web services to show the Covid-19 cases in West Bengal. We have tested our Application with different users in different locations across West Bengal and it works efficiently and Is able to attain our target.

Purpose:

The Android application shows the location of the containment zones to the users. It also Notifies the user when he or she trespasses the boundary of a containment zone or stays in the Containment zones.

IDEATION PHASE

PROBLEM STATEMENT

CONTAINMENT ZONE ALERTING

V GAJHANA SELVI

B DARSHIKKA

S G DHARSHANA

R DHARANI

CONTAINMENT ZONE ALERT APPLICATION

Problem Statement

Date	09 September 2022
Project ID	https://github.com/IBM-EPBL/IBM-Project-8781-1658929548
Project Name	Project – Containment Zone Alert Application
Maximum Marks	2 Marks

People travel to different places unaware of the fact that it is a COVID-19 containment zone and hence don't take necessary precautions. As a result, the people getting inside a containment zone are at a higher risk of getting affected by the disease.

But   Because   Which makes

I'm trying to   me feel

I am

A common

	People who are traveling to places being unaware of COVID Containment Zones.
Who does the problem affect?	

What is the issue?	If people get into a COVID containment zone, there arises a high risk for them getting into contact with an affected person and thereby it results in the transmission of the disease.
When does the issue occur?	When a healthy person gets into contact with an affected person living in a COVID prone area.

PROBLEM STATEMENT 2

Where does the issue occur?	Getting affected by COVID might occur anywhere. Nonetheless, the risk of getting affected by the disease would be very high in Containment Zones.
Why is it important that we fix the problem?	It is important that we fix the problem that people become aware of Containment Zones and stay away from them to protect themselves from COVID-19
What solution to solve this issue?	An Alerting application that delivers instant alerts whenever a person enters a COVID Containment Zone.

What methodology used to solve the issue?	Geofencing of Containment Zones, Constant location monitoring of the users of the application, and instant alert delivery.

EMPATHY MAP

What do they THINK and FEEL?
->Feeling of safety
->Doesn't want to catch covid
->Privacy concerns

What do they HEAR?
->Words of criticism
->Questions about the product
->Words of appreciation

What do they SEE?
->Notification alert
->Places they visit
->Covid prone areas

What do they SAY and DO?
I->Attitude in public apperance
->Behaviour towards others

PAINS
I->If location services failed
->If phone is in DND mode

GAINS
->Safety from COVID-19
->Instant alert and notification

CONTAINMENT ZONE ALERT APPLICATION

BRAINSTORMING AND IDEA PRIORITIZATION

DATE :
TEAM ID :
PROJECT NAME :

Brainstorming is a method of generating ideas and sharing knowledge to solve a particular commercial or technical problem, in which participants are encouraged to think without interruption. Brainstorming is a group activity where participants share their ideas as soon as they come to mind. Brainstorming creates an open and welcoming environment in which everyone in a team is invited to participate in the analytical thinking process that leads to problem resolution. Prioritizing volume over value, unconventional ideas are welcomed and developed, and all participants are encouraged to contribute, assisting each other in developing a
a wealth of creative solutions.

Containment Zone Alert Application – Brainstorming & Idea Prioritization

Step-1:
Team Gathering, Collaboration, and Selecting the Problem Statement
Step-2:
Brainstorming, Idea Listing, and Grouping
Step-3:
Idea Prioritization

CONTAINMENT ZONE ALERT APPLICATION

TEAM GATHERING, COLLABORATION, AND SELECTING THE PROBLEM STATEMENT

PROBLEM STATEMENT: CONTAINMENT ZONE ALERT APPLICATION

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.

PROBLEM
How might we alert people of covid zones?

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.

ADMIN APP(PORTAL) :

They should log in to the app and update the containment zone 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.

CONTAINMENT ZONE ALERT APPLICATION

GROUPING OF IDEAS

FEATURES

- INSTANT ALERT DELIVERY
- MAP INTEGRATION USING GOOGLE API'S
- SIMPLE AND CLEARCUT UI

PROS

- NO PRIVACY DATA BREACH
- CUSTOMISABLE ALERT COULD BE A FEATURE
- FREQUENT UPDATE AND BUG FIXES
- SYNCING OF CLOUD DATA

ISSUES

- WHAT IF SERVICE LOCATON FAILS?
- COMPATIBILITY OF THE APP
- GETTING PERSONAL DETAILS

EXTRA FEATURES THAT COULD BE ADDED

- NEWS FEED FEATURE TO THE APP
- ALLOW USER TO STORE THE SEARCH DATA
- VISUALISED STATISTICS
- INCLUDING OF REFERRAL PROGRAM

CONCERNS

- OVERCOME THE LATENCY FACTORS
- SIMPLE AND CLEARCUT UI
- REDUCTION OF CLOUD SERVICE USAGE

CONTAINMENT ZONE ALERT APPLICATION
PRIORITISATION

"Task prioritization ensures that you allocate sufficient time to complete tasks and also make necessary changes in order to save time and become more productive."

PROJECT DESIGN PHASE – 1

ProblemSolution Fit

Team ID	PNT2022TMID05182
Project Name	Containment Zone Alerting

Application

Define CS, fit into CC ## 1.Customer Segment The user customer who belongs to the Business man.	## 5. Customer Constraint There is a boundation of using this application because the user customer who is having knowledge if this application can work on it easily.
Focus on J&P ## 2.Jobs-To-Be-Done/Problems It is very easy to analyze the issues and risk in containment zones. It is a best way to avoid the people easily to identify the disaster region and prevent from danger. Detection and recognition of risks zone using cloud computing are very difficult in providing information about containment zone at its earliest.	Explore AS, differentiate ## 6.Available Solutions We can use google maps and GPS to show which area in least cases and more cases and other instructions , to alert the people in the zone and the public knowledge.
Identify String TR ## 3.Triggers Movement in containment zone will be monitored to ensure that nobody leave or visit, except for medical emergencies	Focus on J&P and tap into BE, ## 7.Behaviour 1. Easy to use 2. Can be able to respond quickly

Identify string EM

4.Emotions:Before/After

BEFORE:

　　The user who never have been used before makes them auxious.

AFTER:

　　As the user knows how to use this applications then they will become comfortable and friendly in environment

Extract Online and Offline CH of BE

8.Channels and Behaviour

ONLINE:

　　Customers can be able to identify their zone is disaster or not,Using google map and GPS in the map to know the cases in the cobtainment zone

OFFLINE:

　　Store the data and information

Focus on RC

9.Problem Cause

　Generally, we cannot identify the number of cases on area in the particular location. Whether it is red zone or normal zone or any instruction to arrive on the particular area

10.Your Solution

The application is built which uses this model. The application updates you to stay up to date regarding the number of cases, both locally and nationally.The accurate numbers can help you access your risk futher.

Team Members:

V.Gajhana Selvi

B.Darshikka

S.G.Dharshana

R.Dharani

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	20 October 2022
Team ID	PNT2022TMID03224
Project Name	Containment Zone Alerting Application
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**User Registration**	Registration through Gmail. Registration through mobile number.
FR-2	**User Confirmation**	Confirmation via Email and OTP.
FR-3	**Authentication**	It verifies the confirmation of the password.
FR-4	**Business rule**	For subscriber's we give first 3 day's free trail. For unsubscribes the user needs to watch some advertisement for knowing the zone alert for first 3 days.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

Date	05 October2022
Team ID	PNT2022TMID50125
Project Name	Containment Zone Alerting Application
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process with many sub processes that bridges the gap between business problems and technology solutions.Its goals are to:

1. Find the best tech solution to solve existing business problems.

2. Describe the structure ,characteristics ,behavior ,and other aspects of the software to projects take holders.

3. Define features ,development phases ,and solution requirements.

4. Provide specifications according to which the solution is defined ,managed ,and delivered.

Example-Solution Architecture Diagram:

Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	23 October 2022
Team ID	PNT2022TMID05182
Project Name	Project – Containment Zone Alerting Application
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members

Sprint-1	Registration	USN-1	User: I can register for the application by entering my email, password and verifying password.	3	High	gajhana
		USN-2	User: I will receive a confirmation email once I have registered for the application.	2	High	darshikka
		USN-3	User: I can register for the application through Gmail.	5	Medium	dharshana
		USN-4	Management: I need to register my hospitals on the site.	2	High	r dharini
	Login	USN-5	User: I can log into the application by entering my email & password	3	High	gajhana

| | | USN-6 | Management: I need to login into my dashboard with my given hospital id and password. | 5 | Medium | darshikka |
| | Dashboard | USN-7 | User: I need to give permission to access my Contacts, Location, and Storage | 5 | High | dharshana |

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2		USN-8	User: I get access to the dashboard which shows a map with containment zones	5	High	r dharini
		USN-9	Management: I need to enter the case information of the patient that visits our hospital.	5	High	gajhana
	Services	USN-10	Admin: I need to provide valid information about the pandemic out there.	5	High	darshikka

Sprint-3	Dashboard	USN-11	Management: I need to store all the patient information on the cloud.	5	High	dharshana
	Services	USN-12	Admin: I need to provide medical advice through a chatbot.	5	Medium	r dharini
		USN-13	Admin: I need to provide medical recommendations by collaborating with top hospitals.	5	Low	gajhana
		USN-14	Admin: I need to provide preventive measures when they travel through it.	5	High	darshikka

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Registration	USN-15	User: I can register for the application through Facebook.	2	Low	dharshana
		USN-16	User: I can register for the application through Twitter.	2	Low	r dharini
	Services	USN-17	Admin: I need to alert the user when they enter pandemic zones.	3	Medium	gajhana
		USN-18	Admin: I need to provide special services for premium users by giving services like monitoring health by their smart bands.	3	Low	darshikka
	Data Collection	USN-19	Admin: I need to store all the user information on the cloud	5	Medium	dharshana

		USN-20	Admin: I need to collect the recent list of diseases in the world.	5	Low	r dharini

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

Velocity:

It will be updated after the first week of work is completed.