NCS Tech Smartans

COVID-19 Contact Tracing and Early Detection System

SMARTANS COVID CONTACT AND EARLY DETECTION SYSTEM

Executive Summary

Tech Smartans is a start-up organization whose vision is to lead the world in building technological innovative solutions.

This software product is designed and created by tech smartans' development team, to help fight the spread of the novel corona virus which is causing a big problem in the world in general. The software will be used as a means of tracing and getting record of people who might have had contact with the virus.

Included in the system also is an early detection module (symptoms documentation is gotten from NCDC) that will help in determining if the user is test positive to the virus by going through a quick test, with these we get the users information, current location and also the major roads that links to that user location.

Objectives

- To prove that technology is a great tool to solve any problem if well optimized
- To flatten the curve of the novel corona virus in the world
- Assist the country in terms of contact tracing

Introduction

The Smartans' COVID-19 contact tracing and early detection software system is basically a web hosted platform developed the Smartans' group for the purpose of detecting people with the virus in their early stage using the WHO documentation and symptoms analysis, tracing them to their current location by the federal medical bodies in the country thereby doing the necessary to the person and that community.

These software system is capable of highlighting hot zones or territory where the virus has it highest number of confirmed cases based on our system diagnosis and also cold zones where there is little or low reported cases.

Review of Existing Related Systems

From our recent research we learnt there is already an existing system operating similarly as ours. It is called the **stopcorona.app** it is a free database for COVID-19 hotspot.

And we are working towards implementing that structure in our system as it will help our medical bodies in the country a lot in terms of contact tracing and early detection of the virus in the country.

Methods/Tools

Our system basically depends on some API's which are used to fetch users accurate location and analyze them.

We are also making use of GIS (**Geographic Information System**) on our admin end in order to spot out both cold and hot zones and also for visualization by fetching user location data from our database which had been previously saved to our database.

For early detection we created a module that will analyze user data input from our online form and then convert it to a response that is well understandable by our system and thereby use that response to diagnose the report and give submit user health status based on information provided by the user,

Currently we are also working towards avoiding data duplication and database flooding by numerous submission of data by users due to misuse of the system by users.

Implementation

Our system can be implemented majorly in the health sector and other related agencies working on the COVID-19 pandemic in the country as a system for tackling the spread of corona virus.

Our system is been deployed as a web hosted system that is user data is not in any-way stored offline because on any data loss and security.

As stated previously we are making use of the GIS as a means to know where the virus hot zone and cold zone are and how to contain the virus within that territory

Current Stage

Currently we are still working on the full implementation of the GIS into our system and also working on delivering a good and fascinating UI/UX for easy use of our system by the users.

We have designed the module that will help us to analyze user data inputs and give report on user health status depending on what the user provided.

Economic Viability

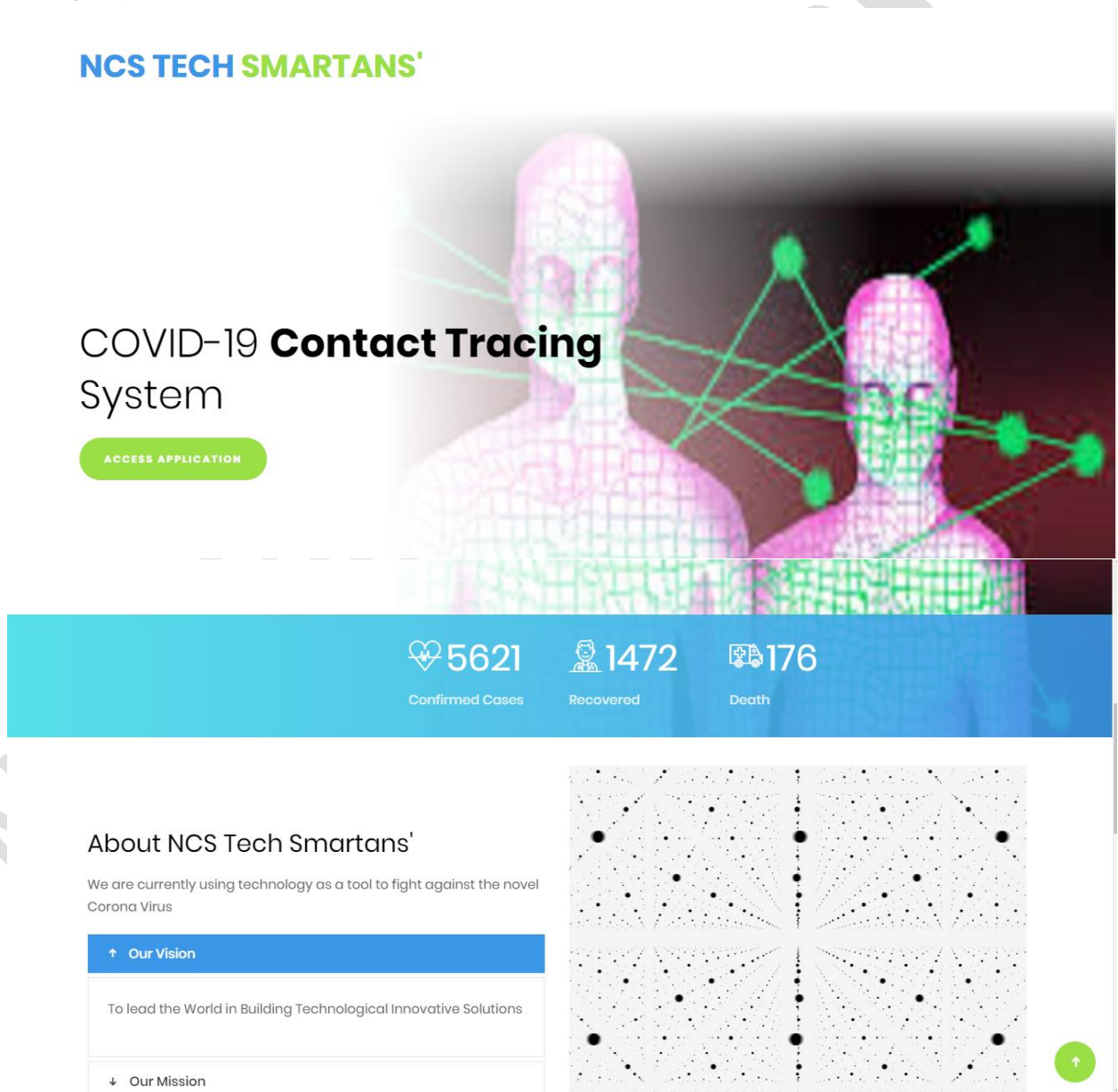In the area of the economic viability of our system, it is:

i.   Reduce the cost of house to house contact tracing currently implemented in Lagos state in terms of finance.
ii.   Save the citizen from further exposure to the virus all in the name of house to house contact tracing and inspection.
iii.   Save the stress and time for people to report to the hospital if they are actually having or showing the symptoms of the virus
iv.   Reduce wastage of resources and funds allocated to contact tracing and early detection of the virus.

v.   Government officials will no longer need to expose themselves to the virus by doing physical testing. After user using our system and tested positive by our system then Government medical practitioners will also conduct the physical test for verification if the need arise.
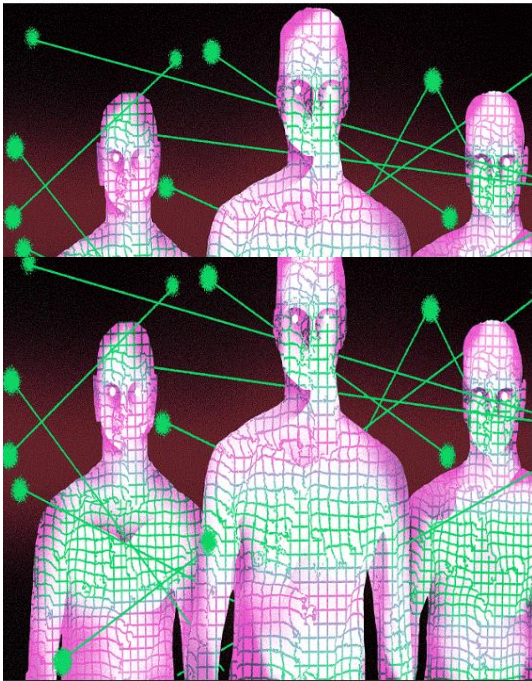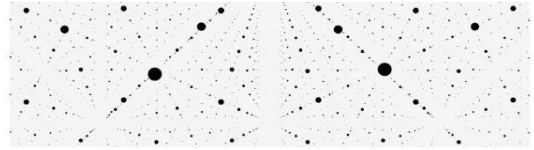
Process

a. User End

1. Visit project **url**

↑ Our Mission

- Making sure **Corona Virus** curve is flattened all over the globe.
- Making COVID-19 contact tracing easier and faster

What makes us best?

Unique Tracking features

Fully web hosted platform

What makes us best?

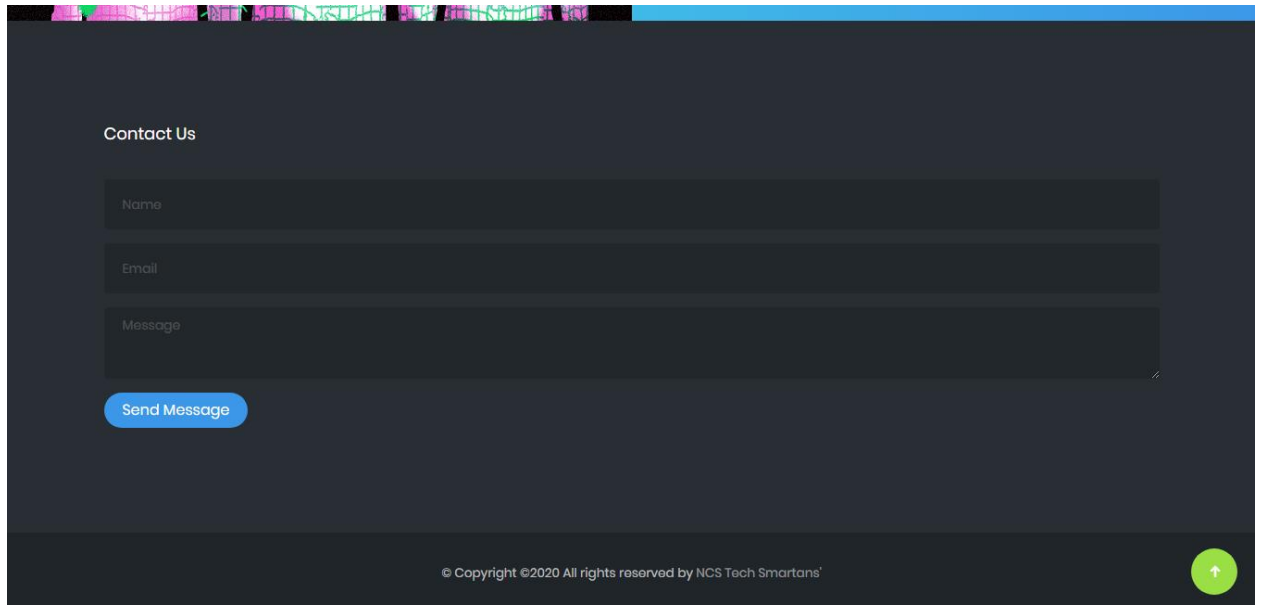**Unique Tracking features**

Fully web hosted platform

Free Consultation

Contact Us

Name
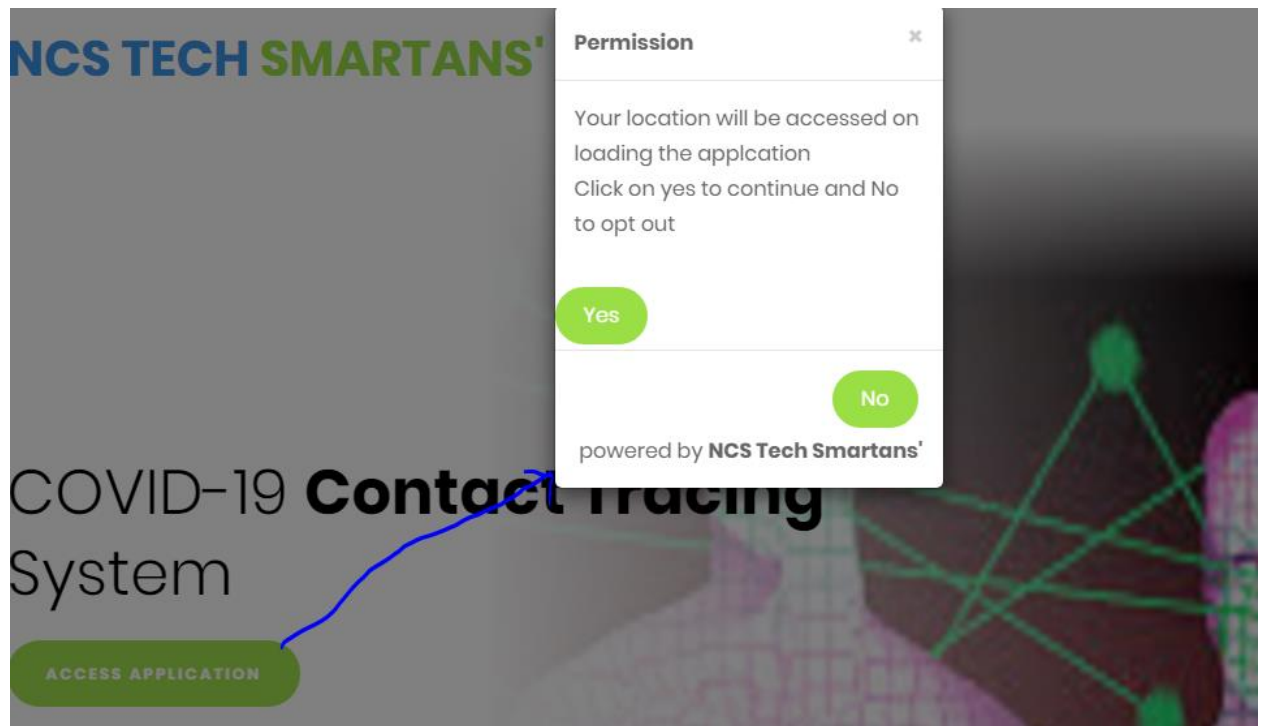
Contact Us

Name

Email

Message

Send Message

2. Click on Access application to further

COVID-19 **Contact Tracing** System

ACCESS APPLICATION

3. Choose whether to grant the site permission to access your device location

4. Carry out short test and click on done on completion

Personal Infomation

01 Personal Infomation

02 Sign & Symptoms

03 Conclusion

Personal Infomation

Please enter your infomation and proceed to the next step by clicking on the green icon so we can confirm your status

Surname
Surname

Othernames
Othernames

State
State

City
City

Home Address
Address

Phone Number
+234 801-1234-567

National Identity Number
NIN (optional)

Email Address
example@email.com

Date of Birth
mm/dd/yyyy

National Identity Number
NIN (optional)

Email Address
example@email.com

Date of Birth
mm/dd/yyyy

Gender

● Male

● Female

→

01	Personal Infomation
02	Sign & Symptoms
03	Conclusion

Sign & Symptoms

Please select Yes or No where necessary and fill any other information required in order for us to confirm your status

click on the green icon to move to the next stage

1.

DO YOU FEEL FEVERISH?

⬤ YES

⬤ NO

2.

DO YOU EXPERIENCE DRY COUGH?

⬤ YES

⬤ NO

3.

DO YOU EXPERIENCE NASAL CONGESTION?

DO YOU EXPERIENCE NASAL CONGESTION?

⬤ YES

⬤ NO

3.

DO YOU EXPERIENCE SHORTAGE OF BREATH?

⬤ YES

⬤ NO

3.

DO YOU EXPERIENCE DIFFICULTY IN BREATHING?

⬤ YES

⬤ NO

3.

DO YOU FEEL TIRED AFTER A FULL NIGHT REST?

- ● YES

- ● NO

4.

HAVE YOU USED ANY MEDICATION?

- ● YES

- ● NO

5.

DID YOU VISIT ANY PLACE RECENTLY?

- ● YES

- ● NO

LIST AT LEAST THREE PLACES YOU VISITED RECENTLY

....Enter here at least three Place you visited Recently

DID YOU VISIT ANY PLACE RECENTLY?

- ● YES

- ● NO

LIST AT LEAST THREE PLACES YOU VISITED RECENTLY

....Enter here at least three Place you visited Recently

HOW LONG HAVE YOU BEEN FEELING SICK?

....Enter here in Months - Days - Weeks

→

✓DONE

b. Admin End

1. Login to access admin panel

2. View total number of submitted data

ADMIN Dashboard

Logout

Admin
Oyebola Simeon

MAIN

User Data

Maps and Location

Others

Others

ADMIN DATA ACCESS PAGE

Home / User data

USER DATA FROM COVID-19 FORM DO NOT DELETE AS IT WILL ALTER THE DATABASE

S/N	SURNAME	OTHERNAME	GENDER	PHONE NUMBER	Test Status	DATE OF BIRTH	ACTION	
1	FANIYI	NURUDEEN	male	08117614246		2020-04-02	Delete	View More
2	Adeleke	Oluwatosin	female	07066012972		2010-03-18	Delete	View More
3	Tayelolu	David	male	07060916610		1998-01-02	Delete	View More
4	Tayelolu	David	male	07060916610		1998-01-02	Delete	View More
6	Oyebola	Simeon	male	09068465738		2019-08-05	Delete	View More
7	Kkk	Nnnn	male	08088452032		2020-04-10	Delete	View More

3. View individual data and click on view more to see other data

30	Hnn	Ndndu	female	09017820944		2020-05-02	Delete	View More

ADMIN Dashboard ⬅

Admin
Team Covid

MAIN

📊 User Data

🔲 Maps and Location

📄 Others

📄 Others

CONFIDENTIAL DATA ACCESS PAGE

Home / User data

HNN NDNDU ⋮

PERSONAL INFORMATION

PHONE NUMBER:	09017820944	NIN NUMBER:	Njk6008
EMAIL:	oyebolasimeon@gmail.com		
GENDER:	female	ADDRESS:	Dnd
STATE:	Abe	CITY:	Dnnd	AGE:	2020-05-02

DISEASE OR INFECTION INFORMATION

HAVING FEVER:	yes	HAVING COUGH:	yes	HAVING NASAL:	no
HAVING SHORT BREATH:	yes	DIFFICULT BREATH:	yes	FULL RITTEREDNESS:	yes
TAKEN ANY DRUGS:	yes	SICK DURATION:	60 days	VISITED PLACES:	None

HEALTH STATUS

CURRENT STATUS: COVID -19 (+)

USER CURRENT LOCATION

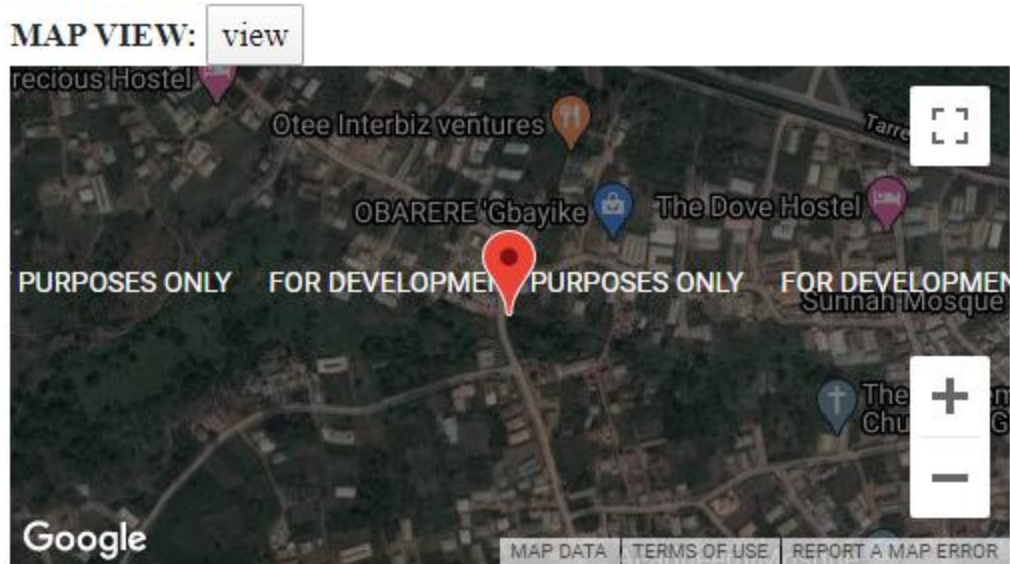LATITUDE: 7.1959142   LONGITUDE: 3.4305228

MAP VIEW: [view]

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4. View map showing major roads and user current location, admin can zoom to have a clear view

USER CURRENT LOCATION

LATITUDE: 7.19591 42   **LONGITUDE:** 3.4305228

MAP VIEW: [view]

MAP VIEW: view

5. Generate confidential report as pdf for further verification

HNN NDNDU

PERSONAL INFORMATION

PHONE NUMBER: 09017820944   **NIN NUMBER:** Njk6008

EMAIL: oyebolasimeon@gmail.com

GENDER: female   **ADDRESS:** Dnd

STATE: Abe   **CITY:** Dnd   **AGE:** 2020-05-02

DISEASE OR INFECTION INFORMATION

HAVING FEVER: yes   **HAVING COUGH:** yes   **HAVING NASAL:** no

HAVING SHORT BREATH: yes   **DIFFICULT BREATH:** yes   **FULL RITTEREDNESS:** yes

TAKEN ANY DRUGS: yes   **SICK DURATION:** 60 days   **VISITED PLACES:** None

HEALTH STATUS

CURRENT STATUS: COVID-19 (+)

USER CURRENT LOCATION
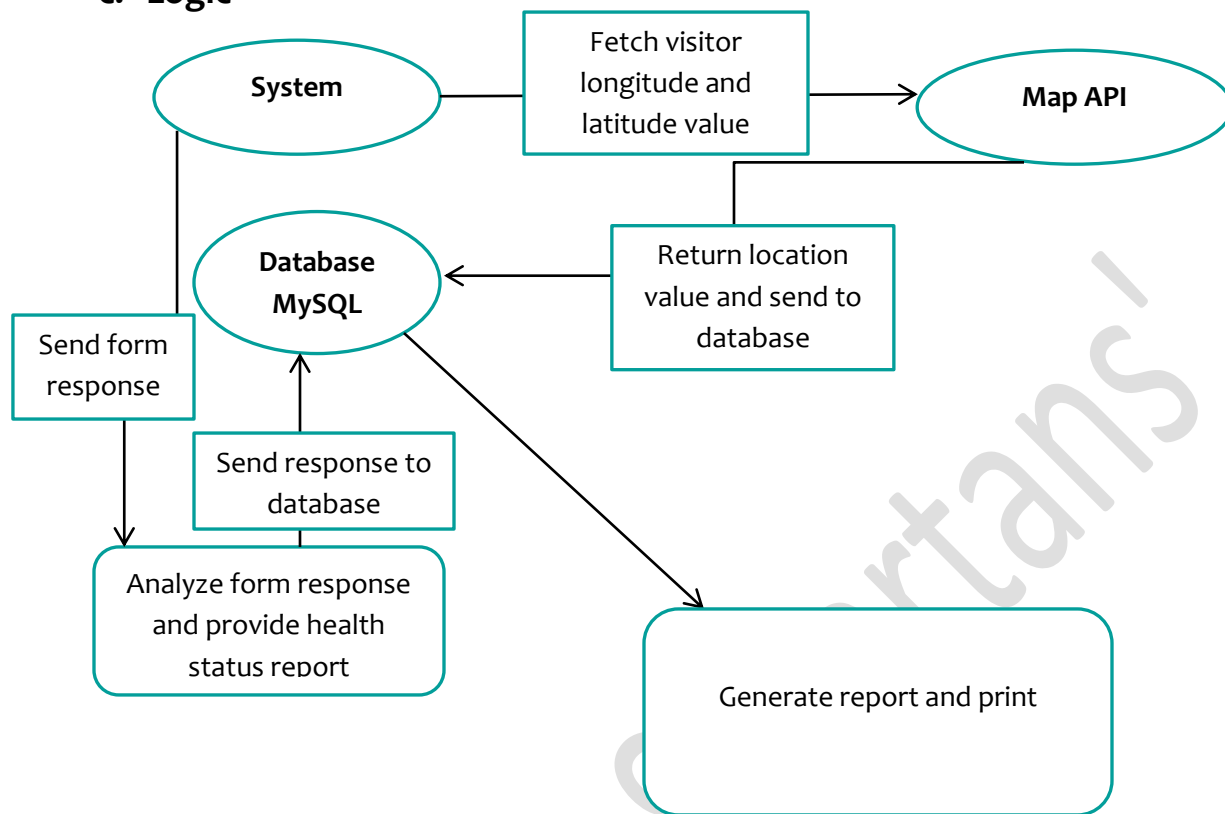
LATITUDE: 7.1959142   **LONGITUDE:** 3.4305228

MAP VIEW: view

c. Logic

Conclusion

In conclusion, the general aim of this project is to reduce the spread of the corona virus and also contain the virus using technology as a tool.

Our system is still in the **Alpha phase** of development currently, we are working towards moving it to the **Beta phase** of development as time goes on.