Friends of the Community
Smart Accessibility Map

Abhishek Rawat , Aieshah Nasir , Akshat Singh Gour , Akshat Singh Rathore

FoTc

Introduction

Disabled people are unable to browse and identify nearby locations having accessibility features. Offices, restaurants, bus stops, railway platforms, schools, cinema halls etc. which are having accessibility provisions can not be filtered and shown by any means today, which would be very helpful to persons with disabilities. There is no platform where restaurant owners, film hall owners, hotel owners etc. can register and declare that their properties are now accessible.

This project is a web based portal which consist of **Bing Maps** in which all the places are mentioned which has accessibility features for disables.

Objective

Development of a centralized platform with web-based portal or a mobile app for storing and sharing of information about accessible buildings,public places,offices. The system will also store their physical locations so that the information can also be shown on a on-screen map.
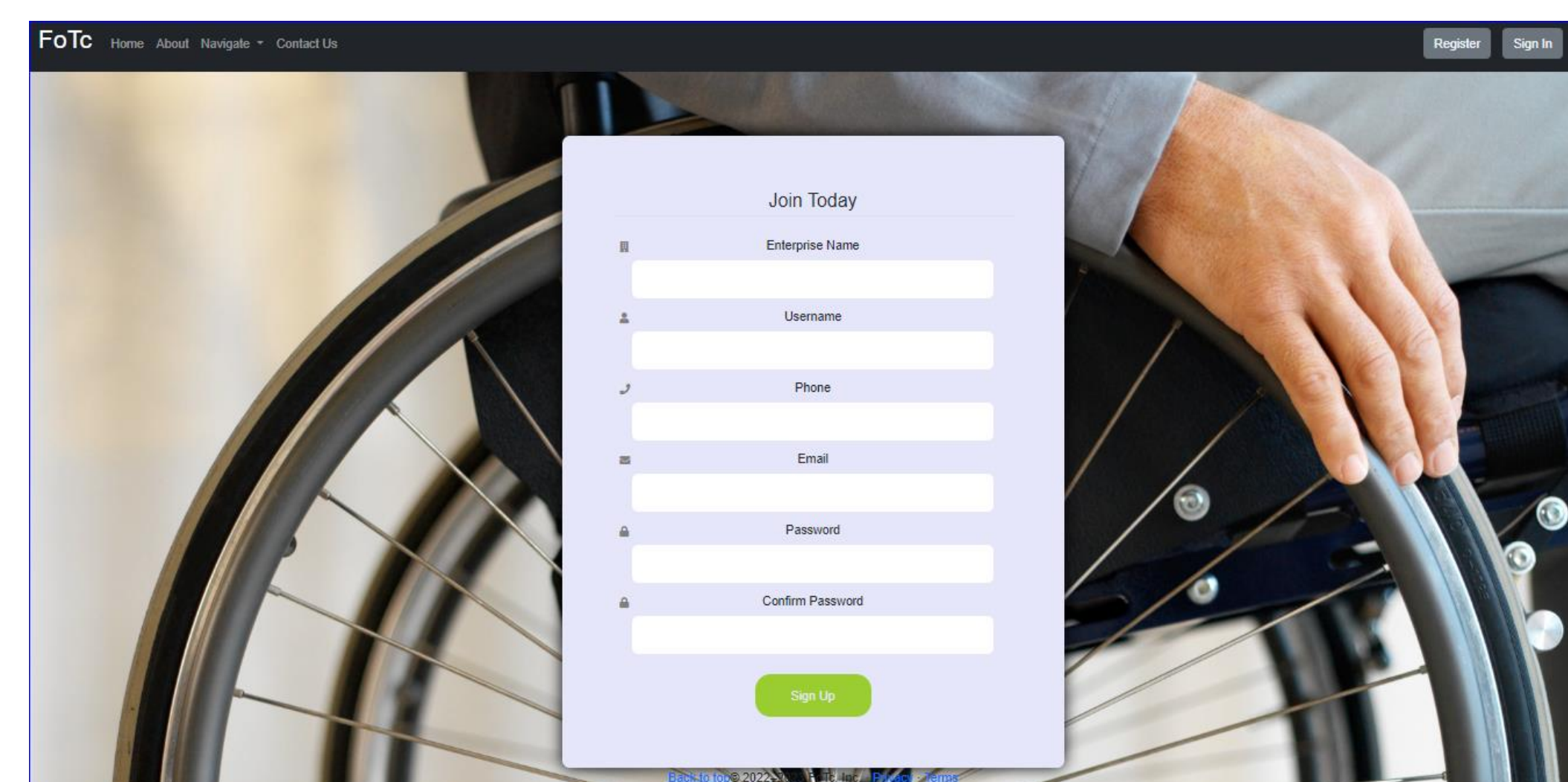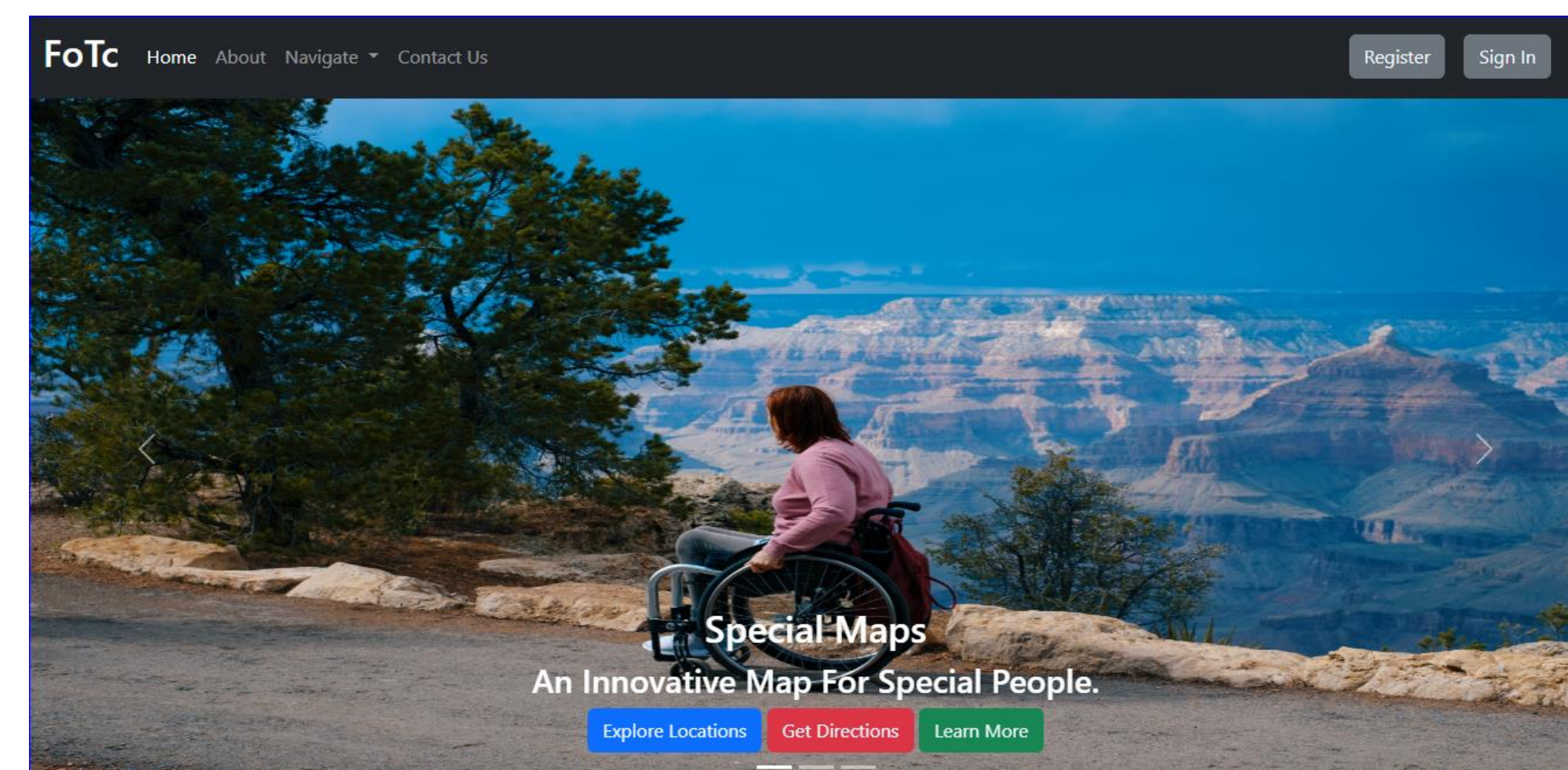
1. The objective of FoTc isto provide solutions to the problems of the weaker,disable sections of society.
2. To give the accessibility information to them.
3. System gives the direction for the place to be visited by the disables.
4. Easy usability of the system ,to be understand by anyone.
5. To provide easy registration for propertiors.

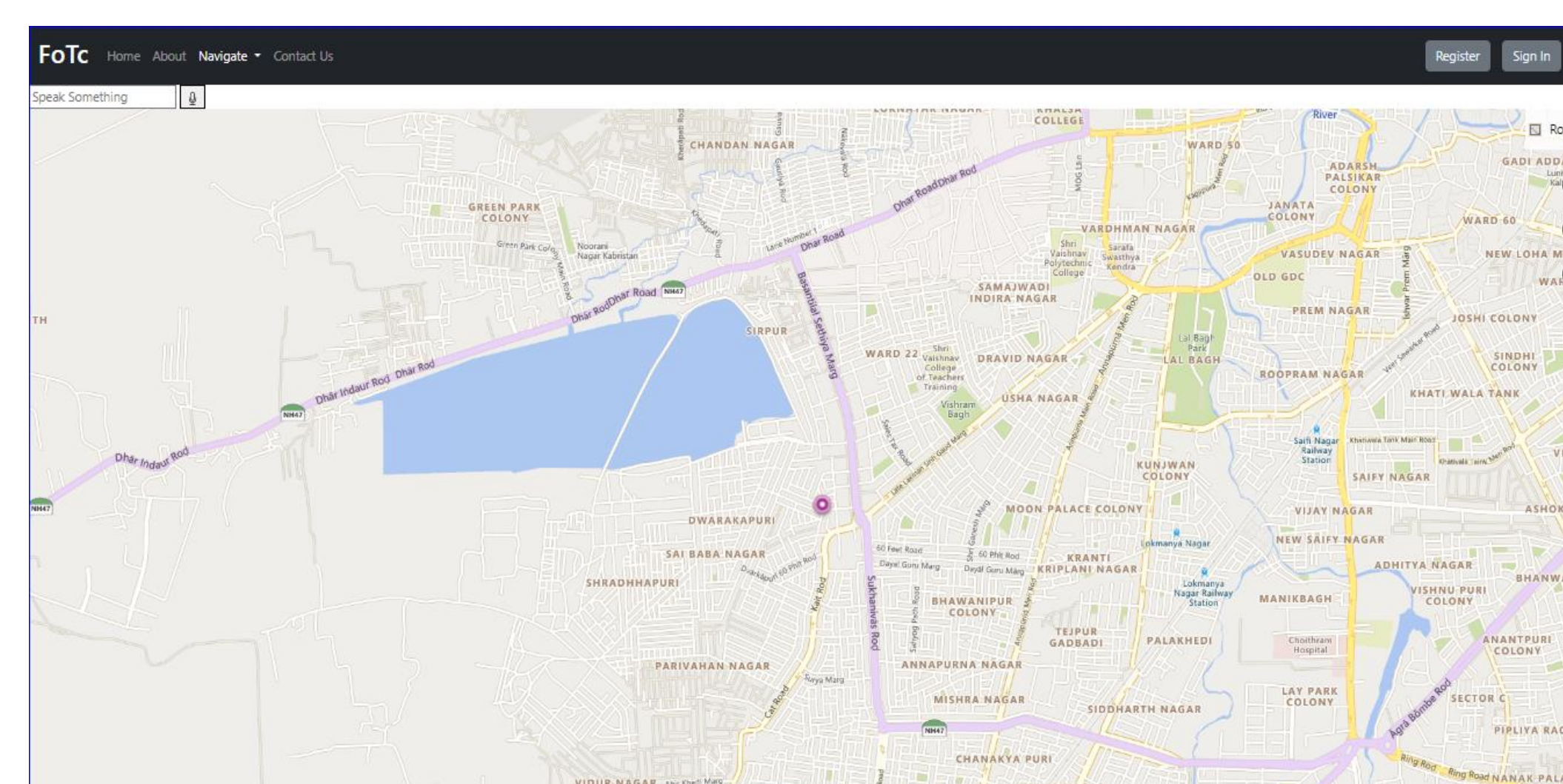**This facility is brought up by FoTc's 'Smart Map' powered by Bing Maps associated with this project**

Features

- **User Friendly Interface**

Project is having understandable and easily accessible interface.

This project is powered by Bing Maps . Bing Maps includes up-to-date maps, satellite and aerial photos of the highest quality. The service provides three-dimensional views of buildings with the so-called Bird Eye function. Bing Maps also has a very good geocoding service with forward, reverse and batch geocoding functionality.

- **Speech Recognition**

Specially made for blind ones.

Technology Used

Front end –
HTML
CSS
Javascript
Bootstrap
Jinja2

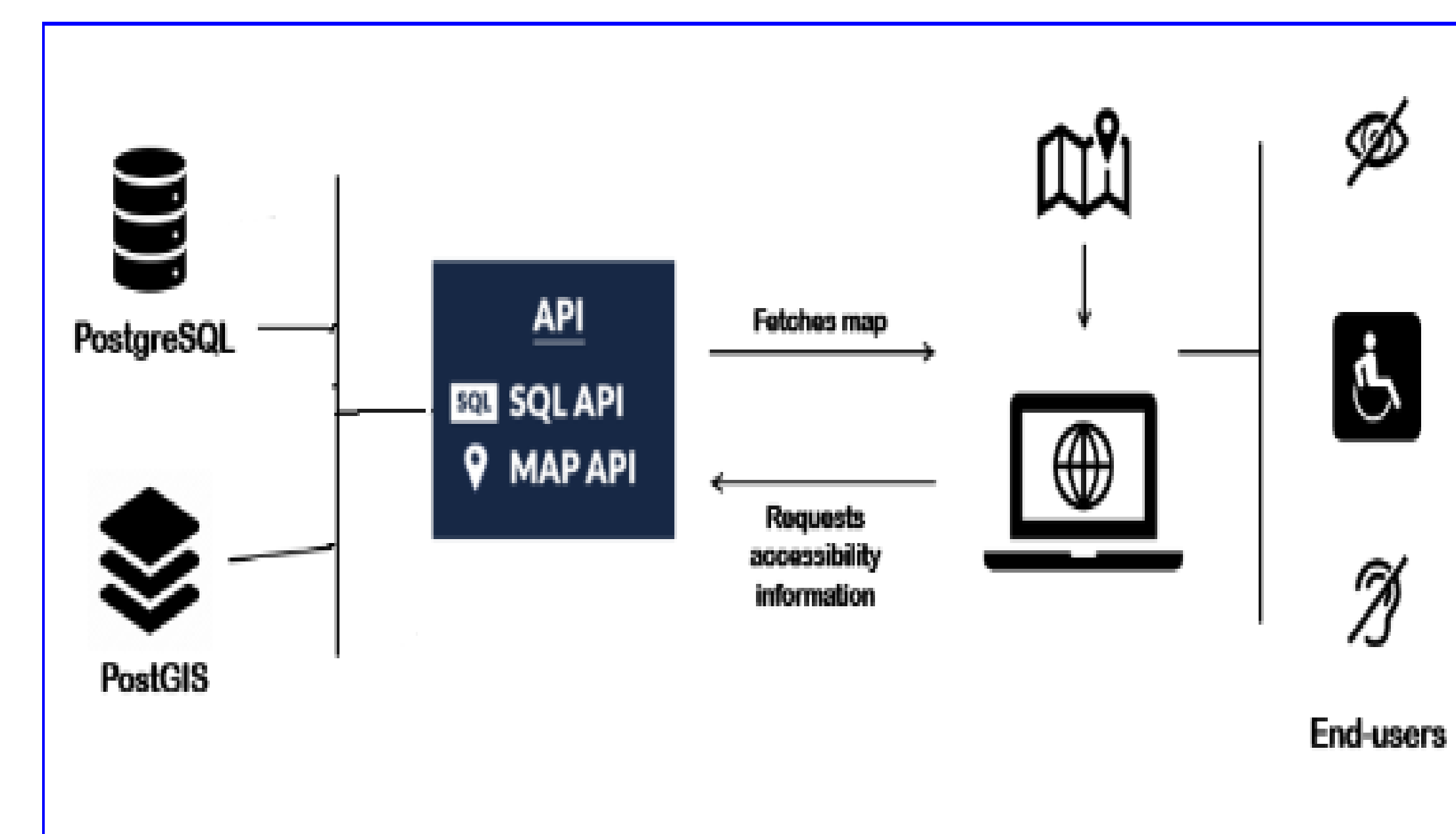These technologies are used in making user interface.

Back End –

Flask -Flask is a micro web framework written in Python. It is classified as a microframework because it does not require particular tools or libraries

Postgresql - PostgreSQL is used as the primary data store or data warehouse for many web, mobile, geospatial, and analytics applications

Json - Javascript is standard file object used to interchange data. The data objects are stored and transmitted using key - value pairs and array data types. In simple terms JSON data is the language of database.

Werkzeug - Werkzeug is a collection of libraries that can be used to create a WSGI (Web Server Gateway Interface) compatible web application in Python.

Bing Maps API is used for its various feature including but not limited to
- Geocoding
- Reverse Geocoding
- Routing
- Imagery Service

Conclusion

This Project is a smart map for disabled people with Bing Maps API with Python. We'ev used Geocoding API to fill in information in a database. HTML, CSS, Bootstrap for front end development of the project and use of PostgreSQL for maintaining the data in relational database management systems. This friendly map is a web application which will help disabled people to find the way on their own just by speaking up on the phone.

Refrences

1. Shadi Abou-Zahra,Accessibility Strategy and Technology Specialist,How People with Disabilities Use the Web.
2. Brajnik, G. 2000. "Automatic Web Usability Evaluation: What Needs to be Done?" 6th Conference on Human Factors and the Web.
3. Poppinga, B., C. Magnusson, M. Pielot, and K. Rassmus-Gröhn. TouchOver Map: Audio-Tactile Exploration of Interactive Maps. In MobileHCI '11 Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services.
4. Tsou, M. H. "An Intelligent Software Agent Architecture for Distributed Cartographic Knowledge Bases and Internet Mapping Services.

Contact

Abhishek Rawat - abhishekrawat20210@acropolis.in
Aieshah Nasir - aieshahnasir20729@acropolis.in
Akshat Singh Gour - akshatsingh20037@acropolis.in
Akshat Singh Rathore - akshatrathor20505@acropolis.in