PS Number: BC78

Disasters act as a shock to density. Considering the Cities of tomorrow, what should be done?
Aim: To develop a Software-based solution for disaster management

Ministry/Organization Name

Ministry of Housing and Urban Affairs

Team Name

CodeRescue

Team Leader Name

Rashi Singh

College Code

U-0053

Key Features

Dashboard

Real Time Tracking of affected areas displayed on a map based on input sources like **satellite data.**

Disaster related data such as number of people injured/rescued is displayed. This data can be updated by the concerned authorities.

Preventive and **precautionary messages** issued in public interest by the **headquarters** like relief camp location etc.

SOS API endpoint where any 3rd party app can provide an emergency button to **report the status** of the victims.

Augmented Reality

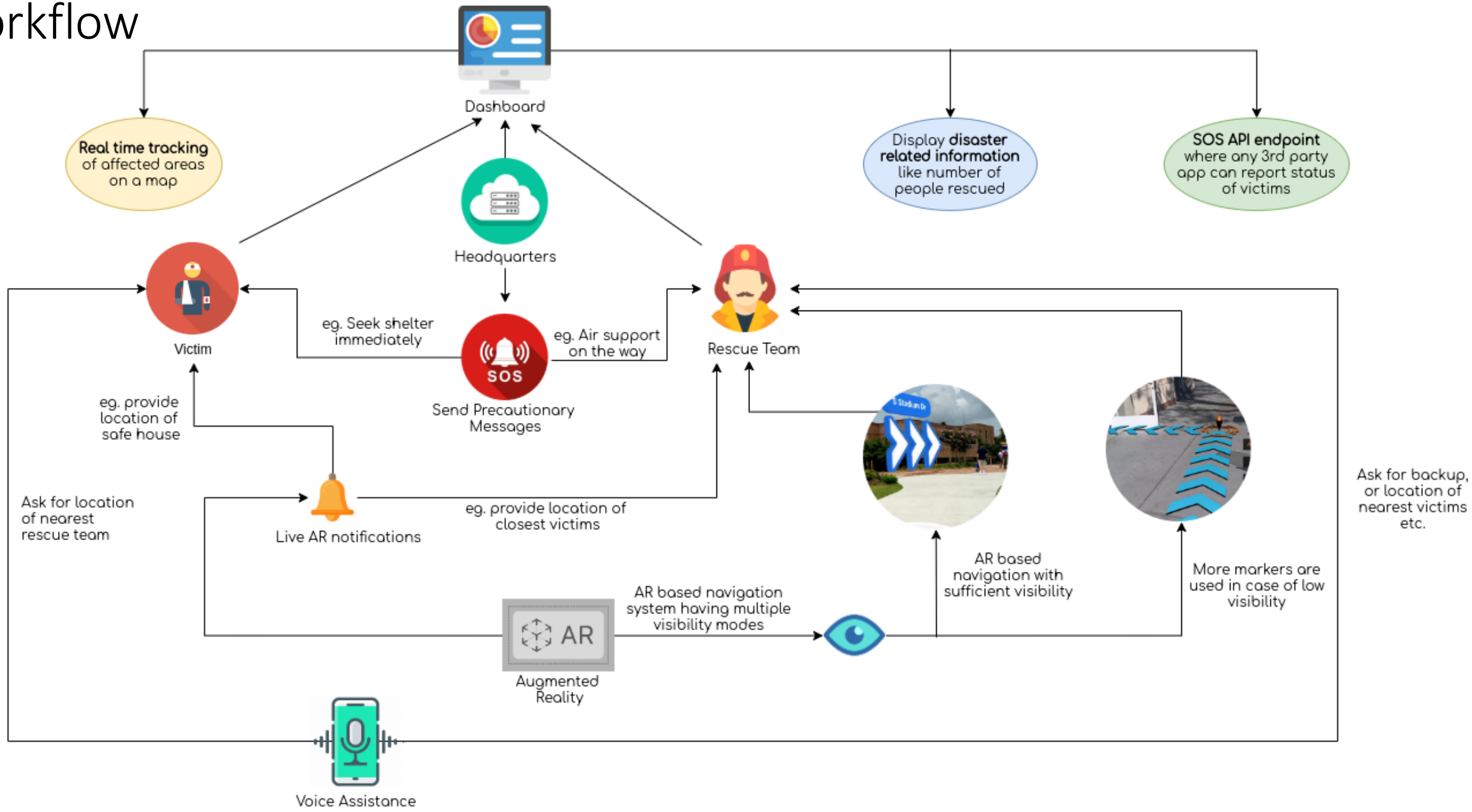
AR based **navigation** functionality guiding the rescuers using **virtual markers** directed towards the affected area.

Supports various **visibility modes.** In case of dust storm or at night, rescuers can switch to low visibility to get **closely spaced markers** guiding the route.

AR **notifications** provide effective communication using "help" messages and details like road blockage **tagged** along with location in AR space.

Integrated **Speech API** for **voice recognition** to make whole experience hands-free and thus save time for the users.

Workflow


Dashboard
Real time tracking of affected areas on a map
Display disaster related information like number of people rescued
SOS API endpoint where any 3rd party app can report status of victims
Headquarters
Victim
Rescue Team
eg. Seek shelter immediately
eg. Air support on the way
SOS
Send Precautionary Messages
eg. provide location of safe house
Ask for location of nearest rescue team
Live AR notifications
eg. provide location of closest victims
Ask for backup, or location of nearest victims etc.
AR based navigation with sufficient visibility
More markers are used in case of low visibility
AR based navigation system having multiple visibility modes
AR
Augmented Reality
Voice Assistance

Technology Stack

WEB
- Django
- Bootstrap, CSS
- HTML, JavaScript

Augmented Reality
- Beyond AR Framework

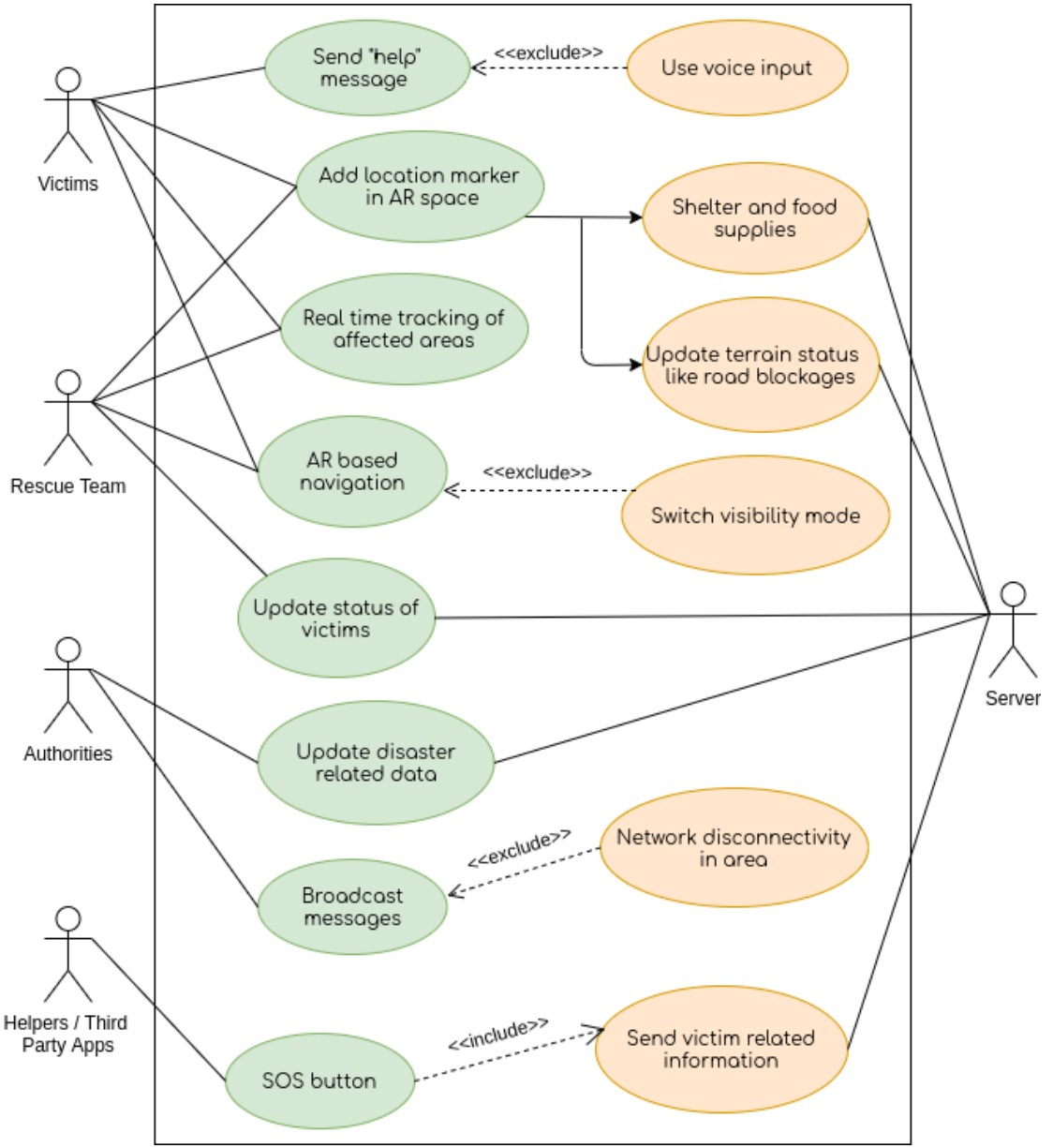
DATABASE
- MongoDB

APP
- Android Studio with Java

APIs
- Google Cloud Speech API
- Google Maps Direction API

GPS
- Google Geolocation API

Use Case Diagram



Unique Selling Point

Real-time disaster tracking with Augmented Reality based navigation and notification functionality to assist victims and rescue teams even in absence of visibility and internet connectivity.

Dependencies

- Rear Camera: AR features
- Microphone: Voice Input

Show-Stopper

- Precautionary messages might be blocked due to network disconnectivity.
- If GPS is disfunctional, tracking the victims will become strenuous.