

# BLUD

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# How We Did It?

- Frontend:
  - Dart was used to build the front end of the app
  - Reason: Dart is one of the popular languages used for building apps and Google backs it
- Backend:
  - NodeJS was used to create the services and the business logic
  - Reason: NodeJS is one of the fastest runtime environments used to build backend applications and it can handle heavy loads

# DataBase

- Firebase: 
  - Realtime Database powered by Flutter that helps us fetch real-time data.
- MongoDB: 
  - MongoDB is a popular and widely used NoSQL database with several advantages and significant importance to various applications and industries.

## Third party APIs Used

- Geocoder: Provides the location data
- Opencage: Provides geographical coordinate details
- Twilio: Provides services like the transfer of messages through Whatsapp

# Testing

- The Testing Method we used is White Box Technique.
- By employing this method, we found out various errors and optimization issues while checking the modules.
- Mainly the issues occurred during the integration of the Server and the Front End.

# Bugs and Fixes

## ■ Backend

- Bug: Run time was relatively was high for some modules
- Fix: Redundant codes and unwanted loops were removed
- Bug: Delay in reading and writing Database
- Fix: Rewriting the read and write code in promise method



# Bugs and Fixes

## ■ FrontEnd

- Bug: Pixel overflow from the defined space
- Fix: Definition of a certain width/height compatible to the device's
- Bug: In Hive, a local storage system, a boolean variable governing the login status consistently redirects users to the login page, indicating an error in the system's logic.
- Fix: Resolved by identifying and rectifying the error in the boolean variable that determines the login status

# Bugs and Fixes

## ■ Integration

- Data exchange between Server and Frontend.
- Improper sending of data
- Inability in handling exceptions from the Server by the Frontend
- Difficulties in comprehending the data types received from the server and the data types that should be transmitted to the server.

# Limitations and Potential Features

- Live location of available donors on the map
- Blood Donation Drives in collaboration with Blood Banks

# Demo