

Mini Project

Title : Women/Senior Citizen Safety Device with GPS Tracking ,SMS alerts and buzzer alert. System for ensuring safety of females and senior citizens in emergency and unsafe circumstances .

Introduction

- Safety of Women on streets is an issue even in the 21st century.
- Old people like to stay independent or at times are alone at home, thereby causing a concern of their health and well-being.
- Women/Senior Citizen safety device is a gadget having 2 buttons as panic button and buzzer button. On pressing the panic button it sends sms alerts along with GPS location to the user's favourite contacts and nearby police station or ambulance according to the use case. On pressing the buzzer button the buzzer goes off thereby alarming passersby. This enables the users to get help in required time in emergency situations.



Useful for :

- Safety of Women
- Assist Senior Citizens in emergency situations



Need

- Considering the use case of women safety ,the perpetrator will always be on the lookout for any items of self-defence the victim may be carrying. So a hidden alarm system is needed.

- Device should be fast and easy to trigger, considering the target does not have a lot of time or opportunity to call for help if the attacker is right in front of them.

- Wearable safety devices provide family members and caregivers with peace of mind



- Help seniors alone at home in time in case of emergency situations if they suffer sudden attacks, faint ,seizures, discomfort etc.

- Unable to reach or pick up phone in such situations ,hence an easy to use device helps in alerting and providing required medical assistance as fast as possible

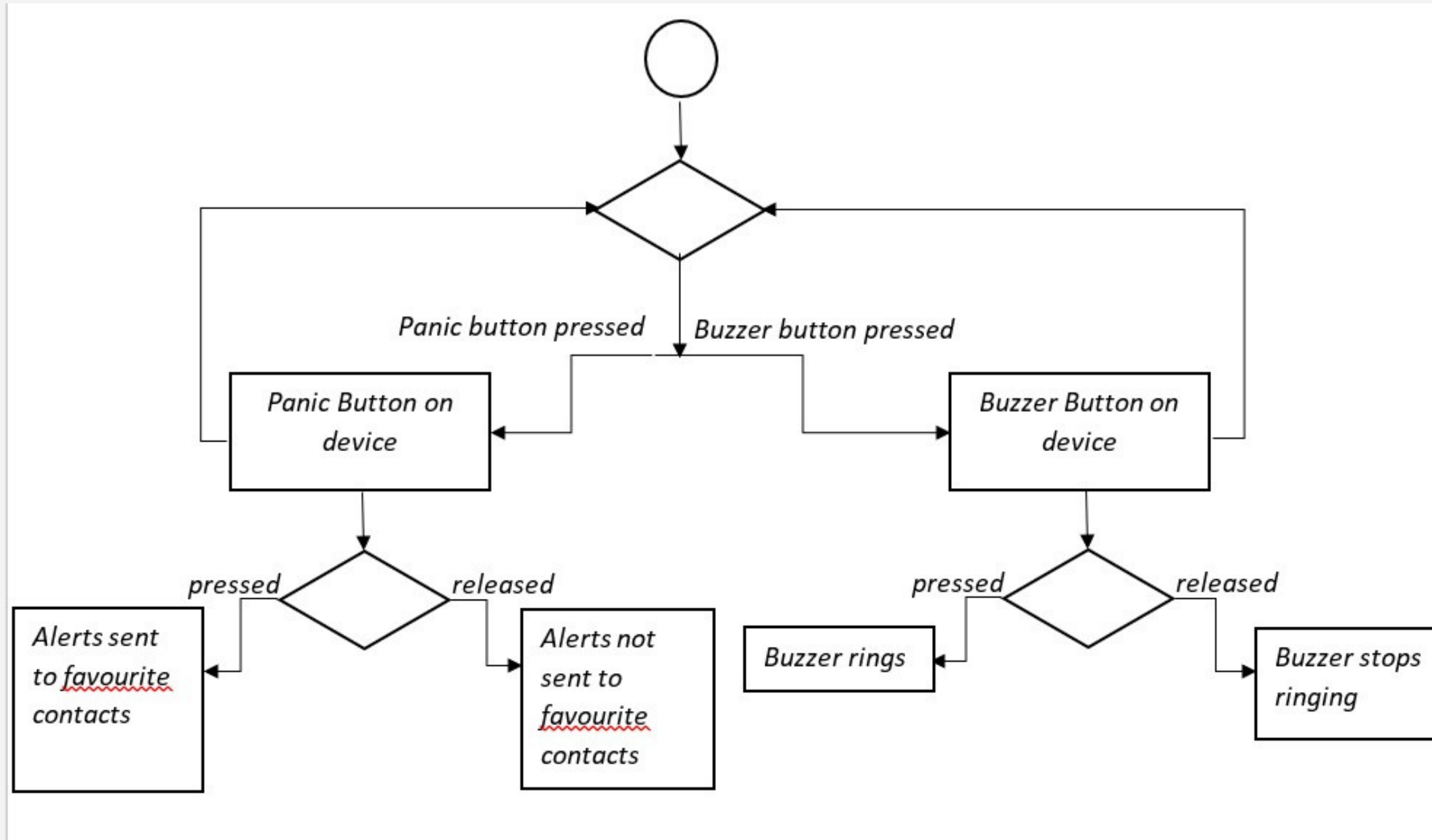




System Requirements

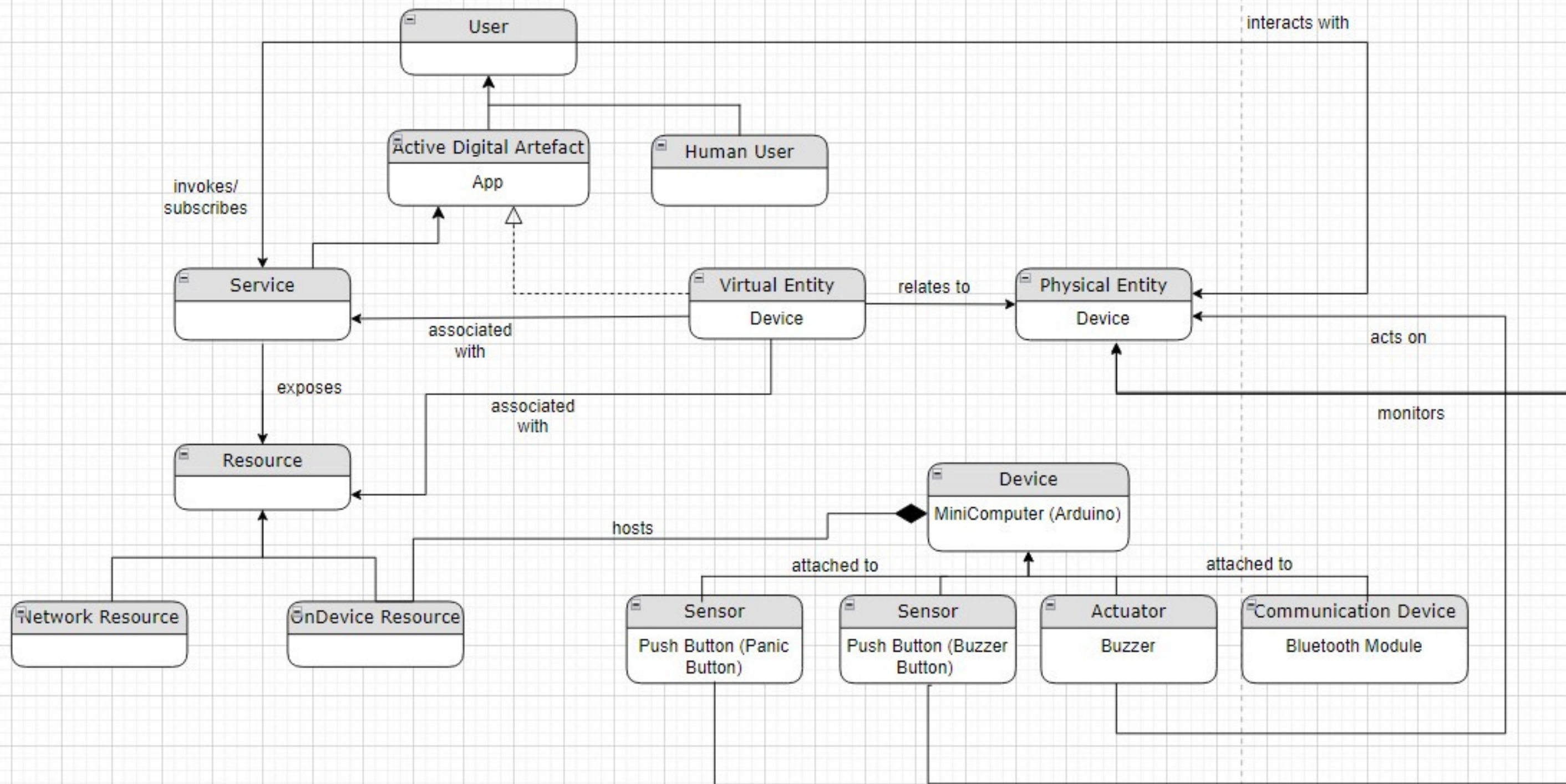
- Arduino Uno
- Bluetooth module (HC05)
- Push Button
- Resistor
- Buzzer
- Android Studio
- Arduino IDE

Process Specification



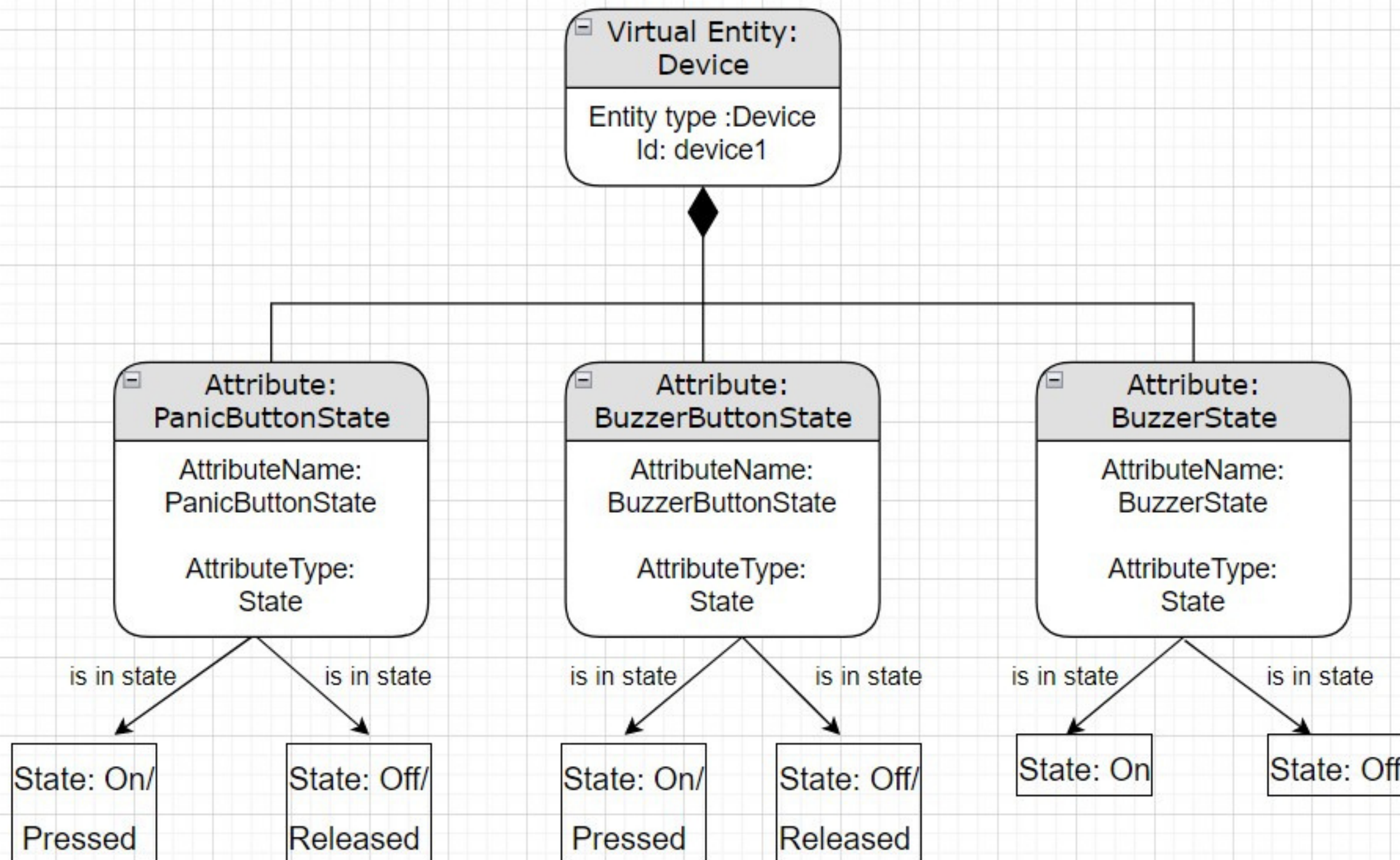
- Bluetooth of both device and mobile phone should be on. Device should be paired with mobile.
- On pressing the panic button on the device, app reads an inputstream with the help of bluetooth connectivity.
- On receiving this signal, app sends emergency alert to favourite contacts and police station or ambulance as per the use case.
- If user wants a buzzer alert ,he/she will press the buzzer button on the device ,on which the buzzer goes off.

Domain Model Specification

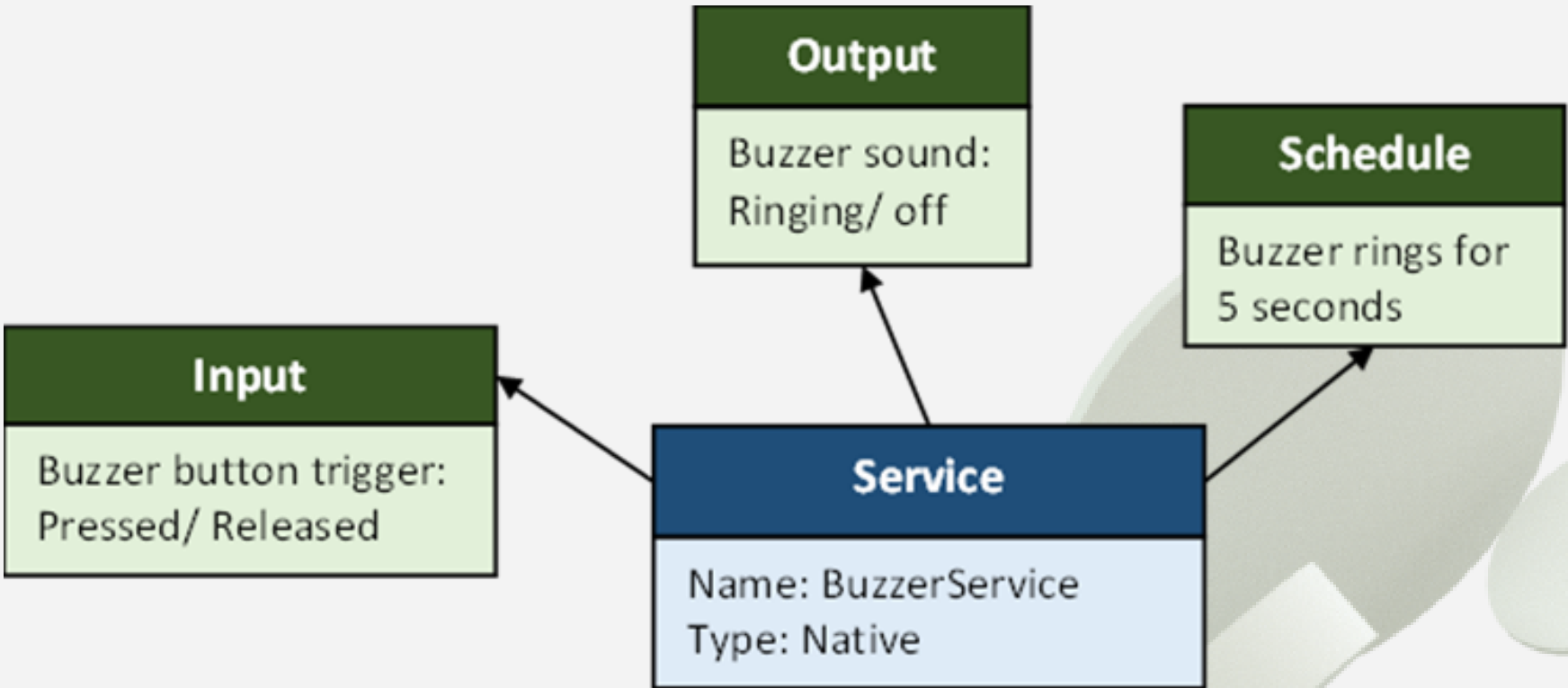
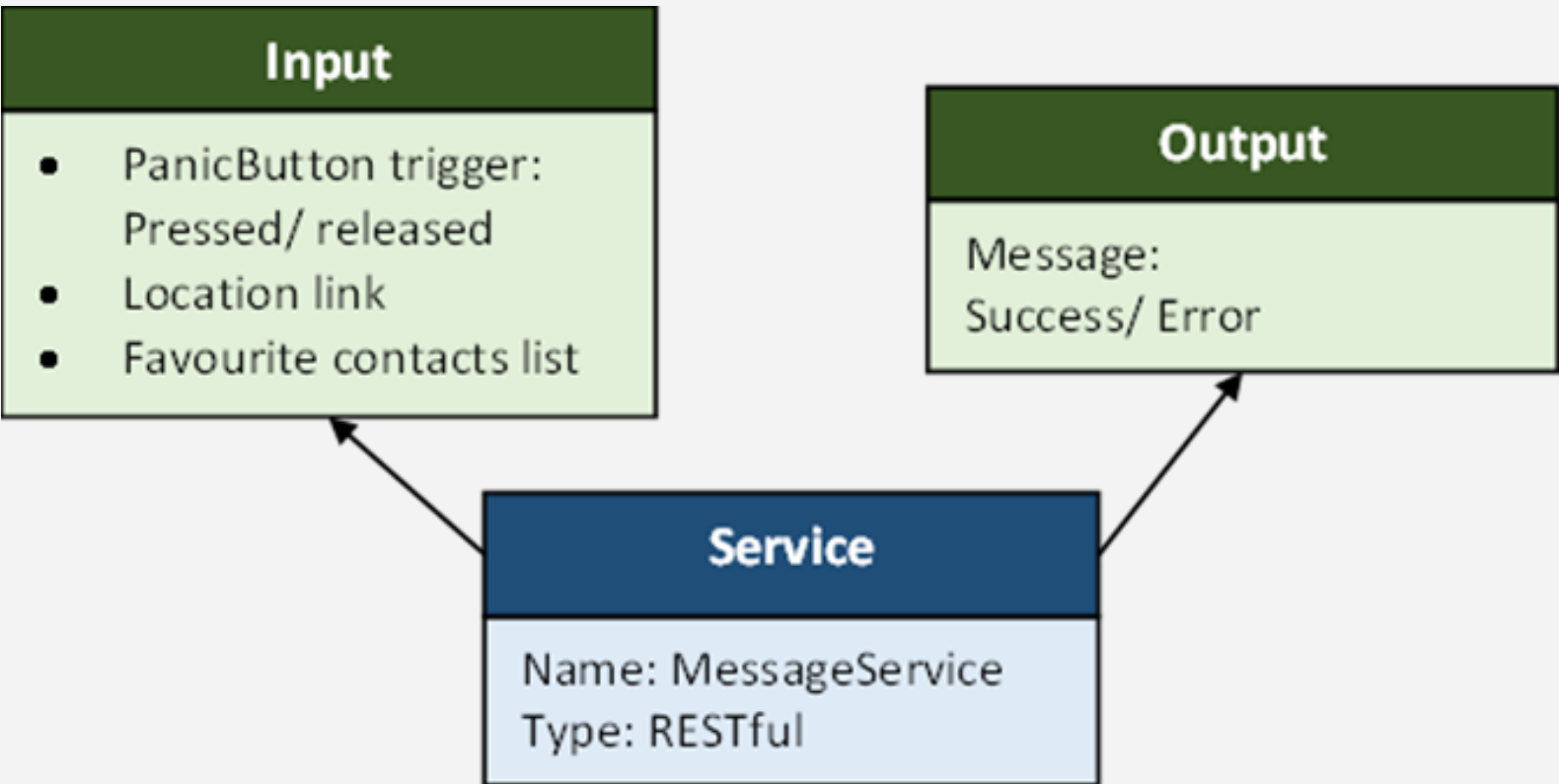
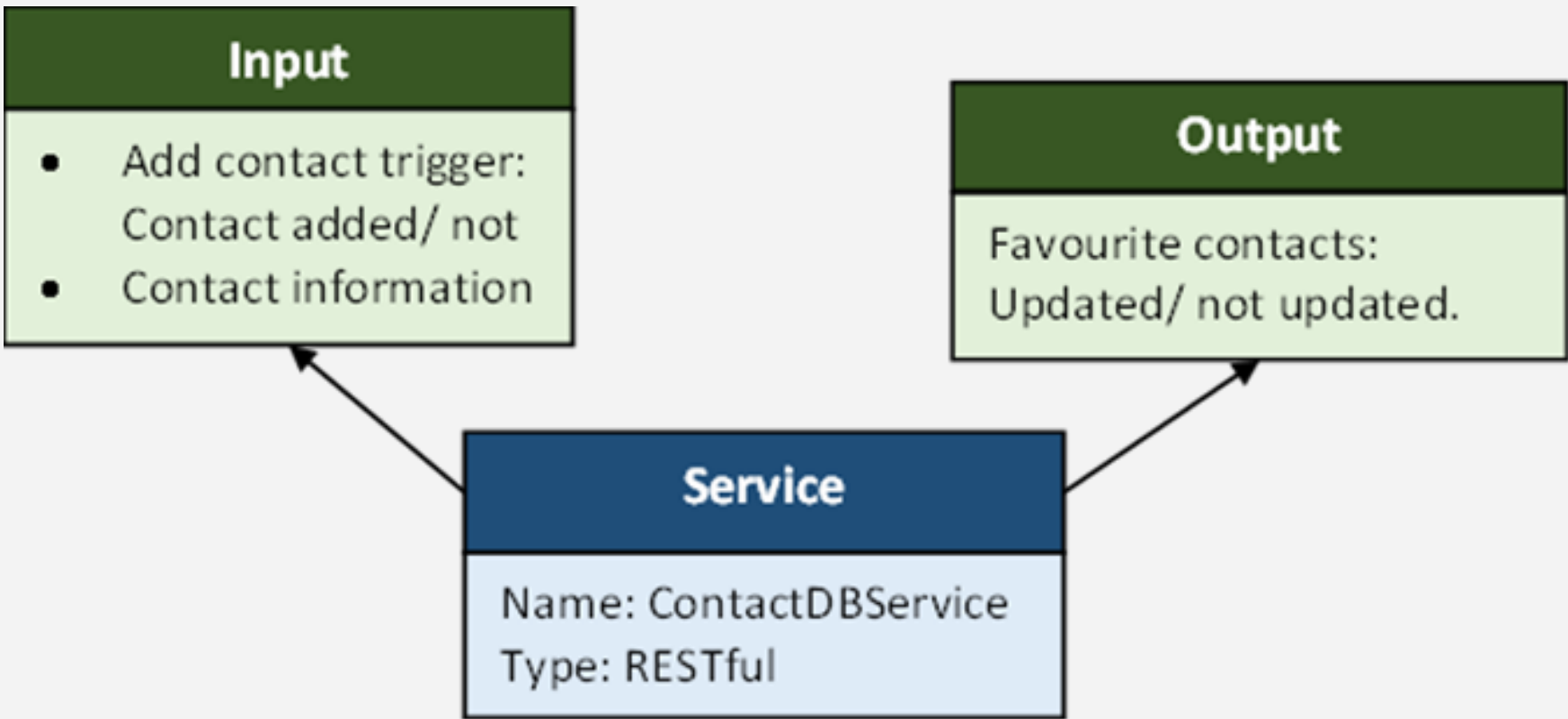
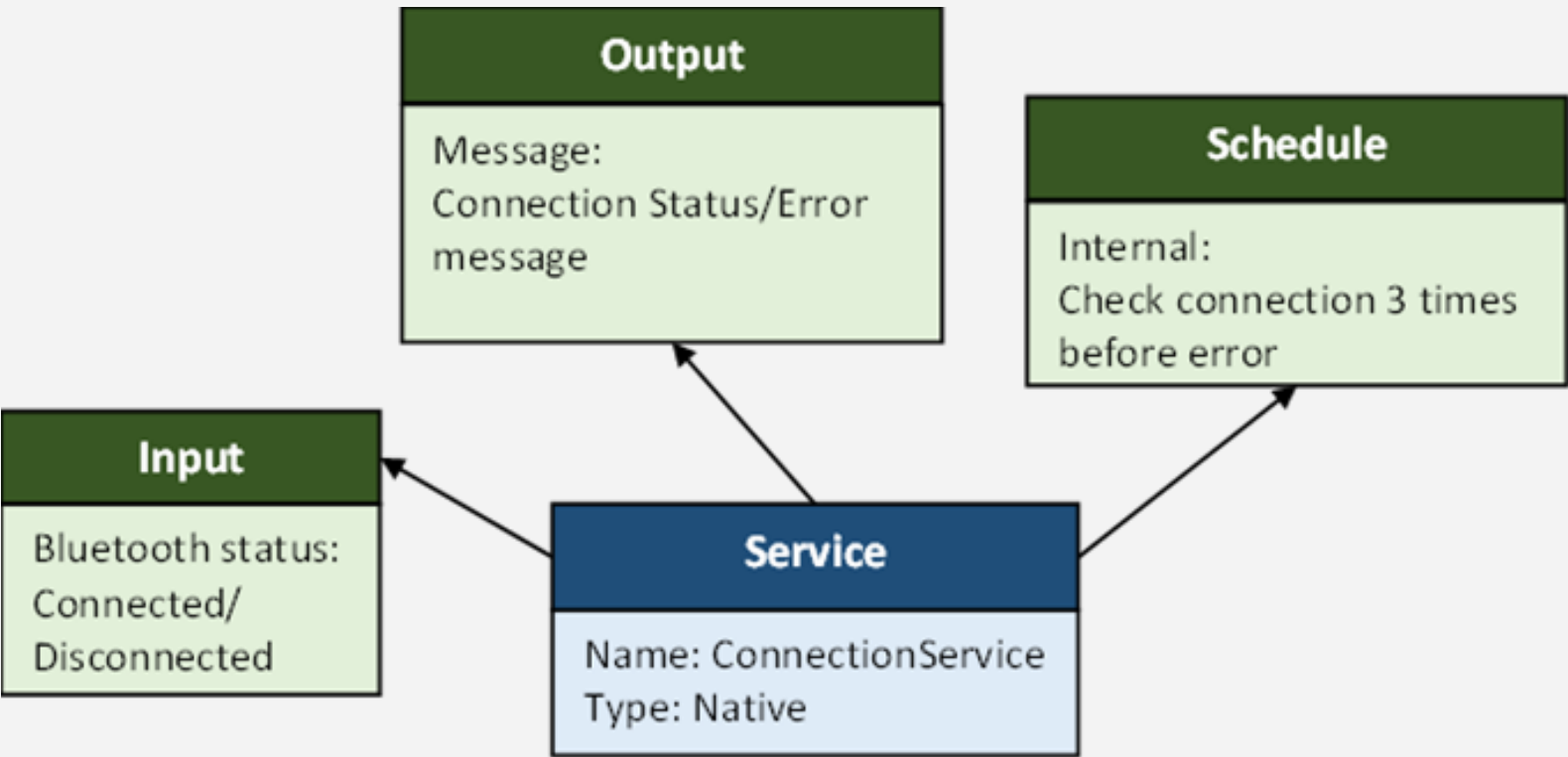


Domain Model Specification

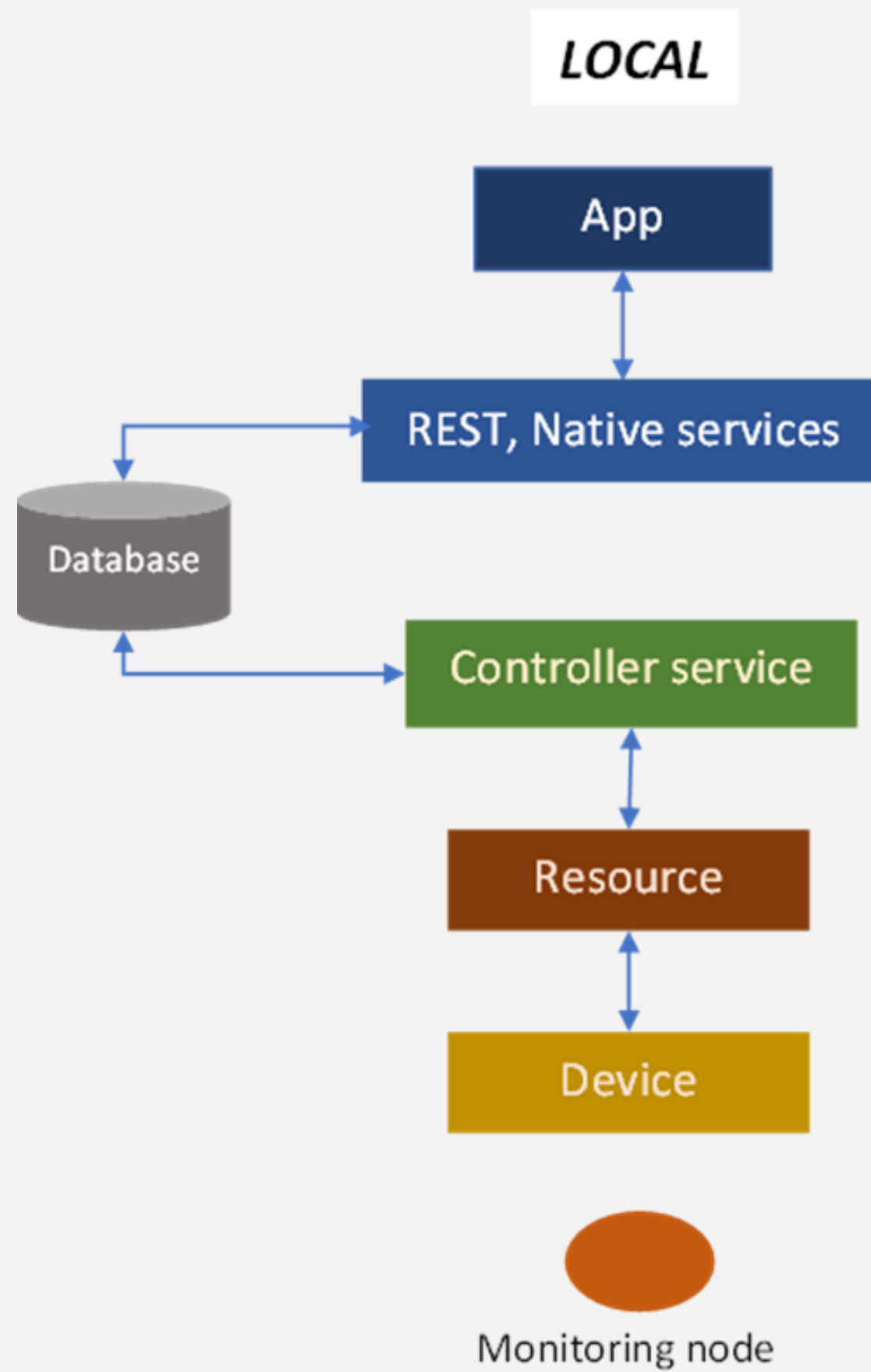
Information Model



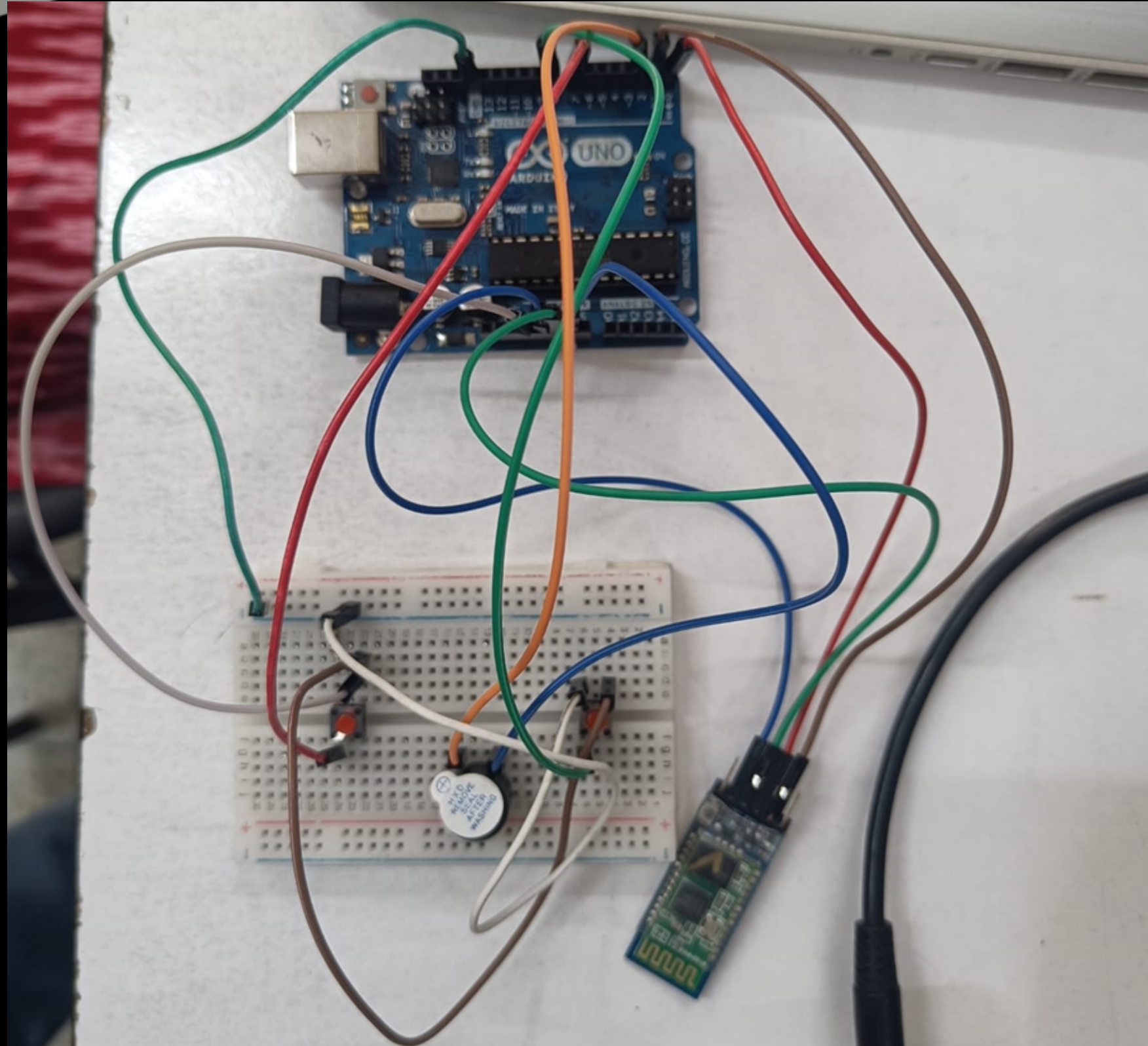
Service Specification



IOT Level Specification : *Level 1*



Device And Component Integration



Application Development



Fig 1:
Home page of client
application

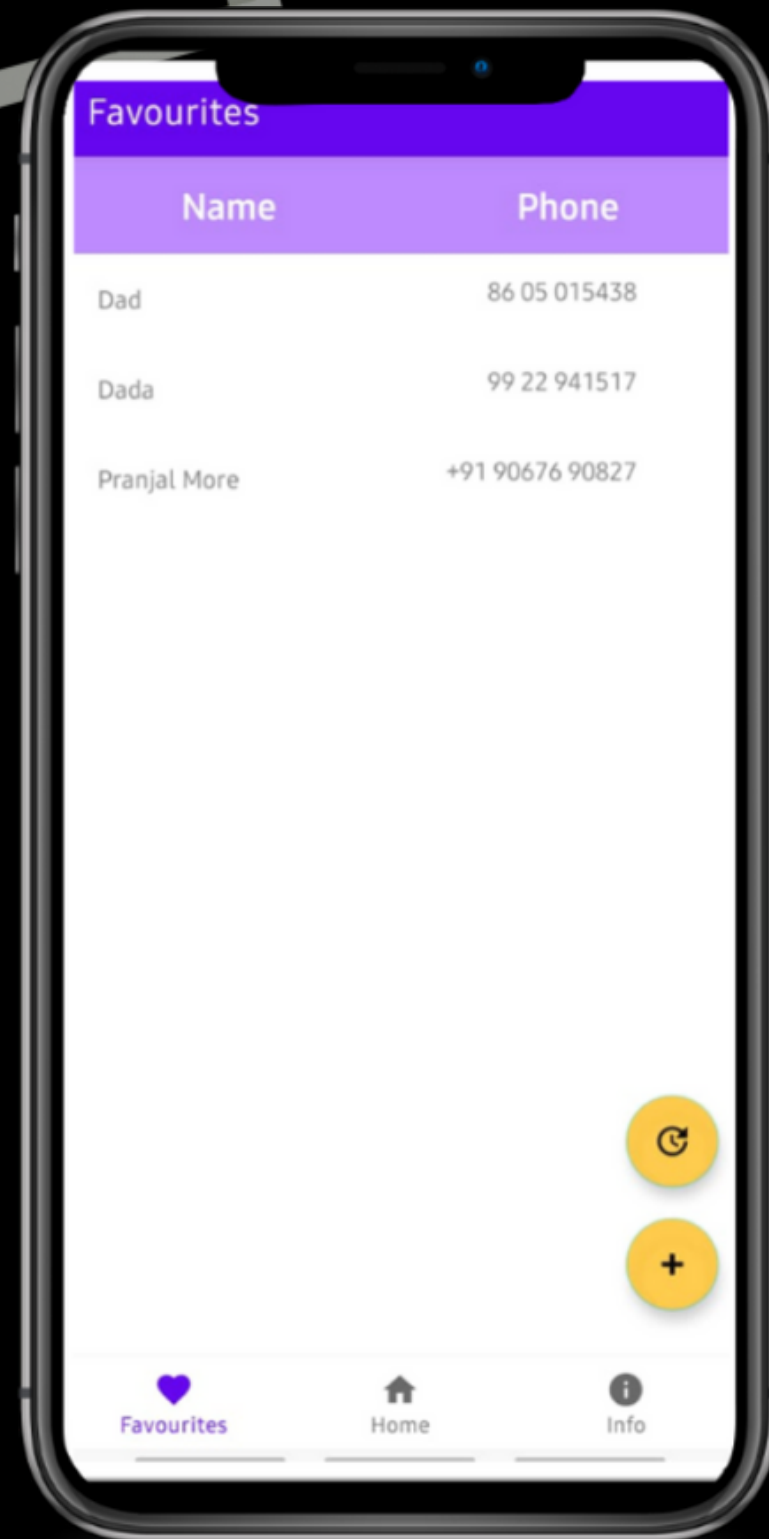


Fig 2:
Adding contacts to alert
in case of emergency

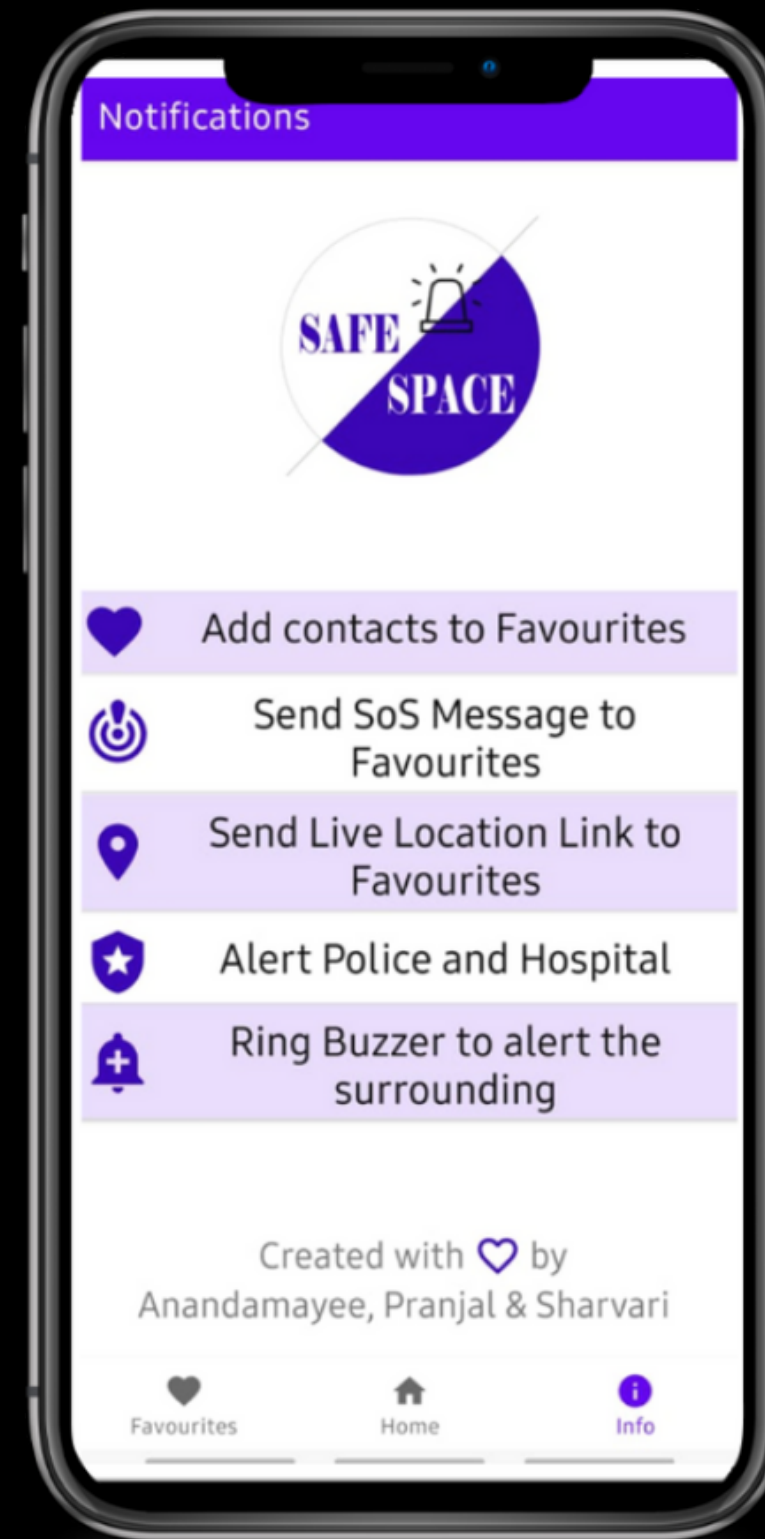


Fig 3:
Features information
for the client

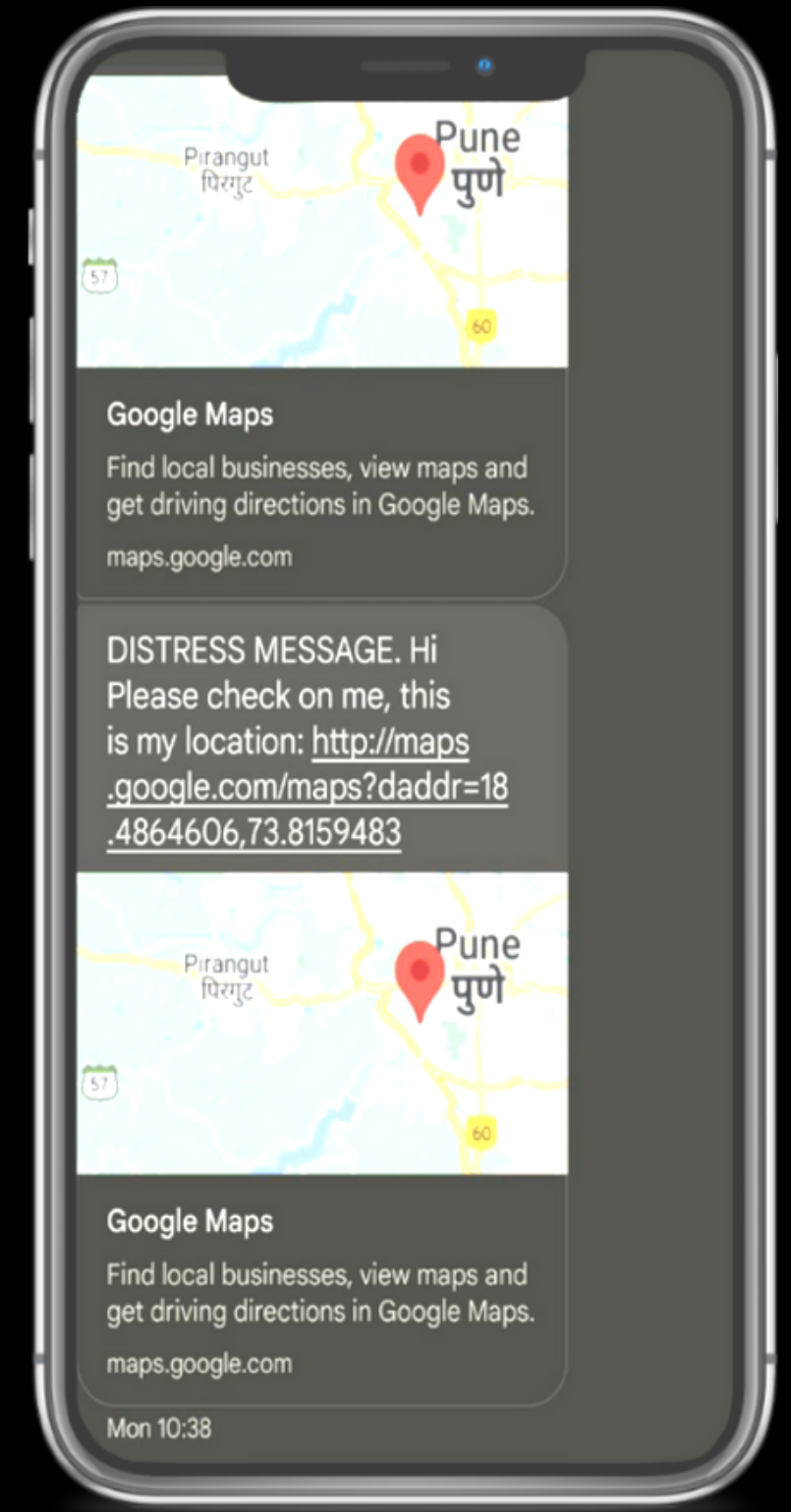
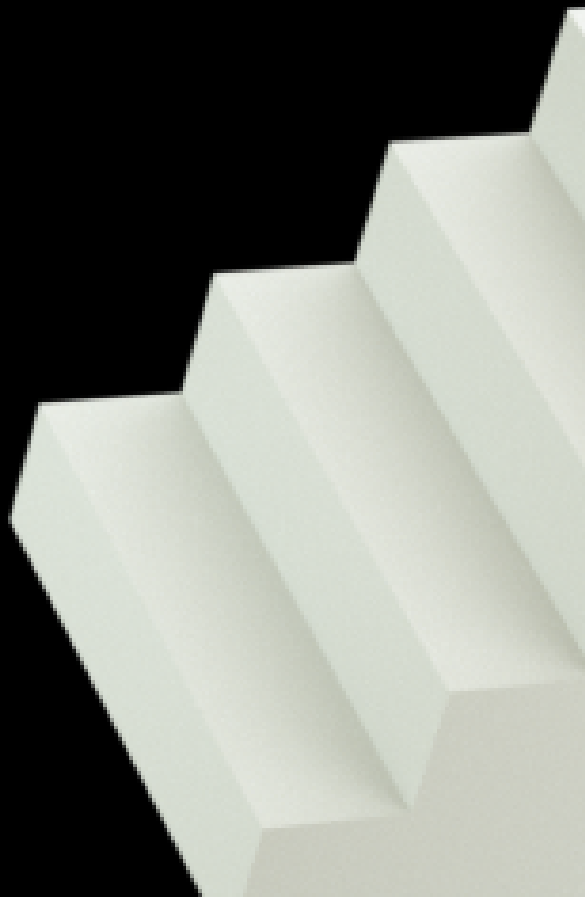


Fig 4:
Message alert sent
to favourite contacts



Future Scope

- Making the device more compact
- Push notification on receiver's mobile phone on receiving an alert
- Cloud analysis for trigger incidents in various locations in case of women safety.





THANK YOU !

