

Basic Details of the Team and Problem Statement

PSID: KVVH-013

Problem Statement Title: Tool for monitoring ground personnel

Problem Description :

Platform/tool to remotely track police officers deployed to bandobast duty using NFC(Near Field Communication)to ensure that they stay where they are posted.

Team Name: MORSE CODERS

Team Leader Name: AKMAL FOWMILA A S

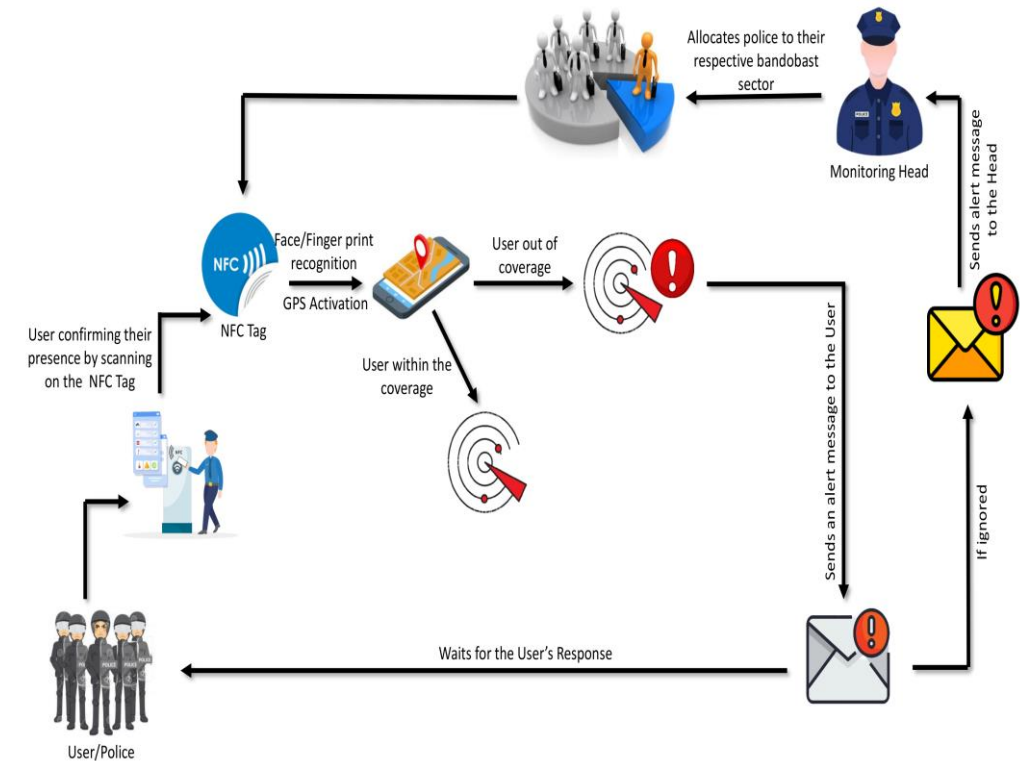
Institute Code (AISHE): C-26783

Institute Name: PSNA College of Engineering and Technology

Idea/Approach Details

Describe your idea/Solution/Prototype here:

- We have developed a **mobile application** for police officers and a **website** for the **Head Police Dept.**
- The mobile application is developed for the **registering presence** of the police officers during bandobast.
- The website is handled by the Head of the police dept which is used to **separate the bandobast geographical area into sectors and subsectors** and to **assign duties** to the police officers to their respective sectors and to monitor them.
- The website and mobile app are linked to each other and the location of the police officers can be **tracked in real time** during bandobast.
- An unique **NFC tag must be provided to each sector** which will be used by the police officers to register themselves using the mobile application in the particular sector and hence they can be verified via the website by the officials.
- For **verification** the police officers have to **scan the NFC tag** using their phone from the respective sector and then scan their fingerprint or use face recognition method so that their **location can be tracked in real time**.
- The police officer will have to register their fingerprint in their mobile application **periodically** (1hour) which will be monitored via the website to ensure their presence within the allocated area or sector.
- A constraint is set by which the police officer must **remain within the allocated area** .If the police officer steps out of the allocated sector or boundary then a **warning message** will be sent to alert the particular police officer.
- If the police officer **persist to stay out** of the sector or boundary , then a **message is sent** to indicate the head of the police to the particular website.

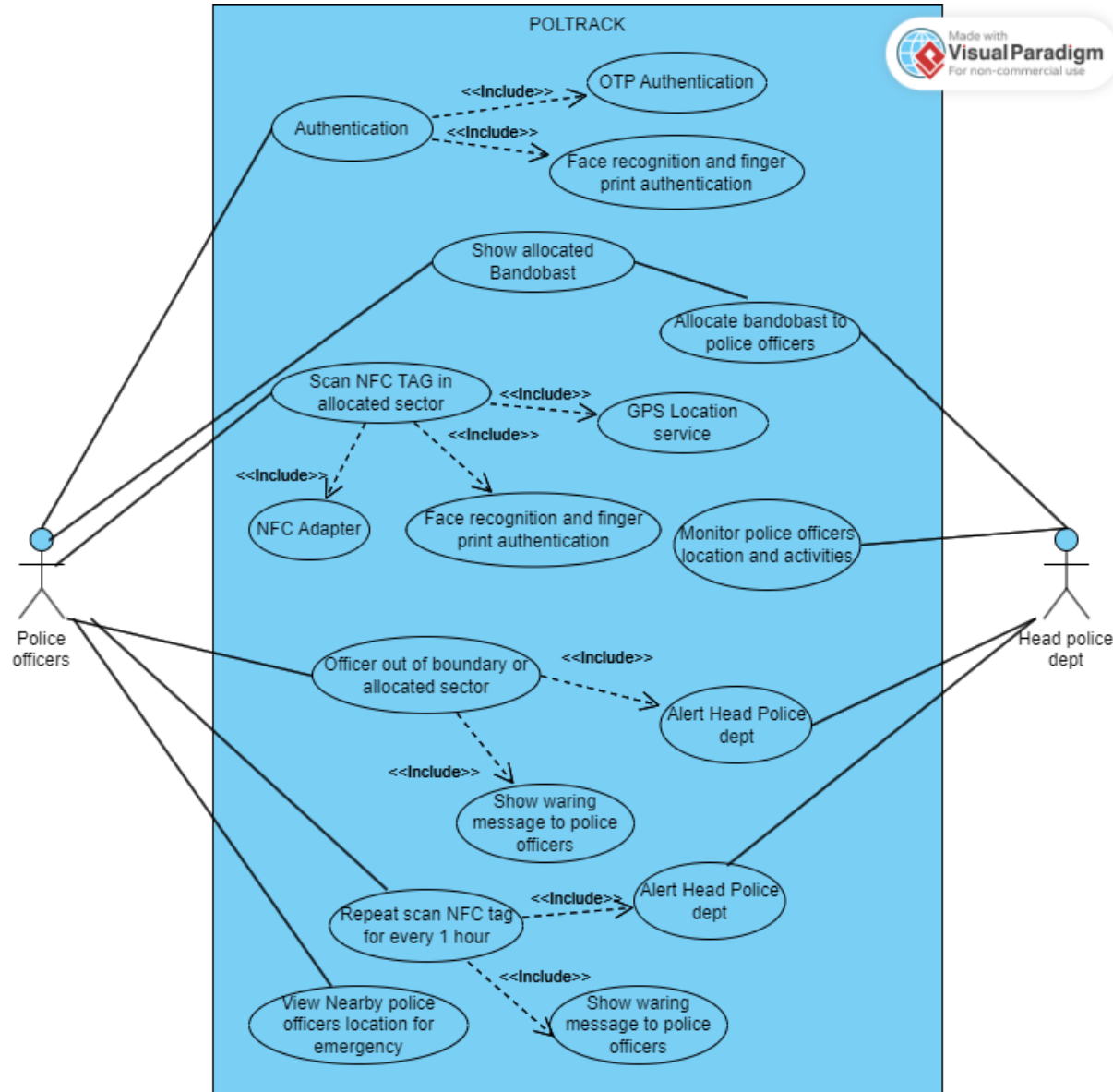


Describe your Technology stack here:

- Kotlin, Java
- React JS
- Firebase Database
- Fused location provider for GPS
- NFC
- Google Map SDK

Idea/Approach Details

Describe your Use Cases here



Actors: Head Police Dept, Police Officer

- **Head Police Dept:** Creates bandobast and separate sectors and sub sectors. Assigning police officers to the bandobast. Monitoring the police officers who are deployed for bandobast duty. Monitoring the police officers whether they are present within the allocated boundary. Receiving a alert message when any police officers go out of the allocated sector.
- **Police officers:** Has to scan their phones on the NFC tag .Verifying themselves using face recognition or fingerprint, then their location is ON to track them. Have to register them on the NFC tag periodically (1 Hr).

Describe your Dependencies / Show stopper here

- Need NFC tags
- Need NFC enabled mobile phones
- GPS location must be turned ON
- Database service.

Team Member Details

Sr. No.	Name of Team Member	Branch (Btech/Mtech/Ph D etc):	Stream (ECE, CSE etc):	Year
1	Akmal Fowmila A S	B.Tech	CSBS	3
2	Hari Haran R C	B.E	CSE	3
3	Mansha S	B.Tech	CSBS	3
4	Madhesh V	B.Tech	CSBS	3
5	Siva Prakash G	B.Tech	IT	2
6	Godwin Joe D	B.Tech	IT	2

Team Mentor/s Details

Sr. No.	Name of Mentor	Category (Academic/Industry):	Expertise (AI/ML/Blockchain etc):	Domain Experience (in Years)
1	Dr. S.Shahul Hameed	Academic	ML	6 years
2	C. Preethi	Academic	AI	5 years