Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID49512
Project Name	Project - Signs with smart connectivity for better road safety.
Maximum Marks	4 Marks

Technical Architecture:

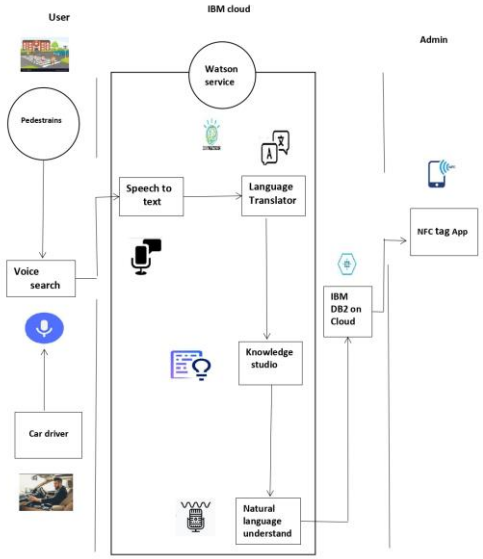

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with application through NFC tag reader.	HTML, Python / C etc.
2.	IOT Application Logic-1	NFC tag contains some data to specific functions.	C / Python
3.	IOT Application Logic-2	Audio playback recorder to store the recordered voice.	IBM Watson STT service
4.	IOT Application Logic-3	NFC tag writing application allows you to write tags.	IBM Watson Assistant
5.	Database	VARCHAR - string(0 to 255)	phpmySQL database
6.	Cloud Database	The partitioning type of a database is set at database creation time.	IBM DB2, IBM Cloudant etc.
7.	File Storage	Android beam file transfer: Only available in android 4.1.	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Web NFC API is a low level API.Ability to read and write to nearby NFC.	IBM Weather API, etc.
9.	External API-2	Creating a push trigger API App to process NFC tag reads.	Push trigger API, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks are NFC profile,readie and NFC Tag Launcher.	Technology of Open source framework is NFC.
2.	Security Implementations	NFC technology is safe.It is also incredibly difficult to hack.	It is end to end encrypted.
3.	Scalable Architecture	These NFC tags are predefined at manufacture.They can be either read,re-writable or read only.	Near Field Communication Technology is used.

S.No	Characteristics	Description	Technology
4.	Availability	Short range NFC tags are available in cheapest price.It gurantee the security of the customers data.	Near Field Communication Technology is used.
5.	Performance	NFC tags work without a battery.It requires much less power.It lasts for 10 years.	Near Field Communication Technology is used.