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

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|---|---|
| Date | 24 October 2022 |
| Team ID | IBM-project-13896-1659534693 |
| Project Name | Signs with smart connectivity for better Road safety |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

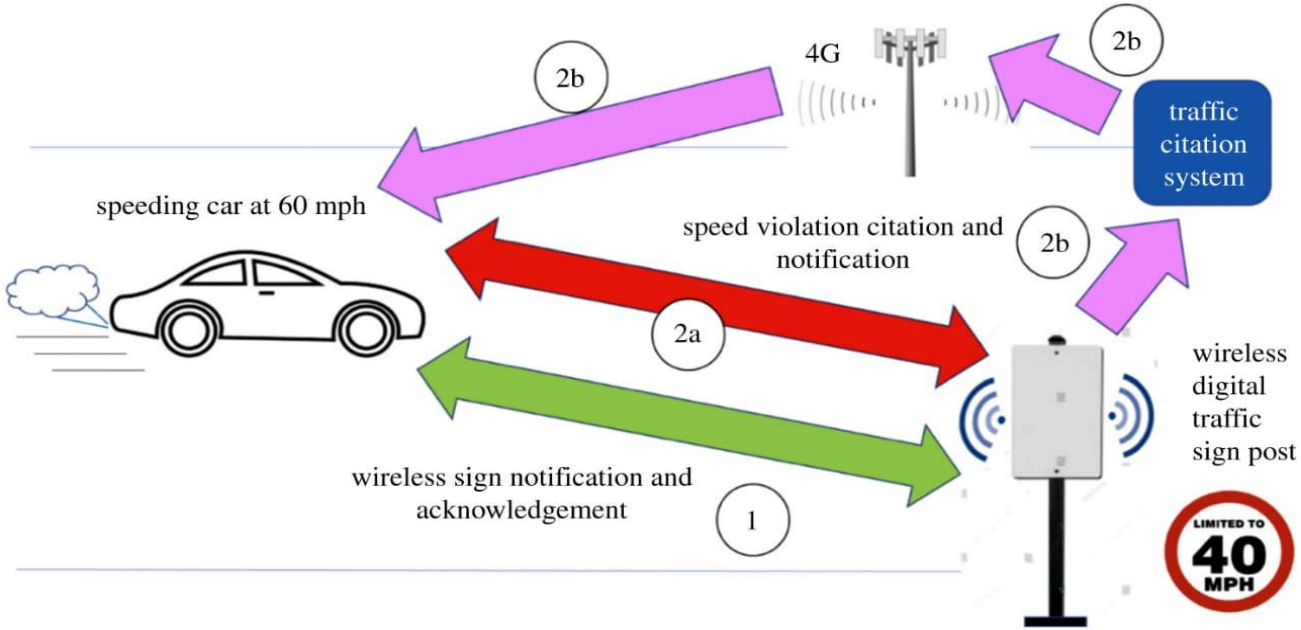

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | **speed sensors** | Speed sensors use magnets or optical sources to capture rotational or linear speed .typically ,they are used as gear-tooth speed sensors or are incorporated into stroboscopes or tachometers. | VCSEL,advanced VCSEL |
| 2. | **acoustic sensors** | **To generate a signal by moving a diaphragm quickly back and forth displacing the air around the diaphragm, creating an acoustic wave**. | Java,etc. |
| 3. | **IP CCTV cameras** | An IP camera, or Internet protocol camera, is **a type of digital security camera that receives and sends video footage via an IP network** | Analog security systems |
| 4. | **smart traffic lights** | **vehicle traffic control system that combines traditional traffic lights with an array of sensors and artificial intelligence to intelligently route vehicle and pedestrian traffic** | Fiber optic video receivers |
| 5. | **condition and weather monitoring systems** | This ecosystem consists of a microcontroller .which acts as the main processing unit for the entire system and where all the sensors and devices are connected. | C,C++,etc |
| 7. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 6. | **digital signage** | electronic signage, refers to display technologies like LED walls, projection and LCD monitors to vividly display webpages. | IBM Block Storage or Other Storage Service or Local Filesystem |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List A smartphone system, which utilizes smartphone accelerometers, microphones, and GPS to detect | Technology used |

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| | | events related to the quality of the road, e.g., potholes and bumps. | |
| 3. | Scalability Architecture | Justify the prevent and reduce the number of rode related accidents and improve rode safety | Technology used |
| 4. | Data Availability | The data used to support the findings of this study are available from the corresponding author upon request. | Technology used |
| 5. | Performance | Road inspection enables clear and direct observation of the state of the road and assesses the need for repairs or modifications. | Technology used |

**References:**


http://www.who.int/roadsafety/decade_of_action/en/

https://www.who.int/violence_injury_prevention/road_safety_status/2015/en/

http://atlas.eurorap.org/

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