Customer Requirements Specification

**Speed Bump MobileApp**

**ـــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــ**

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# Document Status:

|  |  |  |
| --- | --- | --- |
| **Name** | PO\_SB\_CRS\_MobileApp | |
| **Version** | V1.3 | |
| **Status** | Proposed | |
| **Author** | MM | |
| **Date** | [30/11/2022] | |
| **Team approval** | MM |  |
| **Mentor approval** | Esraa Abdelnaby |  |
| **Final approval** | Esraa Abdelnaby |  |

# Document History:

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Author** | **Date** | **Change** |
| 1.0 | MM | [29/10/2022] | * Initial Creation |
| 1.1 | NH | [23/11/2022] | * Editing the format * Editing the requirements |
| 1.2 | MM | [24/11/2022] | * Add new requirement based on the change request |
| 1.3 | MM | [30/11/2022] | * Add new requirement based on the change request * Editing the requirement * Editing the context diagram |

# Reference Document:

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref.number** | **Doc.Name** | **Version** | **Status** |
| 1 | PO\_SB\_CR\_SpeedBumps | 1.3 | Released |

#### 

# Project Description:

## Definition:

An application through which the user can be notified about the coming speed bumps on the road and the remaining distance between the car and the bump.

## Features:

* The application is Flutter based.
* Users must sign up.
* Different pricing plans.
* Users can control the ride.
* Alerting the user with the coming speed bumps.
* Asking for permission.
* The application shall communicate with the hardware.
* Monitor HW device.
* Technical Issues reporting.

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### Key Elements:

* The app shall be Flutter based so it can be used by Android and IOS users.
* Users shall have an account to start using the app.
* The mobile app shall contain basic plan.
* The mobile app shall contain premium plan.
* The mobile app shall contain the option to start and end the ride.
* The app shall alert the user with the coming bumps.
* The app shall alert the user with the remaining distance till the bump.
* The app shall save the bump’s location on the user’s GPS screen.
* Application shall guarantee user permission to use Bluetooth, location, etc.
* The Application shall communicate with the detection device.
* In premium plan, the app shall ask the user for his/her permission to save the bumps on the ride.
* Application shall be notified by the embedded device’s issues and status.
* Users can report any issue.

# System Context:

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# CRS Requirements:

## Configuration

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| **Req\_ID** | PO\_SB\_CRS\_*001*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall contain a “Config Button” shown on the screen after successful login. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*002*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall ask the user to open the Bluetooth to start the configuration. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*003*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | If the user accept to open the Bluetooth,the app shall reach the website’s firebase to see newly sold detector device. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*004*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | If the user deny to open the Bluetooth, the app shall tell the user that "the config is denied" ,and stop the configuration. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*005*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall search for matching device’s name in the area through the Bluetooth. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*006*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | If there is a matching device in the area, the app shall connect with it. | | | |

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| **Req\_ID** | PO\_SB\_CRS\_*008*-V1.5 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | After successful connection, The app shall send device’s data to the firebase. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*009*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*001*-V1.3 |
| **Description** | After successful configuration,the app shall save the detector’s data  for future usage. | | |

## General

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| **Req\_ID** | PO\_SB\_CRS\_*001*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*001*-V1.3 |
| **Description** | The app should indeed work on both "Android" and "iOS". | | |

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| **Req\_ID** | PO\_SB\_CRS\_*002*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app must allow users to sign up with their "email" or "Facebook" accounts. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*003*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall enable user login if they already have an account. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*004*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall allow users who forget their password or decide to change it to do so. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*005*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall check the accuracy of the information when a user logs in. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*006*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*002*-V1.3 |
| **Description** | The app shall prevent email duplication while sign up process. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*007*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*003*-V1.3 |
| **Description** | The app shall let users select either a basic or premium plan. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*008*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*005*-V1.3 |
| **Description** | The app shall allow the users to start the ride after determine the current location. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*009*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*005*-V1.3 |
| **Description** | the app shall enable auto detection to the present location, If the user gives permission to access the location. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*010*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*005*-V1.3 |
| **Description** | The app shall enable users to manually add their location. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*011*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*005*-V1.3 |
| **Description** | The app shall enable users to end the ride. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*012*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*013*-V1.3 |
| **Description** | The app shall enable users to report any technical issue. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*013*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*013*-V1.3 |
| **Description** | The app shall enable users to review any issues. | | |

## Basic Plan

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| **Req\_ID** | PO\_SB\_CRS\_*014*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*003*-V1.3 |
| **Description** | The application support “monthly”,” yearly” subscription to the basic plan users. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*015*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*003*-V1.3 |
| **Description** | The app shall provide the available data of the previously saved bumps as the foundation for the detected speed bumps. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*0016*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*003*-V1.3 |
| **Description** | The app shall allow users to upgrade to “premium plan”. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*017*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*005*-V1.3 |
| **Description** | The app shall show icons of all the pervious saved bumps on the GPS screen. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*018*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*006*-V1.3 |
| **Description** | The app shall voice notify the users any speed bumps that have been recorded in historical data. | | |

## Premium Plan

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| **Req\_ID** | PO\_SB\_CRS\_*019*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*004*-V1.3 |
| **Description** | the app shall redirect the users to the website, If the users selects the premium plan. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*020*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*006*-V1.3 |
| **Description** | The app shall voice notify the users about the detected speed bumps on the road. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*021*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*006*-V1.3 |
| **Description** | The app shall pop up the icons of any bumps it detects on the GPS screen. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*022*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*007*-V1.3 |
| **Description** | The app shall notify the user of the time left before even the bump. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*023*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*008*-V1.3 |
| **Description** | The app shall save the location of the detected bumps after the users end their ride. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*024*-V1.3 | **Covers** | PO\_SB\_CR\_ MobileApp\_*009*-V1.3 |
| **Description** | The app shall ensure that the user has given permission to connect to the detecting device through Bluetooth. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*025*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*010*-V1.3 |
| **Description** | The status of the hardware shall appear in the application. | | |

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| **Req\_ID** | PO\_SB\_CRS\_*026*-V1.3 | **Covers** | PO\_SB\_CR\_MobileApp\_*012*-V1.3 |
| **Description** | If there is any issue with the embedded device the application shall be notified. | | |