Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	21 October 2022
Team ID	PNT2022TMID32480
Project Name	A new hint to transportation - Analysis of the NYC bike share system
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Data are being collected from user	By using NYC city bike provides the dataset to help with analysis, development, visualization, dashboard etc. Data is collected from these published files
FR-4	Data are being analysed	This data is used as input for creating various types of visualizations and analysis is done and a dashboard is created.
FR-5	Data Display	The dashboard is used to display the top bike used with respect to trip duration, top 10 Start Station Names with respect to customer age group, to find the customer and subscriber with gender, to find total number of trips & calculating the number of bikes used by respective age groups.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This dashboard provides an easily understandable report which facilitates many people and tourists who use bicycles to complete their work and enjoy themselves. Reduced vehicle emissions, reduces energy consumption, improve health benefits, financial savings for individuals, reduced congestion and fuel consumption are some benefits of Bicycle sharing systems.
NFR-2	**Security**	The citi bike usage data is secured with appropriate caution as well as crucial decisions will be made

		based on this data. Access to data and visualisation reports are restricted.
NFR-3	**Reliability**	This analysis provides a reliable and an efficient way to grasp on the performance of this bike sharing system in the year 2018. It makes use of the available data and gives accurate data visualizations that can be used to improve the bike sharing system
NFR-4	**Performance**	Performance of bike sharing system is defined as operational efficiency and spatial effectiveness of bike sharing system. The operational efficiency of bike sharing system aims at understanding the characteristics of public bike users, and evaluating the conditions of bike lanes from the perspective of public bike users. The spatial effectiveness of bike sharing system dashboard aims at analysing the characteristics of bike stations, and accessibility between bike stations and other facilities.
NFR-5	**Availability**	A bicycle-sharing system is a shared transport service where bicycles are available for shared use by individuals for a short-term at low or zero cost. The programs themselves include both docking and dock less systems, where docking systems allow users to borrow a bike from a dock and return at another dock within the system and the dock less systems, which offer a node-free system relying on smart technology. In either format, systems may incorporate Smartphone web mapping to locate available bikes.
NFR-6	**Scalability**	This analysis presents evidence of the possible contribution of bike sharing systems to a more resilient transport system, as it can quickly provide alternative transport options to urban residents. As more data becomes available, particularly in other areas with identically comprehensive bike sharing systems, a clearer picture of the role of this transport mode in these emergency situations can be better evaluated by this analysis and provide results with an increased accuracy.