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

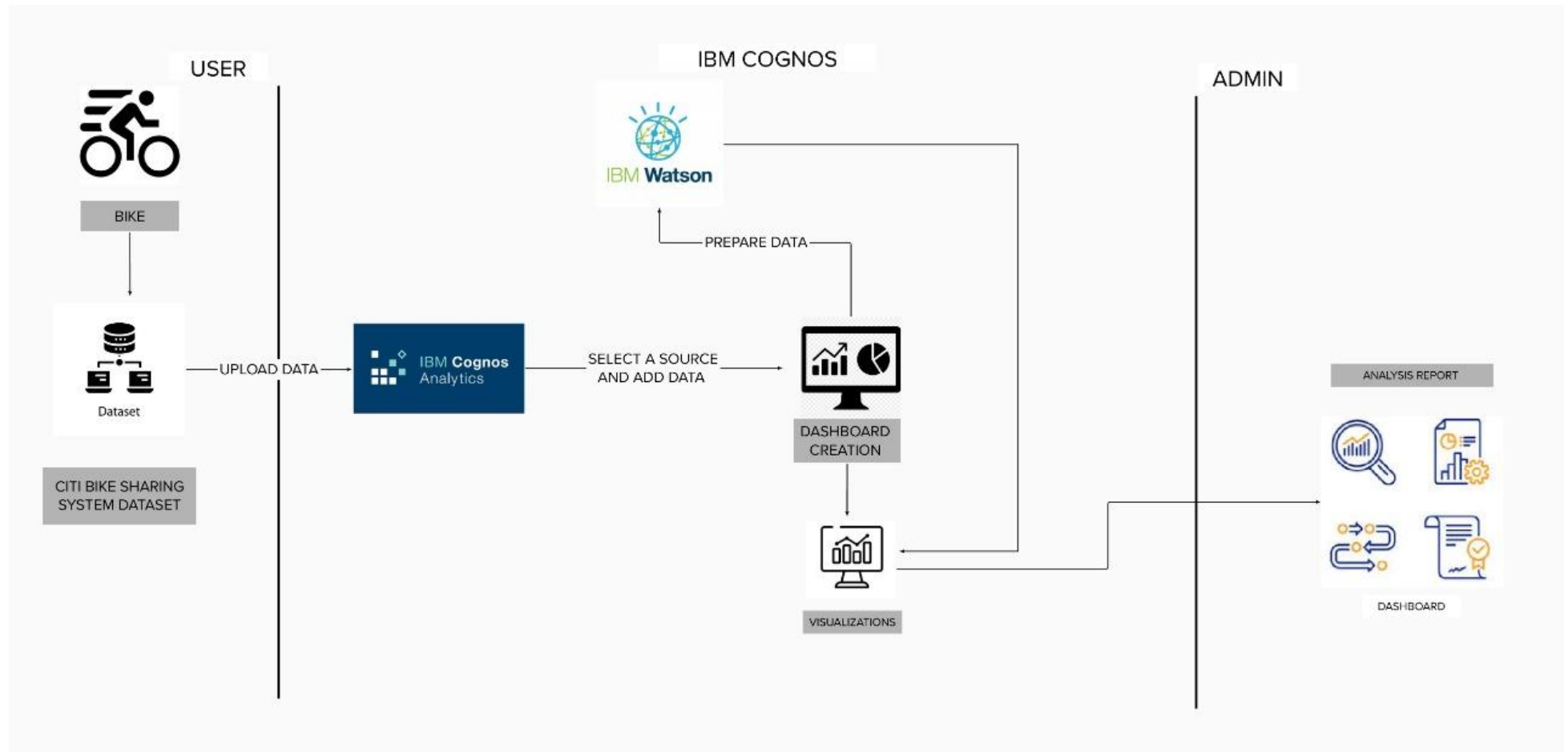| Date	15th October 2022
Team ID	PNT2022TMID23401
Project Name	A new hint to transportation - Analysis of the NYC bike share system
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	IBM cognos Analytics- Reporting user interface	Cognos Analytics portal, Cognos Analytics Reporting
2.	Application Logic-1: Presentation Layer	It is the user interface of the application, where the end user interacts with the application. Its main purpose is to display information to the user.	IBM Cognos - Dashboard
3.	Application Logic-2 : Application Tier	Information collected in the presentation tier is processed.Jupyter Notebook allows users to compile all aspects of a data project in one place making it easier to show the entire process of a project. Through the application, users can create data visualizations and other components of a project to share with others via the platform.	Jupyter Notebook (Python)
4.	Analytics tool	IBM Cognos Analytics integrates reporting, modeling, analysis, dashboards, stories, and event management so that we can understand organization data, and make effective business decisions.	IBM Cognos Analytics
5.	Services	Watson Assistant lets you build conversational interfaces into any application, device, or channel. Common applications include virtual agents and chat bots that can integrate and communicate on any channel or device.	IBM Watson

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used : IBM Watson Studio, Cognos Analytics	IBM Cognos platform
2.	Security Implementations	Security / access controls implemented by the use of Security Access Manager	IBM security service
3.	Scalable Architecture	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	IBM Cognos
4.	Availability	This report is platform independent and can be accessed on almost every platform	IBM Cognos
5.	Performance	The effectiveness of bike sharing system dashboard aims at analyzing the characteristics of bike stations, and accessibility between bike stations and other facilities. The evaluation results can be used to improve the public bicycle sharing program.	IBM Cognos