A NEW HINT TO TRANSPORTATION-ANALYSIS OF NYC BIKE SHARE SYSTEM

PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP (NAALAIYA THIRAN)

A PROJECT REPORT

Submitted by

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in partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

In

COMPUTER SCIENCE AND ENGINEERING

ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY
PALKULAM

ANNA UNIVERSITY: CHENNAI 600 025

NOVEMBER 2022

BONAFIDE CERTIFICATE

Certified that this project report" **A NEW HINT TO TRANSPORTATION-ANALYSIS OF NYC BIKE SHARE SYSTEM**" is the bona fide work of "**JACKSON ANTONY (963319104027), AJMAL BAIJU (963319104009), EBIN P JOHN (963319104024), HEBRONE EDISON (963319104026), RIJU PAUL (963319104050)"** who carried out the project work under my supervision.

SIGNATURE

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CSE department,

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Anjugramam, Kanyakumari.

SIGNATURE

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ACKNOWLEDGEMENT

We acknowledge with great gratitude to all those who helped us to make this project great success. At the outset, we express our thank to the Almighty GOD who has blessed with a healthy situation and has bestowed upon us the required skill to pursue this course.

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LIST OF CONTENTS

ABSTRACT

Bike-sharing systems have been deployed in many major cities around the world today. Bike sharing systems provide great advantages as a mean of urban public transportation facilitating a green solution for daily commuters and tourists. Users tend to use more often this type of transportation for their daily needs. The key to success for such systems is the efficient distribution of bikes among the bike stations in order to satisfy high user demands. Existing schemes in the literature focus either on predicting the bike station demand and modelling user mobility mainly focusing on making cycling more accessible to people, or on minimizing the costly and time-consuming movement of bikes among the stations while the system is in use. In this work our objective is to gain insights into the usage of bike sharing systems and in particular the pick-up and drop-off operations. Our goal is to get a better understanding of the bike mobility patterns and identify the key factors that lead to imbalances in the distribution of the bikes at the stations, towards creating effective and sustainable bike sharing systems. One of the problems in bicycle sharing systems design is the estimation of the potential demand to the service, especially in countries where this type of systems is not yet implemented. The main objective of this methodology is to relate the demand of bike-sharing systems with external characteristics that affects the bicycle usage in order to obtain its territorial distribution.

LIST OF FIGURES

LIST OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION
NYC	New York City
DFD	Data Flow Diagram

CHAPTER-1

INTRODUCTION

Bike-sharing systems have been deployed in many major cities around the world today. Bike sharing systems provide great advantages as a mean of urban public transportation facilitating a green solution for daily commuters and tourists. Users tend to use more often this type of transportation for their daily needs. The key to success for such systems is the efficient distribution of bikes among the bike stations in order to satisfy high user demands. Existing schemes in the literature focus either on predicting the bike station demand and modeling user mobility mainly focusing on making cycling more accessible to people, or on minimizing the costly and time-consuming movement of bikes among the stations while the system is in use. In this work our objective is to gain insights into the usage of bike sharing systems and in particular the pick-up and drop-off operations. Our goal is to get a better understanding of the bike mobility patterns and identify the key factors that lead to imbalances in the distribution of the bikes at the stations, towards creating effective and sustainable bike sharing systems. One of the problems in bicycle sharing systems design is the estimation of the potential demand to the service, especially in countries where this type of systems is not yet implemented. The main objective of this methodology is to relate the demand of bike-sharing systems with external characteristics that affects the bicycle usage in order to obtain its territorial distribution.

1.1 PROJECT OVERVIEW

The purpose of this project is for developing and creating a larger cycling population, increasing transit use, decreasing greenhouse gases, and improving public health. This project is to analyse the data given as to visualize and create a report on it. Our goal is to get a better understanding of the bike mobility patterns and identify the key factors that lead to imbalances in the distribution of the bikes at the stations, towards creating effective and sustainable bike sharing systems.

1.2 PURPOSE

To provide adequate knowledge and skills necessary for critical thinking regarding the travelling and safety of the customers and collect the data upon it and make visualisations according to it. NYC bike share system is a subset of data analytics that uses both historic and current data to produce actionable insights, improve decision making and optimize outcomes within the bike sharing facilities. It is not only for benefits but also for the customers experience and their feedbacks. Data analytics in the bike sharing system, the industries are responsible with their data that collected by them. This means that they have become a site of interest for those working with big data, or large pools of unstructured data. As a still developing field, big data analytics in this sector offers the potential to reduce operation costs, improve efficiency, and treat the customers with very good services.

Bicycle ridership has grown fourfold in the last 10 years and biking is the cities fastest growing transportation option for New Yorkers looking for a fast, safe, convenient and affordable way to get around.

CHAPTER-2

LITERATURE SURVEY

2.1 EXISTING SYSTEM

TITLE : BIKE SHARE SYSTEM

AUTHOR : ELLIOT FISHMAN

Bikeshare has grown rapidly in the past decade. Although the concept has been around since the 1960s, the number of cities offering bikeshare has increased from just a handful in the late 1990s to over 800 at the time of publication (Meddin & DeMaio, 2015). Contemporary bikeshare programmes (BSPs) refer to the provision of bikes, which can be picked up and dropped off at self-serving docking stations. Typically, trips are of a short duration (less than 30 min). The bicycles usually contain technologies that allow the programme operator to track their docking station location and some are equipped with a global positioning system (GPS) (Davis, 2014). Payment is usually by credit card, and this also acts as a form of security and eliminates the anonymity that led to the demise of earlier, less technologically advanced BSPs (DeMaio, 2009; Shaheen, Guzman, & Zhang, 2010). The global growth of BSPs has spurred an enthusiastic response from transport researchers, which has led to a burgeoning of papers examining bikeshare. Who uses bikeshare and why? What factors prevent others from choosing bikeshare and what might encourage them to do so? What impact has bikeshare had on reducing car use? What do the data tell us about bikeshare and road safety? This paper sets out to capture critical themes emerging from recently published literature on these and other bikeshare topics. The overall aim is to provide researchers, bikeshare operators and government policy makers with a distillation of the salient findings from bikeshare research. It is hoped such a paper will enhance the capacity of the rapidly growing bikeshare sector to capitalise on recent research, thereby enhancing the performance of new and existing BSPs.

TITLE: Generations of Bike Share

AUTHOR: Davis, L. S

Some researchers have categorised the evolution of bikeshare systems into four 'generations' (Parkes, Marsden, Shaheen, & Cohen, 2013). The White Bike programme described above is known as a firstgeneration bikeshare 'system', characterised by no payment or security functions. Second-generation programmes involved a coin deposit system (similar to trolleys at a supermarket or airport). The first largescale second-generation programme launched in Copenhagen in 1995, but the anonymity exposed the system to theft (DeMaio, 2009). The problems experienced by these first two generations of bikeshare led to the development of third-generation systems, which are characterised by dedicated docking stations (in which bicycles are picked up and returned), as well as automated credit card payment and other technologies to allow the tracking of the bicycles (Shaheen, Cohen, & Martin, 2013). It is these elements, in combination with growing public policy interest in cycling (Pucher & Buehler, 2012), that have enabled the rapid growth of BSPs globally (Shaheen & Guzman, 2011). The features of fourth-generation systems are not quite so clear, but are said to potentially include dockless systems, easier installation, power assistance and transit smartcard integration. In the past decade, the number of cities operating a BSP has increased from 13 in 2004 to 855 as of 2014, as illustrated in Figure 1. The global bikeshare fleet is estimated at 946 000 bicycles, of which 750 500 are in China (Meddin & DeMaio, 2015). China also has more than double the number of bikeshare systems as the next closest country, at 237, compared to 114 in Italy and 113 in Spain. The USA, a relative latecomer to bikeshare, has 54 cities offering bikeshare (Meddin & DeMaio, 2015). In 2010, Oliver O'Brien began visualising bikeshare activity in different cities, making this available via the website http://oobrien.com/bikesharemap/. This became the most efficient method of examining the number of bikes available and the number of bikes in use. Interestingly, an analysis of these data reveals that the number of bikes available is often considerably lower than what bikeshare operators report. Figure 2 uses data collected via the aforementioned bikeshare map for selected cities, showing the maximum number of observed bicycles. European systems tend to be larger than North American systems and some have suggested that this may be due to a tendency for European systems to be totally or largely funded through

advertising, as well as cycling participation being higher in most European countries (Parkes et al., 2013).

TITLE : History and Recent Growth

AUTHOR: E FISHMAN

In 1965 Witte Fietsen (White Bikes) was launched in Amsterdam (Davis, 2014). This programme consisted of white painted bicycles on the street, free for people to use. The total absence of security mechanisms led to theft and vandalism, and a rapid demise of Witte Fietsen (DeMaio, 2009). Bikeshare, as a concept, experienced little growth after the failure of the White Bike programme, until technological advancements emerged designed to reduce the threat of vandalism and theft.Some researchers have categorised the evolution of bikeshare systems into four 'generations' (Parkes, Marsden, Shaheen, & Cohen, 2013). The White Bike programme described above is known as a first-generation bikeshare 'system', characterised by no payment or security functions. Second-generation programmes involved a coin deposit system (similar to trolleys at a supermarket or airport). The first large-scale second-generation programme launched in Copenhagen in 1995, but the anonymity exposed the system to theft (DeMaio, 2009). The problems experienced by these first two generations of bikeshare led to the development of third-generation systems, which are characterised by dedicated docking stations (in which bicycles are picked up and returned), as well as automated credit card payment and other technologies to allow the tracking of the bicycles (Shaheen, Cohen, & Martin, 2013). It is these elements, in combination with growing public policy interest in cycling (Pucher & Buehler, 2012), that have enabled the rapid growth of BSPs globally (Shaheen & Guzman, 2011). The features of fourth-generation systems are not quite so clear, but are said to potentially include dockless systems, easier installation, power assistance and transit smartcard integration (Parkes et al., 2013).

2.2 REFERENCES

1.NYC Department of City Planning,Transportation Division, " The New York City Bicycle Survey," May 2007

2.Confessore, Nicholas &Kate Hammer, "Drunken Driver kills Rider on Bicycle path, Police Say:" The New York City Times,3 December 2006

3. New York City Depts. Of Health and Mental Hygiene, Parks and Recreation, Transportation, and the New York City Police Department. "Bicycle Fatalities and Serious Injuries in New York City, -" 1996-2005

4. Jacobsen, P.L., Safety in numbers: more walkers and bicyclists, safer walking and bicycling. Inj Prev, 2003

5. Freudenberg, N., S. Galea, and D. Vlahov, eds. Cities and the Health of the Public. ed. , Vanderbilt University Press: Nashville

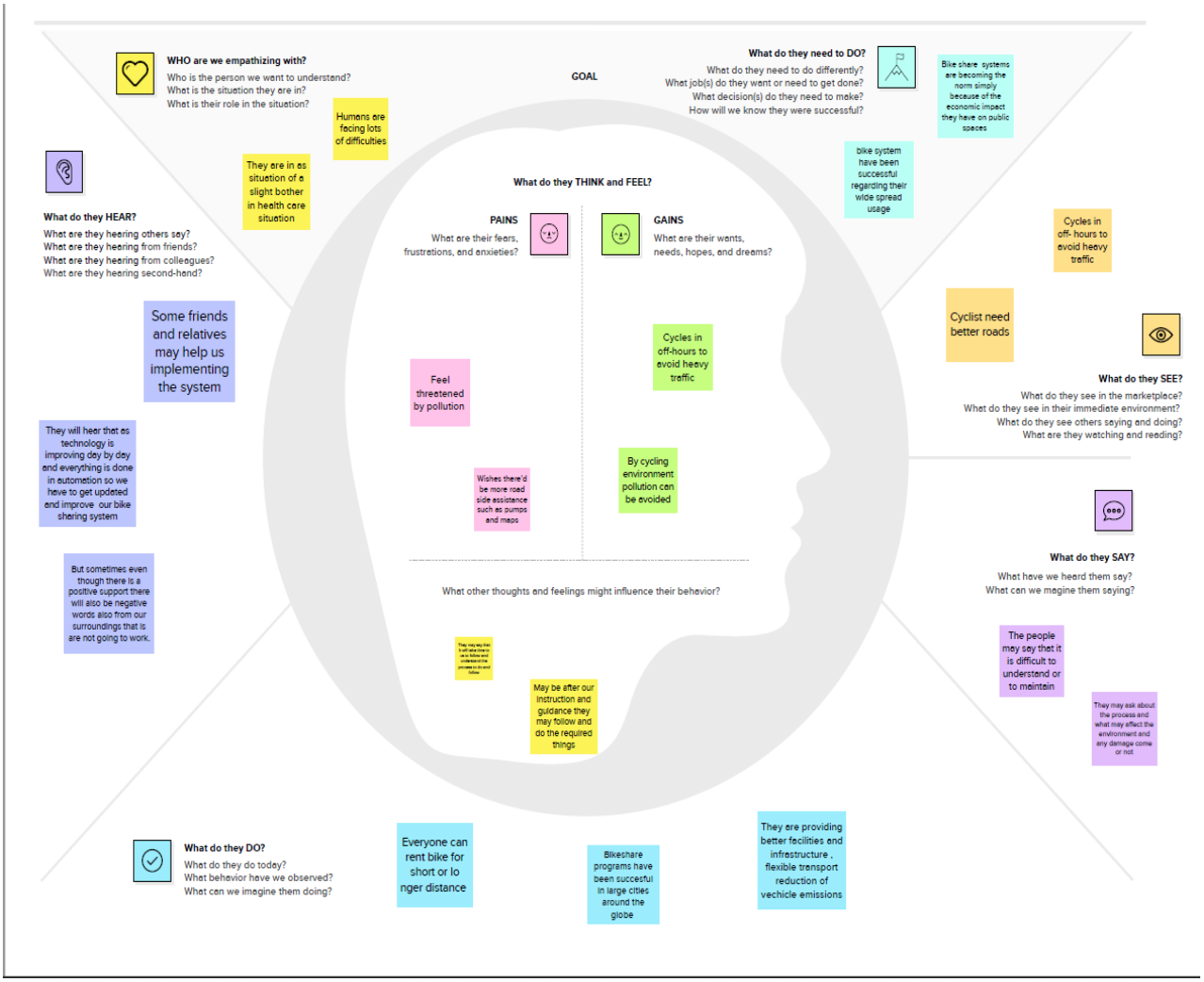
2.3 PROBLEM STATEMENT DEFINITION

The goal of this analysis is to create an operating report of Citi Bike for the year 2018.In this the data of the given time period needs to be visualised and analysed. This project is to analyse the data given as to visualize and create a report on it. Our goal is to get a better understanding of the bike mobility patterns and identify the key factors that lead to imbalances in the distribution of the bikes at the stations, towards creating effective and sustainable bike sharing systems. Customers can access the bicycles given by the industries as they can use it to travel from one place another, Citi Bike is one of the providers who put their effort in making their city unpolluted and customers can use the bikes and use them as per the time period given. The scope of the project is to make the intuitive dashboard ,report and story to present it to the customer's perspective to make them understand in better .Apart from the length of usage of the bikes provided, the data collected as of each time period that contain number of trips, customer's gender, trip duration, start station names, end station names and also age of the customers and it can be used to analyse the various fields related to bike trip using various visualisation plots.

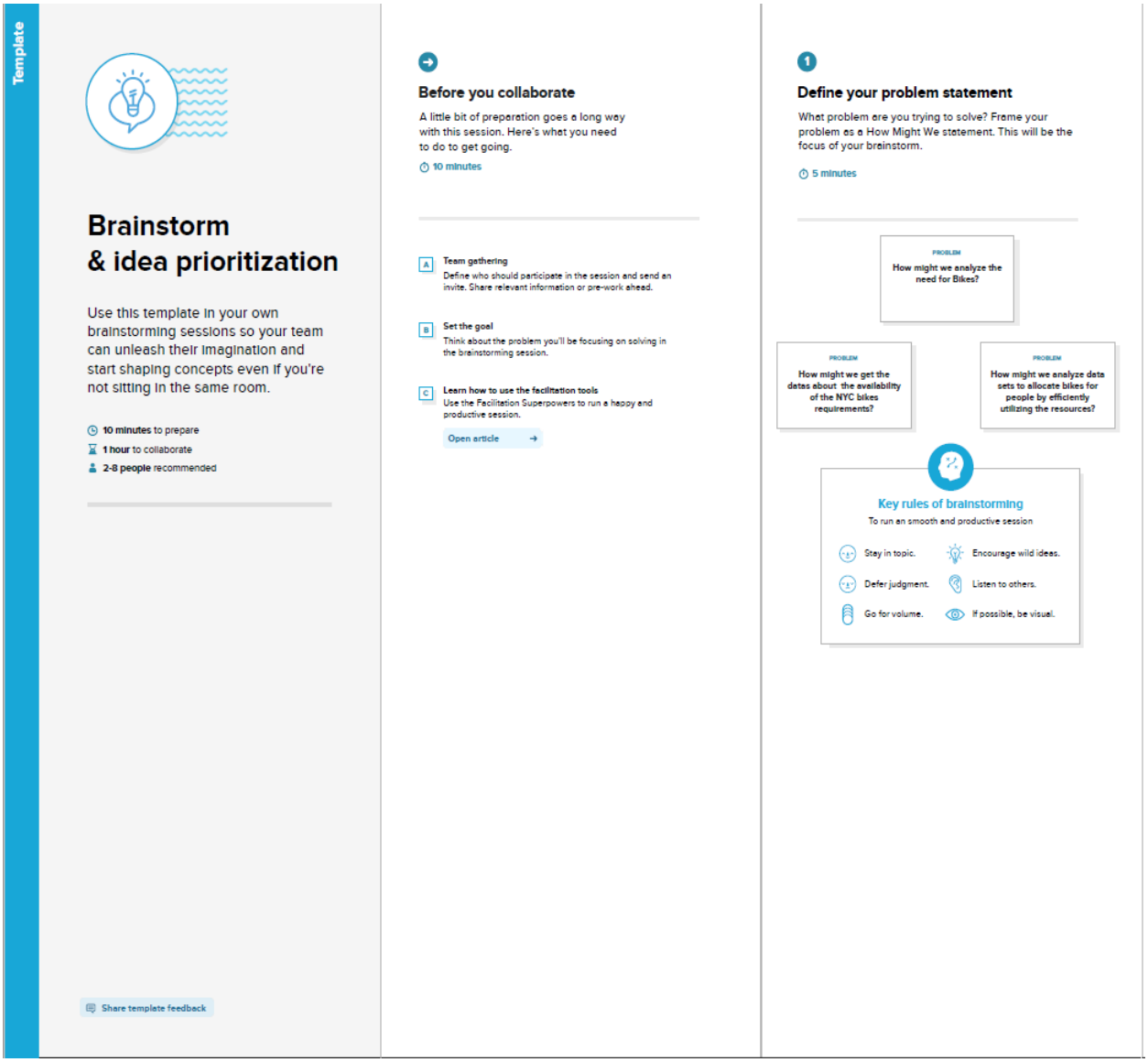
CHAPTER-3

IDEATION AND PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS



3.2 IDEATION & BRAINSTORMING



3.3 PROPOSED SOLUTION

PROJECT DESIGN PHASE-1

Proposed Solution Template

Date	24th September 2022
Team ID	PNT2022TMID35008
Project Name	A new hint to transportation-Analysis of the NYC bike share system
Maximum Marks	2 Marks

Proposed Solution Template:

Project Team shall fill the following information in proposed solution template

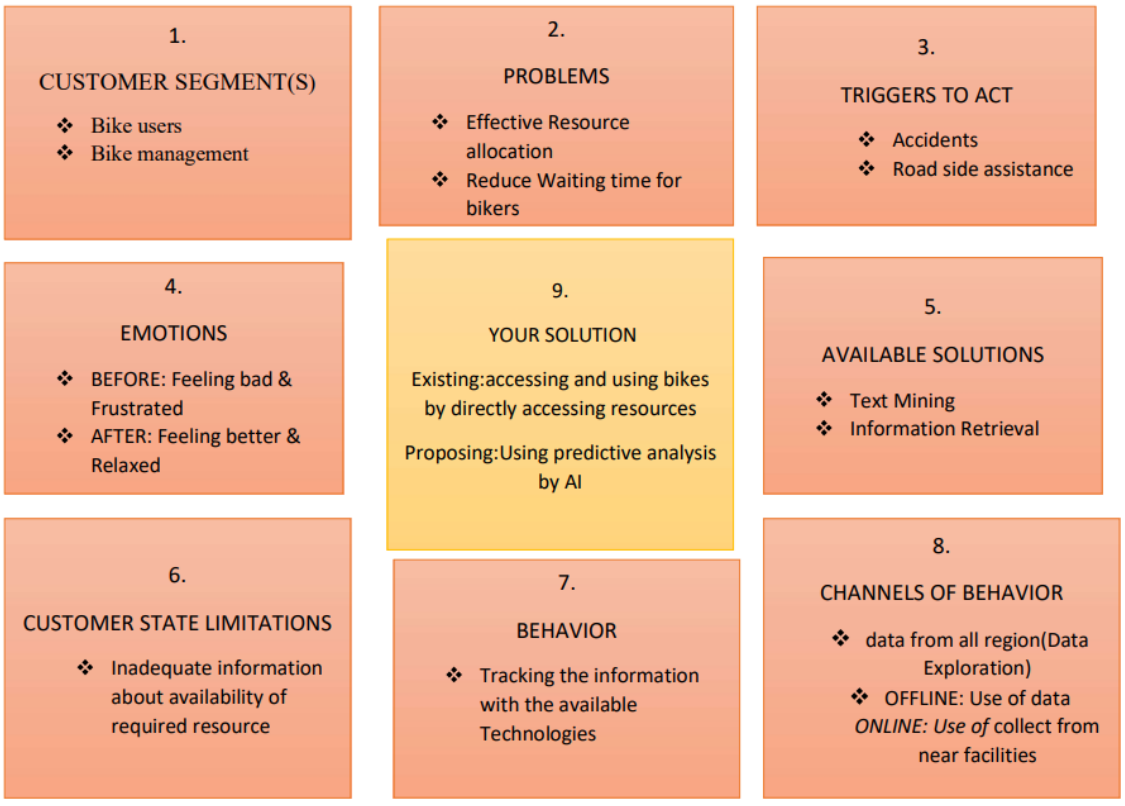
S.N0	Parameter	Description
1.	Problem Statement (Problem to be Solved)	During the covid-19 pandemic , we have faced one of the difficult times of our life . Everyone seeks to survive from the great disaster . At the time of pandemic , everyone try to avoid travelling and thus reduced the usage of the NYC bike system.
2.	Idea/ Solution description	Predictive analytics can create customes journey dashboards and travelling journey that help us to know about the patients period of travel. It improves the effective allocation of customers and other resources.

3.4 PROBLEM SOLUTION FIT

PROJECT DESIGN PHASE-1

PROBLEM SOLUTION FIT

Date	30th September 2022
Team ID	PNT2022TMID35008
Project Name	A new hint to transportation-Analysis of the NYC bike share system
Maximum Marks	2 Marks



CHAPTER-4

REQUIREMENT ANALYSIS

4.1FUNCTIONAL REQUIREMENTS

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

Date	30th October 2022
Team ID	PNT2022TMID35008
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**	User can signup for an annual membership online , or buy a 24-Hour or 7-Day pass at any station.
FR-2	**User Confirmation**	User can sign into the NYC Bike app or pick up a key to unlock thousands of bikes across Manhattan , Brooklyn , Queens, The Bronx and Jersey City.
FR-3	**Interoperability**	With your membership you can take as many rides as you want while your membership is active , and the first 45 minutes of each ride are included in your plan when you ride a classic bike.
FR-4	**Accuracy**	The far majority of the rides were in the very busy Manhattan Island , taken by male users during morning and evening rush hours.
FR-5	**Compliance**	If you go over the time limit , overtime fees apply. The fees increase every additional half hour or 45 minutes the bike is out.
FR-6	**Concise**	Bike sharing systems are fleets of specially designed , heavy-duty , very durable bikes that are locked into a network of docking stations sited at regular intervals around a city.

4.2 NON-FUNCTIONAL REQUIREMENTS

Non-functional Requirements:

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

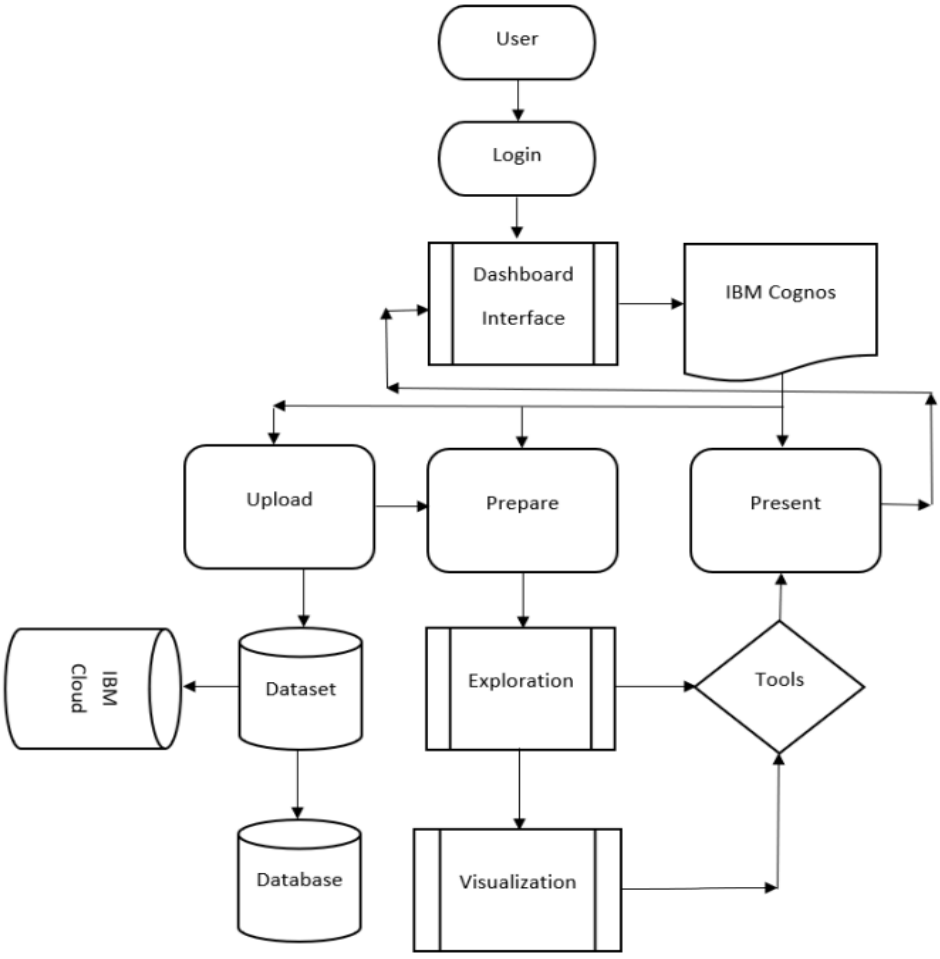
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	User can sign into the NYC Bike app or pick up a bike at any station and return it to any station.
NFR-2	**Security**	No need to worry about storage , maintenance , theft; it's a carefree way to ride.
NFR-3	**Reliability**	The user can find station locations on the NYC Bike website , and at any Bike station.
NFR-4	**Performance**	A new NYC Bike app recently launched , with features to make rides smoother and more convenient. The members will receive a remainder email 5 days before their next automatic monthly membership payment so that they can adjust their membership if needed.
NFR-5	**Availability**	The availability of bikes and empty docks is a useful metric for any bike share system , bikes must be available when and where members want to use them.
NFR-6	**Scalability**	NYC bike system has become the largest bike sharing system in the USA with 12,000 bikes. They operate across 60 neighbourhoods in New York City through 750 stations.

CHAPTER-5

PROJECT DESIGN

5.1DATA FLOW DIAGRAMS

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



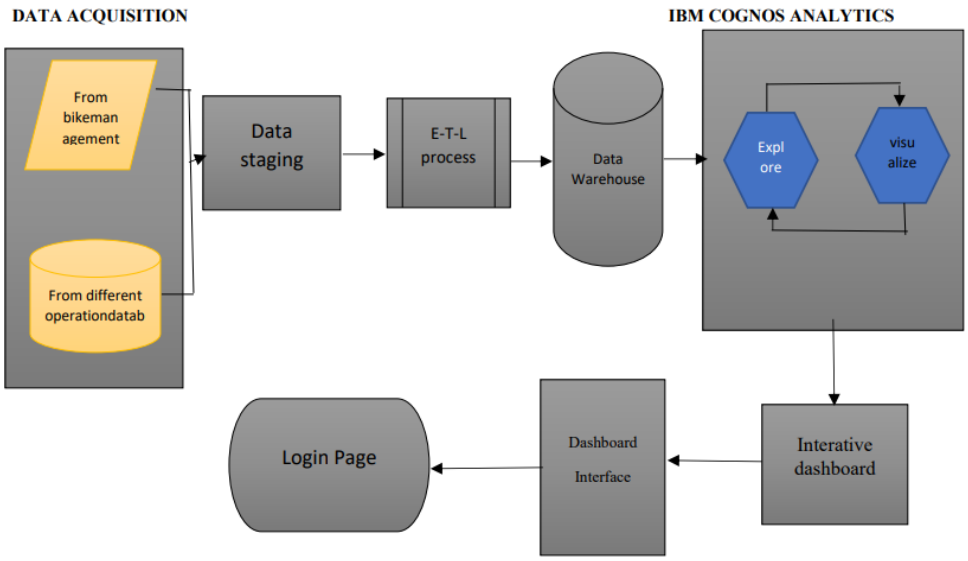
5.2 USER STORIES

User Stories

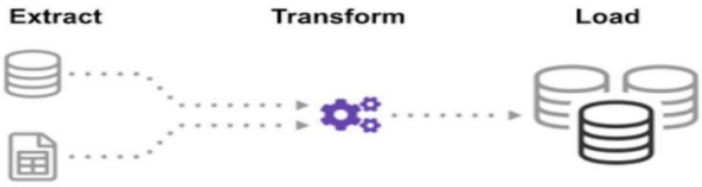
Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the dashboard by entering my email, and password, and confirming my password.	I can access my account in the dashboard	High	Sprint-1
		USN-2	As a user, I will receive a confirmation email once I have registered for the dashboard	I can receive a confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the dashboard through Social Media	I can register & access the dashboard with Social Media Login	Low	Sprint-2
		USN-4	As a user, I can register for the dashboard through Gmail	I can register and access dashboard with Gmail	Medium	Sprint-2
	Login	USN-5	As a user, I can log into the application by entering email & password	I can login to the account in my email login.	High	Sprint-2
	Dashboard	USN-6	As a user ,I can use my account in my dashboard for uploading dataset.	I can login to the account for uploading dataset.	Medium	Sprint-3
Customer (Web user)	Website	USN-7	As a user ,I can use my dashboard in website	I can login into the dashboard by visiting website.	Medium	Sprint-3
Customer Care Executive		USN-8	As a user ,I can contact Customer care Executive for my login.	I can contact customer executive for my login.	High	Sprint-4
Administrator		USN-9	As a user ,I can contact administrator for my queries.	I can contact administrator for solving my queries.	High	Sprint-4
Exploration	Dashboard	USN-10	As a user, I can prepare data by using Exploration Techniques.	I can prepare data by using Exploration Techniques.	High	Sprint-3
Presentation	Dashboard	USN-11	As a user, I can Present data in my dashboard.	I can present data by using my account in dashboard.	High	Sprint-4
Visualization	Dashboard	USN-12	As a user, I can Prepare Data by using Visualization Techniques.	I can prepare data by using Visualization Techniques.	High	Sprint-3

5.3 SOLUTION & TECHNICAL ARCHITECTURE



ETL PROCESS (DATA INTEGRATION PROCESS):



CHAPTER-6

PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement	User Story Number	User story/task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a Bike provider I can create account in IBM cloud and the data are collected	20	High	2 Members
Sprint-2	Analyse	USN-2	As a bike provider all the data that are collected is cleaned and uploaded in database or IBM cloud	20	Medium	2 Members
Sprint-3	Dashboard	USN-3	As a bike provider I can use my account in my dashboard for uploading dataset.	10	Medium	2 Members
Sprint-3	Visualization	USN-4	As a bike provider I can prepare data for visualization	10	High	2 Members
Sprint-4	Visualization	USN-5	As a bike provider I can represent data in my dashboard	10	High	2 Members
Sprint-4	Prediction	USN-6	As a bike provider I can predict the	10	High	2 Members

			length of usage of bikes			

6.2 SPRINT DELIVERY SCHEDULE

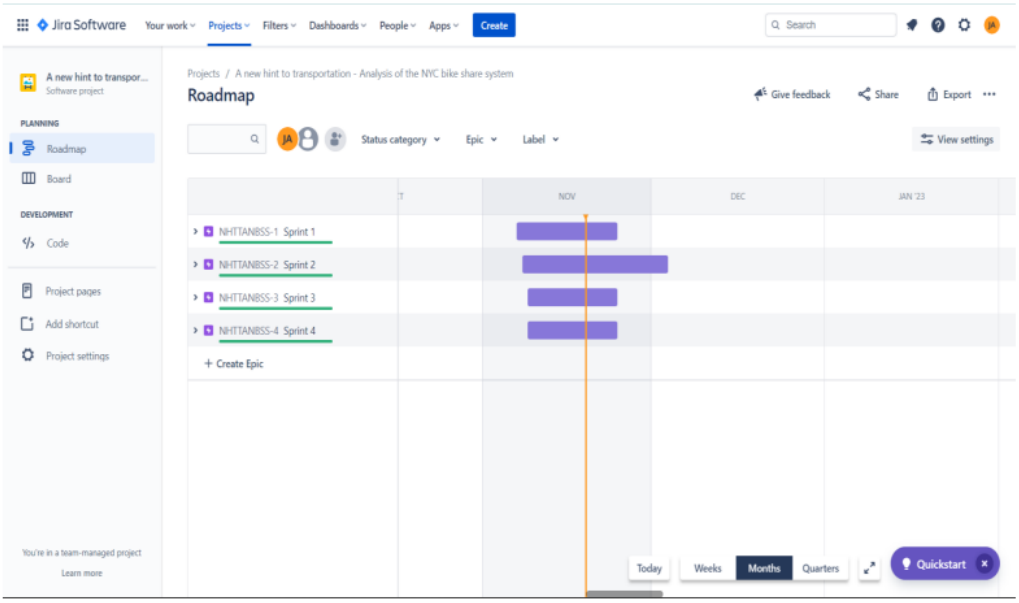
MILESTONES	TASKS
MILESTONE - 1	Data Collecting process (Datasets)
MILESTONE - 2	Required Datasets are uploaded on the IBM Cognitive Platform.
MILESTONE - 3	Data Exploration and Data Visualization
MILESTONE - 4	To Create a Interactive Dashboard.
MILESTONE - 5	Display the Insights in the Dashboard
MILESTONE - 6	Construct a Standardized Data Set and use the needed data with the Assistance of a Python Program
MILESTONE - 7	Use of different algorithm with Google Colab to achieve the desired result with more accuracy.
MILESTONE - 8	Making the output simpler and easier to understand and more efficient.
MILESTONE - 9	Deployed in the Github and waiting to review it .

6.3 REPORTS ON JIRA

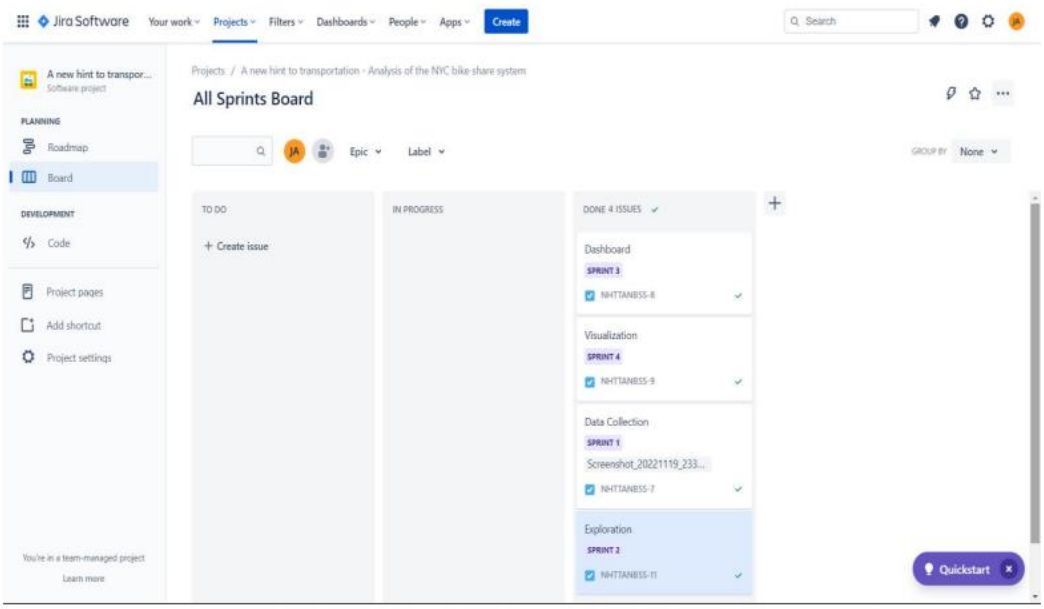
JIRA SOFTWARE

Team ID	PNT2022TMID35008
Project Name	A new hint to transportation- Analysis of NYC bike share system

ROADMAP



BOARD


Jira Software
Your work
Projects
Filters
Dashboards
People
Apps
Create
Search
A new hint to transpor...
Software project
PLANNING
Roadmap
Board
DEVELOPMENT
Code
Project pages
Add shortcut
Project settings
You're in a team-managed project
Learn more
Projects / A new hint to transportation - Analysis of the NYC bike share system
All Sprints Board
Epic
Label
GROUP BY
None
TO DO
+ Create issue
IN PROGRESS
DONE 4 ISSUES
Dashboard
SPRINT 3
NHTTANBSS-8
Visualization
SPRINT 4
NHTTANBSS-9
Data Collection
SPRINT 1
Screenshot_20221119_233...
NHTTANBSS-7
Exploration
SPRINT 2
NHTTANBSS-11
Quickstart

CHAPTER-7

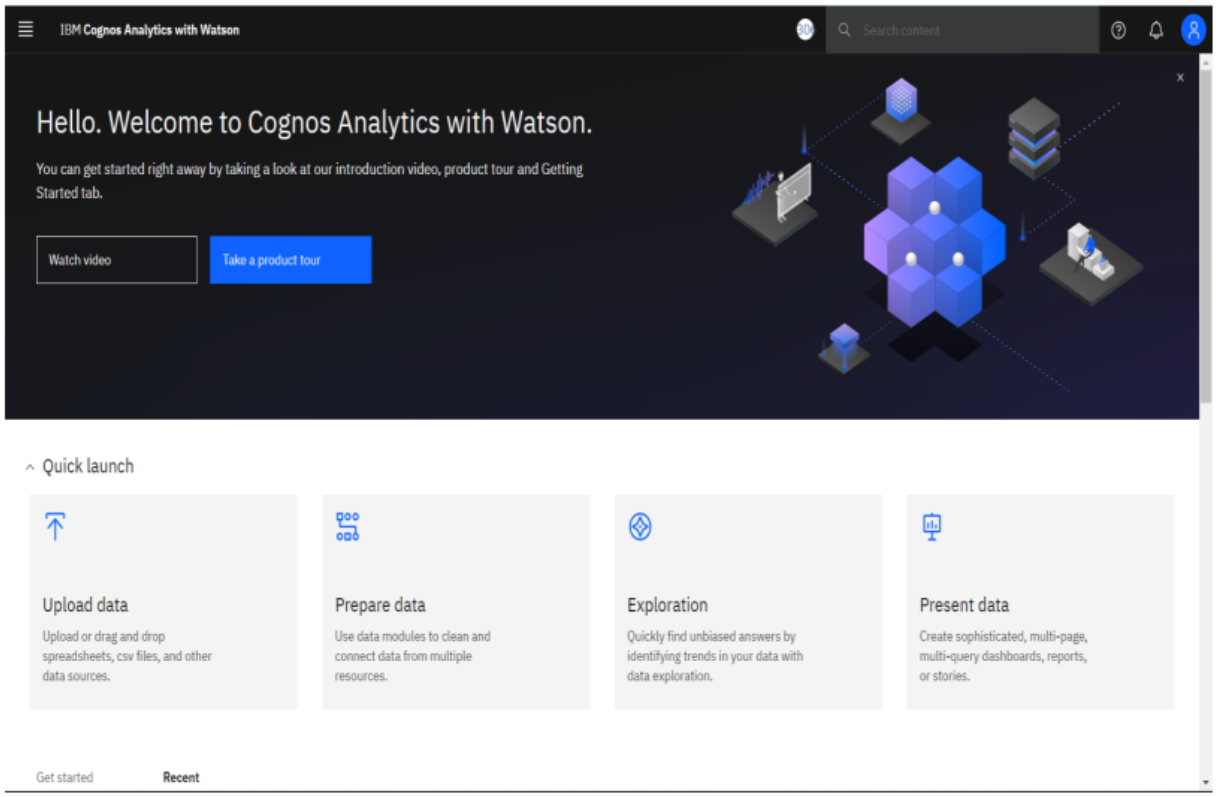
CODING & SOLUTIONING

7.1 FEATURE 1

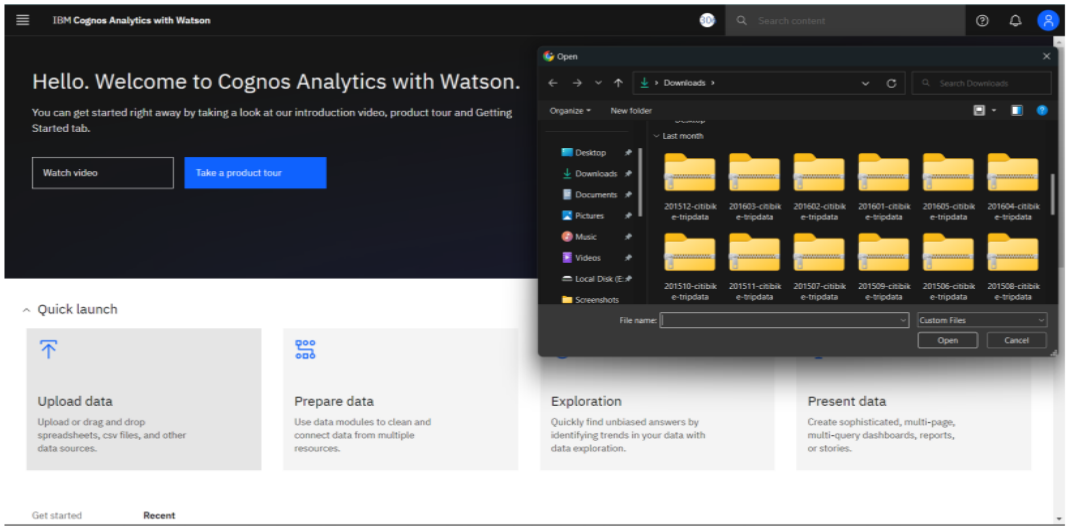
Sprint-1:

- Data Collection
- Data Preparation

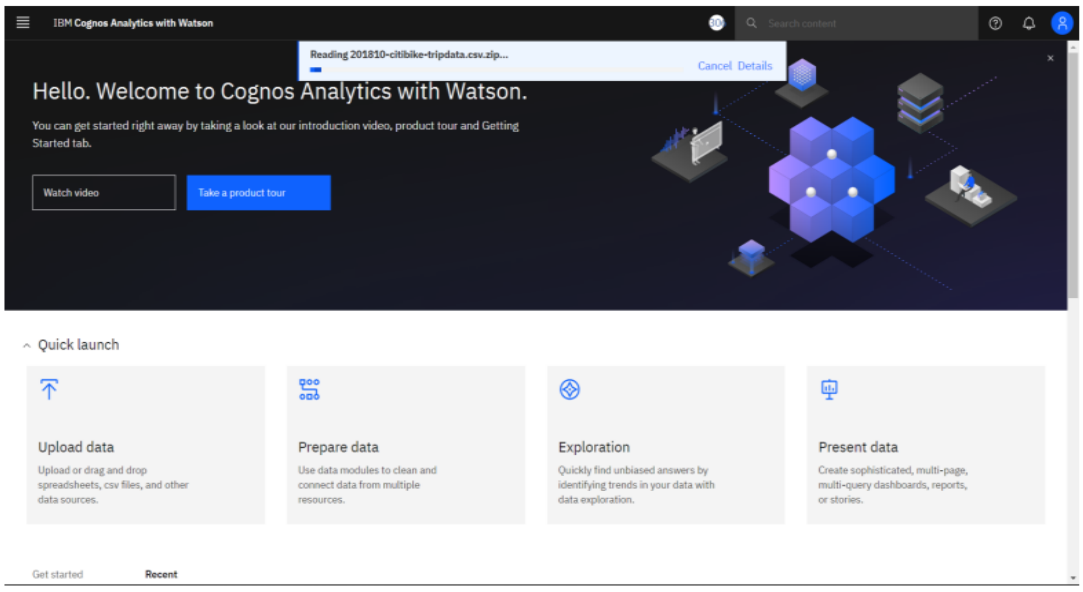
Signing into IBM Cognos Tool:



Selecting the dataset to upload into the Cognos:



Uploading the dataset to perform the preparation and visualization:



7.2 FEATURE 2

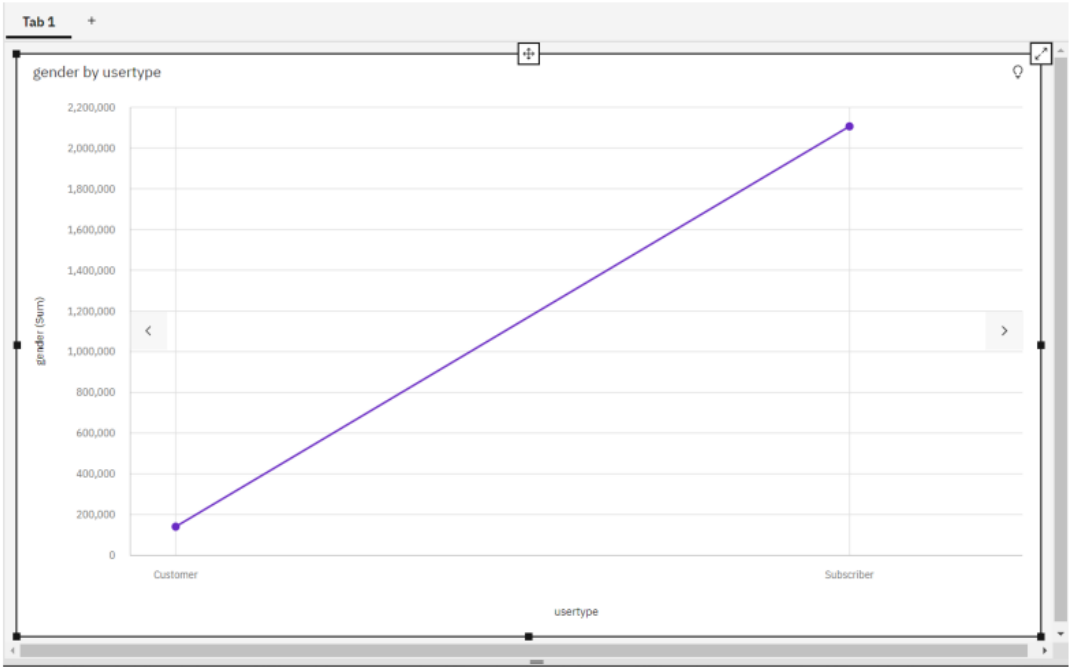
Sprint-2:

- Data Exploration

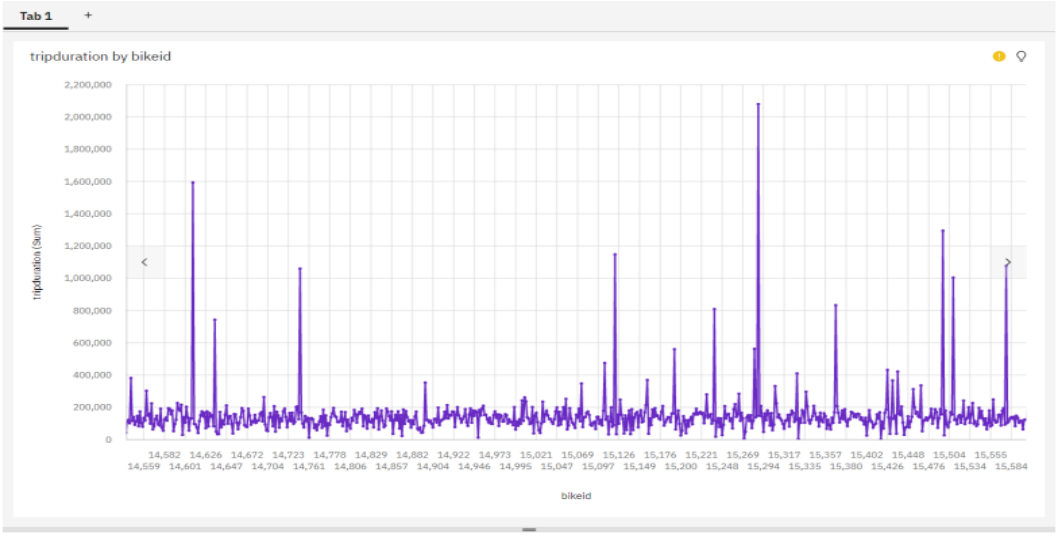
Data Exploration – 1

Total Number of Trips

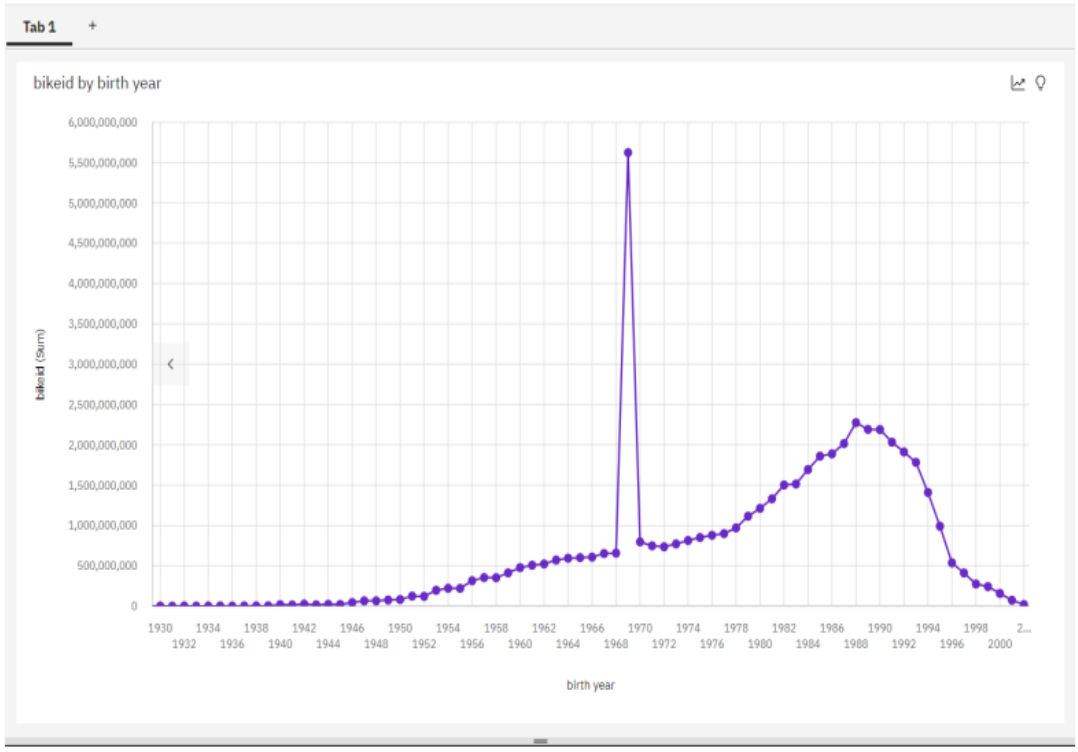
Customer and subscriber with gender :



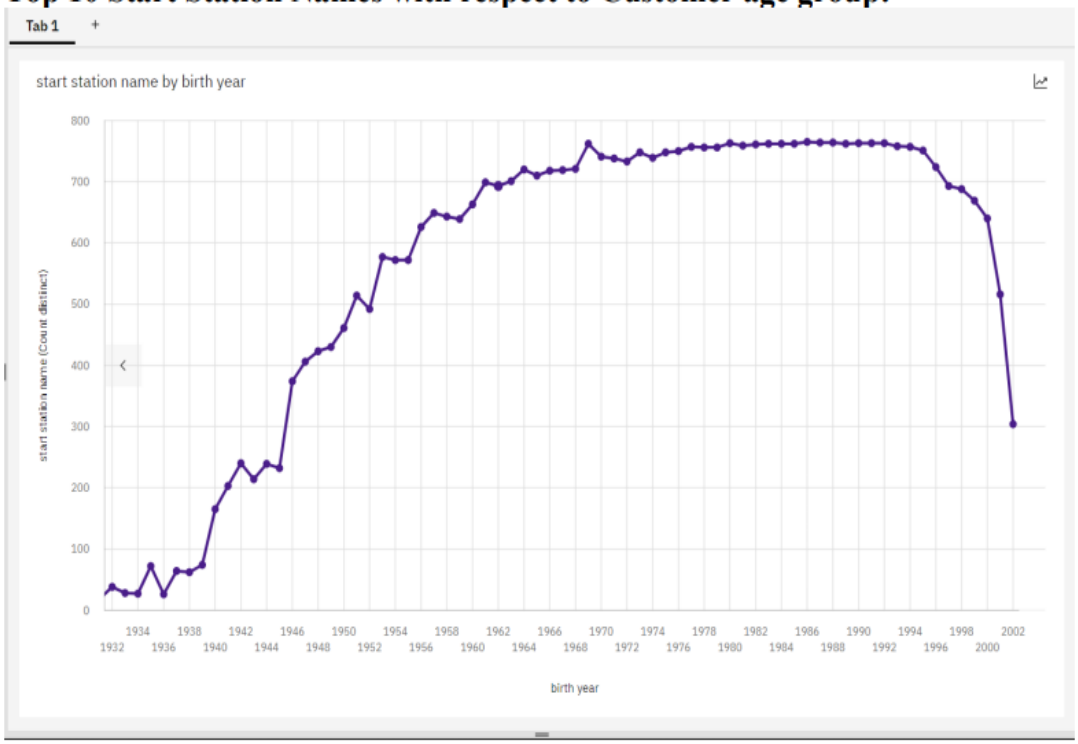
top bike used with respect to trip duration:



the number of bikes used by respective age groups:



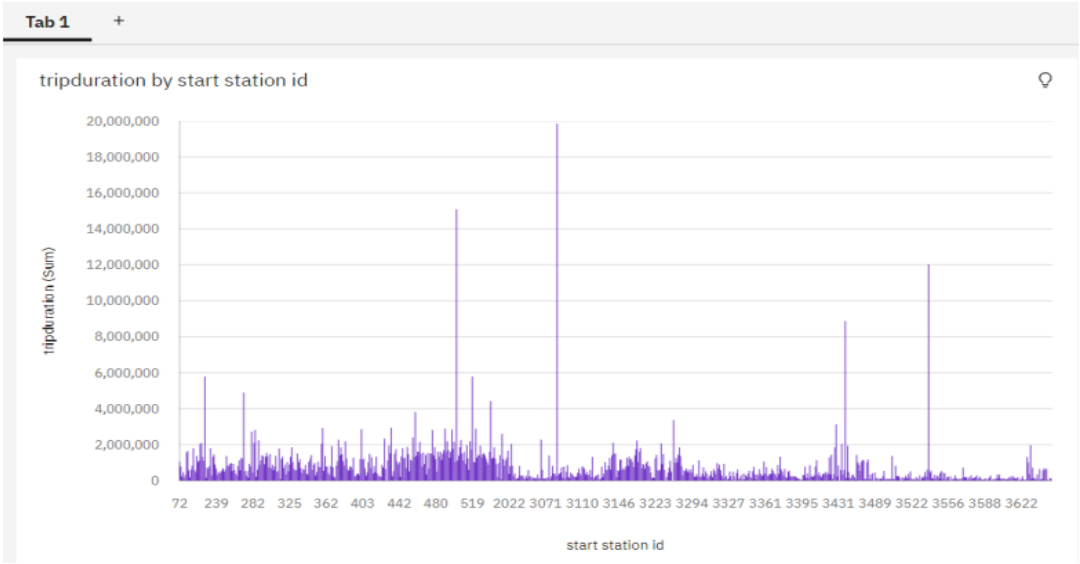
Top 10 Start Station Names with respect to Customer age group:



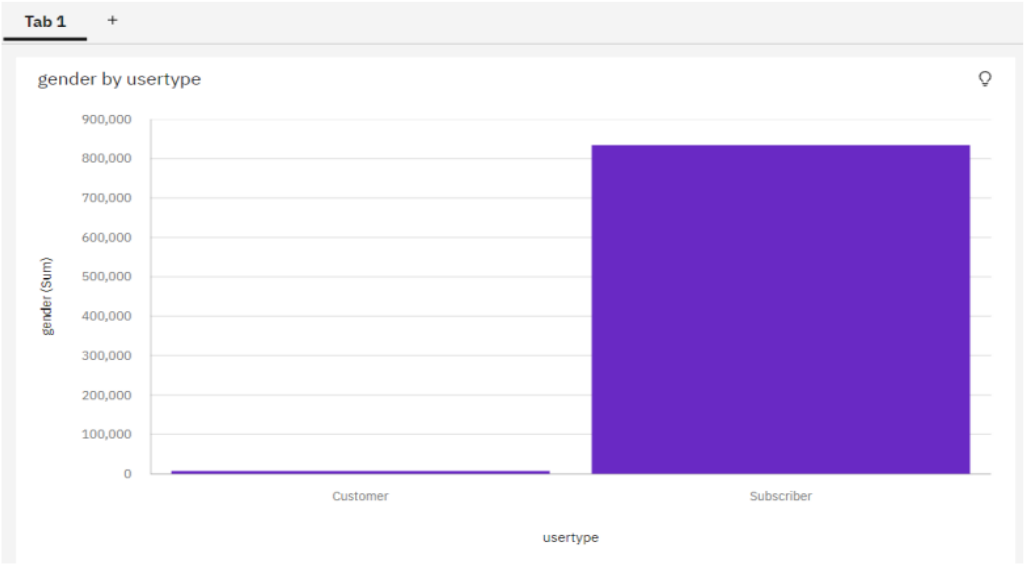
Sprint-3:

- Dashboard Creation

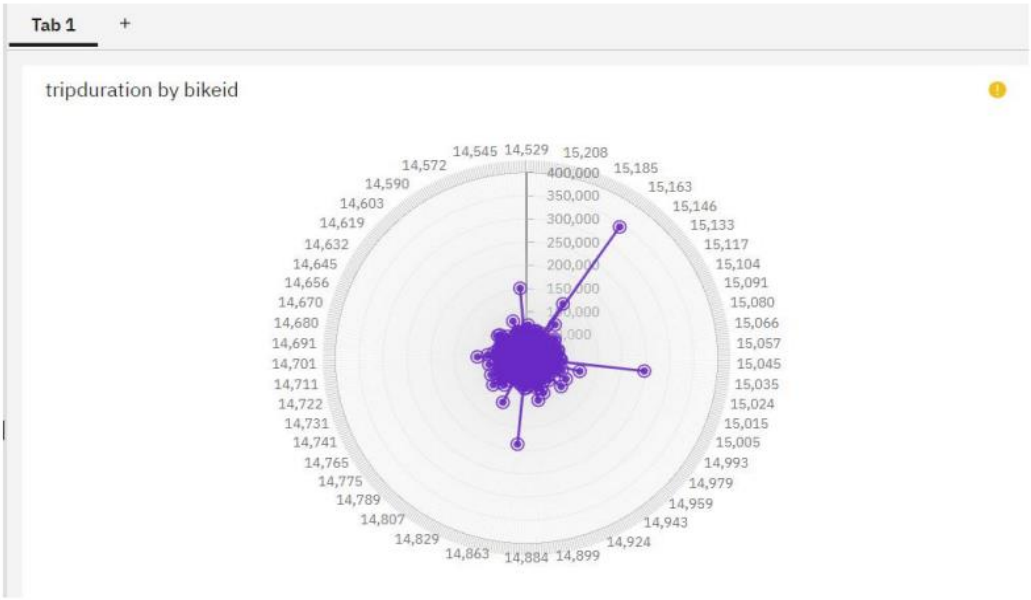
1.Total Number of Trips



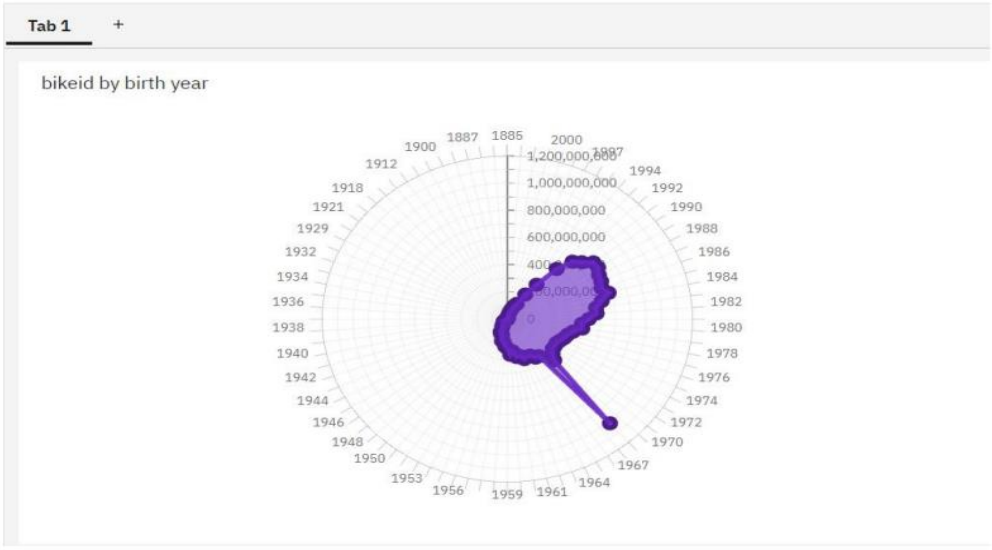
2.Customer and subscriber with gender



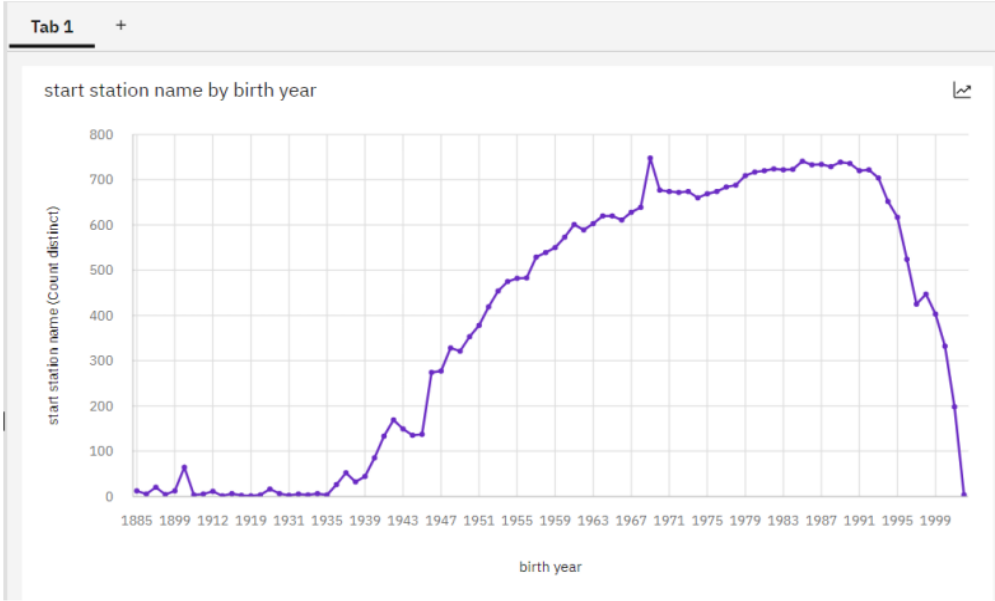
3.top bike used with respect to trip duration



4.the number of bikes used by respective age groups



5.Top 10 Start Station Names with respect to Customer age group



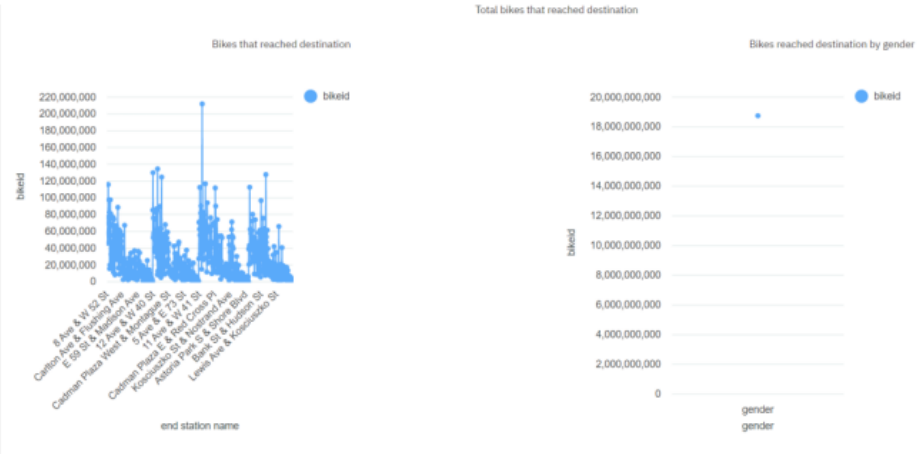
Sprint-4:

- Report Creation
- Story Creation

Report

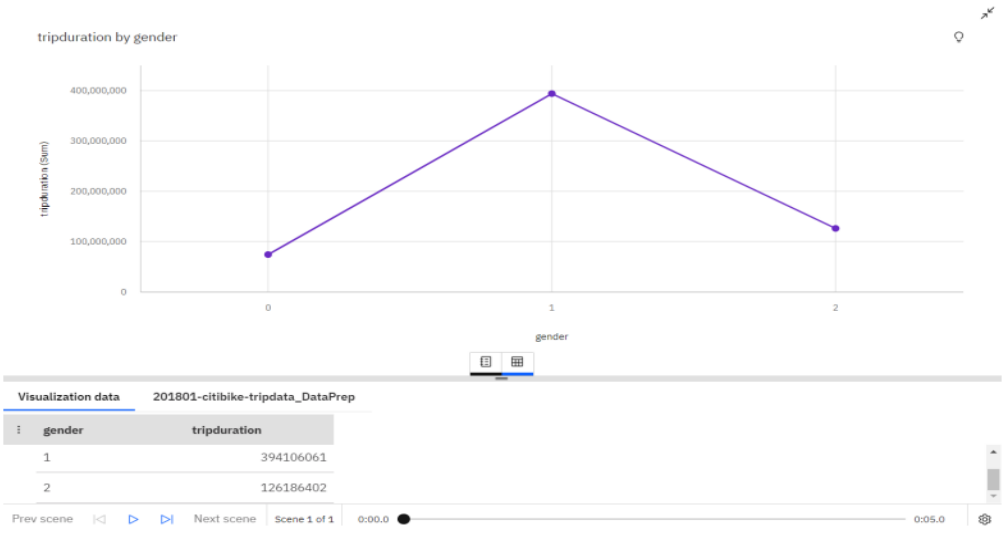
Trip duration by gender and bike id

Bikes that reached destination

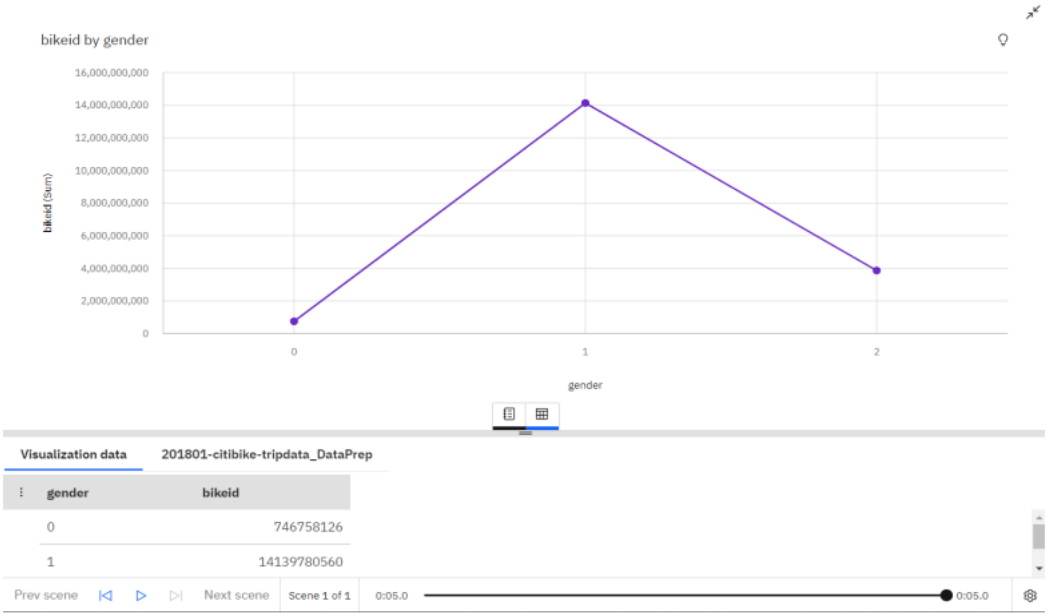


STORY

Duration of trip by each Gender



Most Bikes used by each gender



Visualization data | 201801-citibike-tripdata_DataPrep

gender	bikeid
0	746758126
1	14139780560

Prev scene | Next scene | Scene 1 of 1 | 0:05.0 | 0:05.0

CHAPTER-8

TESTING

Purpose of Document:

The product is the responsive dashboard which shows Customers Length of usage in the travel based on the various aspect considering:

1.Based on the usage of bikes.

2.Based on different stations.

3.Type of bike providers or stations.

4.Station to take bike for riding.

8.1 Test cases

1.Verify the user is able to get the responsiveness of all the graphs
2.Verify the user get the entire visualization of the dashboard, report.
3.Verify the user get the complete interaction with the website
4.Check if the entire dashboard, Report is visible.

5.User can view pages in the report.

1. Verify the customer is able to access the number of bikes based on the region.

2. Verify the user is able to access the Citi bikes with respect to the availability of bikes.

3. Verify the user is able to access the parameters based on the length of usage of bikes.

4. Verify the user is able to compare the stations based on the availability of bikes.

8.2 USER ACCEPTANCE TESTING

Test Case ID	Feature Type	Component	Test Scenario	Actual Result	Status	TC for automation(Y/N)
Uploading the dataset in the IBM Cloud	Functional	IBM Cloud	Loading of all data	Uploaded successfully	Pass	Y
Responsiveness of Dashboard	Functional	Dashboard	Compare the stations based on the availability of bikes	Working as expected	Pass	Y
Design	UI	Dashboard	Compatible to the Website	Working as expected	Pass	Y
Design	Functional	Dashboard	Verify the working of the filter.	Working as expected	Pass	Y
Responsiveness of dashboard	Functional	Dashboard	Verify the customer to access the bikes based on the bikes available	Working as expected	Pass	Y

CHAPTER-9

RESULTS

9.1 PERFORMANCES METRICS:

Citi Bikes Performance Measurements

Main metrics are used to judge the performance of bikeshare systems: average number of daily uses per bike and average daily trips per resident (of the coverage area). These two metrics tend to have an inverse relationship. A system with a low number of bikes could have high per-bike usage because demand is high, but fail to meet that demand and therefore have a lower number of trips per resident. On the other hand, a system could have a high number of trips per resident but also a very high number of bikes, and therefore a low number of trips per bike. Both of these extremes are inefficient; a sustainable system should find a balance of having just enough bikes to satisfy demand with around 4 daily trips per bike. A successful bikeshare system needs to be large enough to serve a range of destinations and have stations close enough to each other to make them easily accessible. A system should start out at least five square miles, but station density is even more important than system size. Bikeshare systems become exponentially more effective as stations get closer together, with 28 stations per square mile being a good goal. Keeping stations no more than a couple blocks apart ensures that there is always a station near a potential destination.

The initial financial analysis should include estimates of capital costs, operational costs, and revenues. It is also important to consider funding mechanisms at this stage. Cost-per-bike is a common metric; while it might be useful in the planning stages, cost-per-bike is a flawed long-term metric because of the way the number of bikes in service fluctuates. Looking at operating costs per trip is a better metric, in line with the way traditional transit systems are evaluated. Proper station siting is crucial to the success of a bikeshare system. Docks should be close together and concentrated in dense, mixed-use areas where there will be consistent demand. Placing stations near transit help bikeshare interface with the larger transportation ecosystem. Stations should be placed in sunny, well-trafficked areas and not block

pedestrian movement. Picking station locations will typically require community outreach so as to build support for the project.

Virtually all bike share stations are automated and use docking spaces as opposed to bike parking areas. While some stations are permanently installed into the ground, modular systems are increasingly common. Modular stations are built on a base that can be bolted to the ground, making them relatively easy to move. Rather than being connected to a power source, they run on solar energy. There are two main entities involved with a typical bikeshare system: the implementing agency and operator. In some cases, these are the same, but more often there is a division of labor. The implementing agency is typically a government group such as a department of transportation or parks department and oversees the entire system. Departments of transportation have an advantage running bikeshare systems because they have authority over the roadbeds and sidewalks where stations will be placed. Day-to-day operations of a bikeshare system are the responsibility of the operator, which could be either a government agency or private company. Government agencies have the advantage of being closer to the implementing agency and are committed to working for the public good; private companies can be more efficient, but their profit motives might run counter to the government's goals for the system.

Setting up a bikeshare system means purchasing bikes, stations, IT systems, maintenance equipment, and redistribution vehicles. There is also a large amount of labor necessary before a system can open.

Operating costs vary widely depending on the size and sophistication of a system and involve generally staffing, redistribution, maintenance, customer service, marketing, and insurance. Operating costs are best represented on a per-bike basis to reflect that fact that a larger system serves the public better.

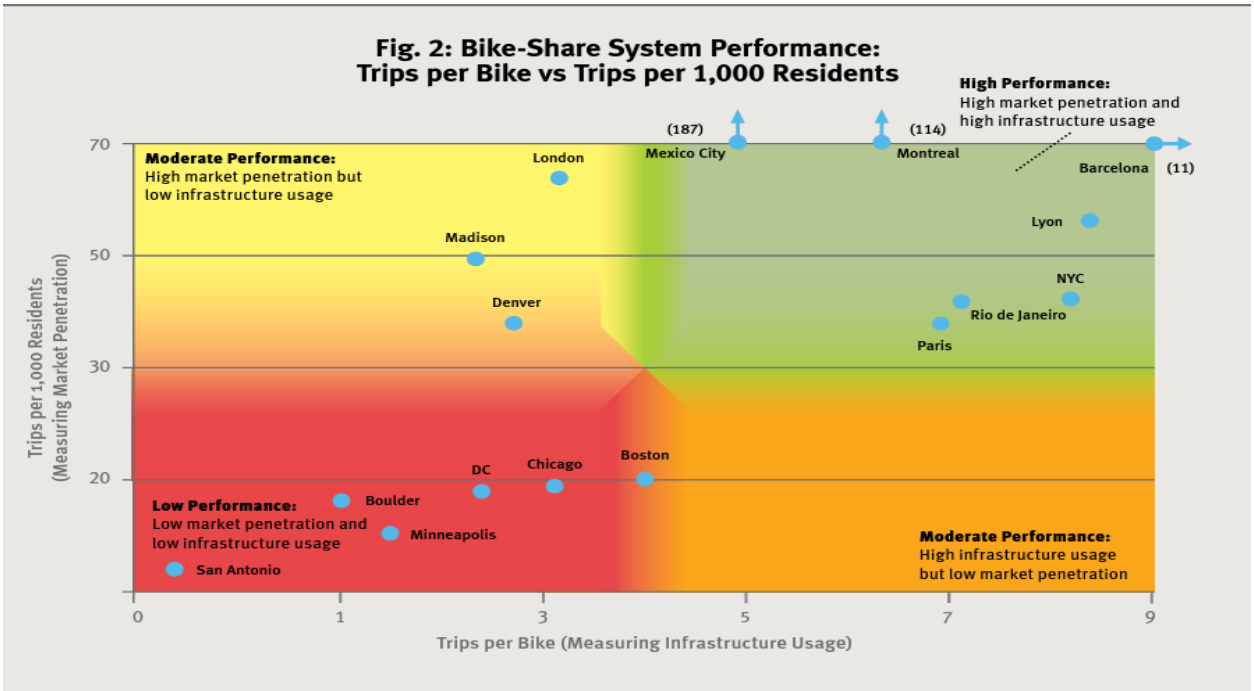
Average number of daily uses per public bike

Ideally, four to eight daily uses per bike. Turnover is critical to a successful bikeshare system, and this is a measure of the efficiency of the system. Fewer than four daily uses per bike can result in a very low cost-benefit ratio, while more than eight daily uses can begin to limit bike availability, especially during peak hours. In 2010, Paris averaged more than four daily uses per bike for the whole year, including winter, when the usage is lower.

Average daily trips per resident

Ideally one daily trip per twenty to forty residents. This is a metric of market penetration. High quantity of uses among the population of the coverage area is key to achieving the primary objectives of a bikeshare system, including increased bicycle mode share, decreased congestion of vehicle and transit networks, and promotion of safe, clean, healthy modes of transport. Lyon, for example, has one daily trip per twenty-five residents.

These two metrics have an inverse relationship. Many systems have a high average daily use per bike because they actually have too few bicycles in circulation, and this means that market penetration (expressed here as average daily trips per resident) will be very low. Other systems may have high market penetration, but very few uses per bike, indicating inefficient usage of infrastructure and low cost-benefit, likely due to a surplus of bikes. The planning of a bike-share system must be carefully calibrated to ensure performance is within the optimum range for both metrics.



CHAPTER-10

ADVANTAGES & DISADVANATAGES

ADVANTAGES:

The reasons for implementing a bike-share program are often centered on goals of increasing cycling, reducing congestion, improving air quality, and offering residents an active mobility option. Bike-share has two key advantages when compared to other transportation projects: implementation costs are comparatively low and the timeline is short. It is possible to plan and implement a system in one mayoral term (i.e., two to four years), which means that benefits to the public accrue more immediately than in most transportation projects.

Reduce congestion and improve air quality, Improve the image of cycling Bike-share systems project a hip, modern image and can help transform the cycling culture in a city. Increase accessibility Implementing a bike-share system gives local users greater access to places that are beyond their reach on foot. Provide complementary services to public transport Bike-share offers an alternative for short trips that people would have otherwise made on transit. Improve the health of the residents Bike-share offers an active transport choice, providing both physical and mental health benefits. Studies have shown that spending twenty minutes every day on a bike has a significant positive impact on mental health. Increase the reach of transit Bike-share fills that critical gap between the station or stop and the final destination for the passenger. Since cycling is more efficient than walking, bike-share enhances mobility and is much less expensive to the city than extending public transport service. Generate investment in local industry Bike-share has the potential to spur development of new products and services through demand for hardware and software, as well as provision of the operations. Bike-share can also attract existing riders through its convenience and practicality.

DISADVANTAGES:

Congestion in the users of Bike sharing. As bike-sharing systems can help you travel throughout the city, they do not exist in infinite numbers. A helmet is a requirement. When you are planning to ride a bike, you need to keep safety measures in your mind. And also, as the bikes are for the public there will be also no clean that bikes are not clean.

CHAPTER-11

CONCLUSION

The enormous growth in bike-share systems all over the world in the past ten years has done a great deal to legitimize the bicycle as the mode of choice for urban commuting. The transformation of bike-share from the informal, "free bikes for the community" system to its official integration into the city's public transport systems is an important step in creating more equitable and sustainable cities.

While the benefits of introducing bikeshare in cities is enormous, adaptations in behavior and enforcement are also necessary to make bike-share work for everyone. Cycling lanes, when protected from cars, encourage riders who may be intimidated by traffic, and the inclusion of signage giving bikes right-of-way helps remind drivers to share the road. In order for this integration to be successful, these spaces and rules should be enforced for drivers and for cyclists. In addition, more cyclists on the road increases the safety of cycling—many cities see a decrease in accidents even though there are more cyclists. Bike-share, more than any other form of urban transport, has the ability to improve and transform our cities. Bikes allow individual freedom of movement, but without the CO2 emissions, congestion, and overuse of scarce street space that cars demand. In the more than 400 cities that have implemented bike-share, more people are now experiencing the health benefits, cost savings, flexibility, and enjoyment of the city that comes with cycling. As more cities consider bike-share, cities and streets are once again becoming dynamic places for people and not just cars. We look forward to seeing how bike-share continues to innovate and cities evolve with more and better practices in bike-share.

CHAPTER-12

FUTURE SCOPE

Growing awareness towards environmental pollution and government initiatives to encourage bike sharing are the substantial driving factors of the Bike Sharing market. In addition, increasing problem of traffic due to rising usage of vehicles and advances in navigation technologies in bike sharing are also factors which increasing demand of bike sharing across the world. Bike Sharing relies on a system of self-service bike stations, it can introduce new people into bicycle commuting by providing fun, safe, and secure bikes and it an encourage new demographics. Bike share programs increase the visibility of cyclists and making riding safer for everyone. Furthermore, increasing demand for e-bikes is creating numerous opportunity in the market. However, Several issues such as vandalism and theft and increasing price of fuel consumption are the restraining factors of the bike sharing market in the upcoming years. The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming eight years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within each of the regions and countries involved in the study. Furthermore, the report also caters the detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market.

CHAPTER-13

APPENDIX

Index.html:

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>IBM Data Analytics </title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Roboto:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">
```

```
  <!-- Vendor CSS Files -->
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/animate.css/animate.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/style.css" rel="stylesheet">

  <!--
  ======================================================
  * Template Name: Medicio - v4.9.1
  * Template URL: https://bootstrapmade.com/medicio-free-bootstrap-theme/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
  ====================================================== -->
</head>
```

```
<body>

  <!-- ======= Top Bar ======= -->
  <div id="topbar" class="d-flex align-items-center fixed-top">
    <div class="container d-flex align-items-center justify-content-center justify-content-md-between">
      <div class="align-items-center d-none d-md-flex">
        <i class="bi bi-clock"></i> IBM Cognos Data Analytics
      </div>
      <div class="d-flex align-items-center">
        <i class="bi bi-phone"></i>
      </div>
    </div>
  </div>

  <!-- ======= Header ======= -->
  <header id="header" class="fixed-top">
    <div class="container d-flex align-items-center">

      <a href="index.html" class="logo me-auto"><img src="assets/img/logo.png" alt=""></a>
      <!-- Uncomment below if you prefer to use an image logo -->
      <!-- <h1 class="logo me-auto"><a href="index.html">Medicio</a></h1> -->

      <nav id="navbar" class="navbar order-last order-lg-0">
```

```
<ul>
  <li><a class="nav-link scrollto " href="#hero">Home</a></li>
        <li><a class="nav-link scrollto" href="#Dashboard">Dashboard</a></li>
        <li><a class="nav-link scrollto" href="#Reports">Reports</a></li>
  <li><a class="nav-link scrollto" href="#Story">Story</a></li>
  <li><a class="nav-link scrollto" href="#about">About</a></li>

<!--

        <li class="dropdown"><a href="#"><span>Drop Down</span> <i class="bi bi-chevron-down"></i></a>
    <ul>
      <li><a href="#">Drop Down 1</a></li>
      <li class="dropdown"><a href="#"><span>Deep Drop Down</span> <i class="bi bi-chevron-right"></i></a>
        <ul>
          <li><a href="#">Deep Drop Down 1</a></li>
          <li><a href="#">Deep Drop Down 2</a></li>
          <li><a href="#">Deep Drop Down 3</a></li>
          <li><a href="#">Deep Drop Down 4</a></li>
          <li><a href="#">Deep Drop Down 5</a></li>
        </ul>
      </li>
```

```
            <li><a href="#">Drop Down 2</a></li>
            <li><a href="#">Drop Down 3</a></li>
            <li><a href="#">Drop Down 4</a></li>
          </ul>
        </li>


                -->



        <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
      </ul>
      <i class="bi bi-list mobile-nav-toggle"></i>
    </nav><!-- .navbar -->



  </div>
</header><!-- End Header -->


<!-- ======= Hero Section ======= -->
<section id="hero">
  <div id="heroCarousel" data-bs-interval="5000" class="carousel slide carousel-fade" data-bs-ride="carousel">
```

**<ol class="carousel-indicators" id="hero-carousel-indicators">
**

** **

<!-- Slide 1 -->

** **

** **

<h2>Welcome to A New Hint to Transportation-Analysis of NYC Bike Share System </h2>

<p>Bike-sharing systems have been deployed in many major cities around the world today. Bike sharing systems provide great advantages as a mean of urban public transportation facilitating a green solution for daily commuters and tourists. Users tend to use more often this type of transportation for their daily needs. The key to success for such systems is the efficient distribution of bikes among the bike stations in order to satisfy high user demands. Existing schemes in the literature focus either on predicting the bike station demand and modeling user mobility mainly focusing on making cycling more accessible to people, or on minimizing the costly and time-consuming movement of bikes among the stations while the system is in use. In this work our objective is to gain insights into the usage of bike sharing systems and in particular the pick-up and drop-off operations. Our goal is to get a better understanding of the bike mobility patterns and identify the key factors that lead to imbalances in the distribution of the bikes at the stations, towards creating effective and sustainable bike sharing systems. One of the problems in bicycle sharing systems design is the estimation of the potential demand to the service, especially in countries where this type of systems is not yet implemented. The main objective of this methodology is to relate the demand of bike-sharing systems with external characteristics that affects the bicycle usage in order to obtain its territorial distribution.

```
</p>
          <a href="#about" class="btn-get-started scrollto">Read More</a>
        </div>
      </div>

      <!-- Slide 2 -->
      <div class="carousel-item" style="background-image: url(assets/img/slide/bike-2.jpg)">
        <div class="container">
          <h2>Our Goal</h2>
          <p>The goal is to accurately predict the Length of usage of each bike on case by case basis so that the Citi bike can use this information for optimal resource allocation and better functioning. The length of usage is divided into 11 different classes ranging from 0-10 days to more than 100 days.</p>
          <a href="#about" class="btn-get-started scrollto">Read More</a>
        </div>
      </div>

      <!-- Slide 3 -->
      <div class="carousel-item" style="background-image: url(assets/img/slide/bike-3.jpg)">
        <div class="container">
          <h2>Project Objectives</h2>

                    <ul>
                    <li>Know fundamental concepts and can work on IBM Cognos Analytics</li>
```

Gain a broad understanding of plotting different visualizations to provide the suitable solution.

Able to create meaningful Visualizations and the Dashboard(s)

Read More

</section><!-- End Hero -->

```
<main id="main">


  <!-- ======= About Us Section ======= -->
  <section id="about" class="about">
    <div class="container" data-aos="fade-up">

      <div class="section-title">
        <h2>About Us</h2>
              <br><br>
              <p><h3>Team ID  -  PNT2022TMID35008 </h3></p>
        <p>We are Blooming Developers <br>
                    Introducing our project for final review for "A New Hint to Transportation-Analysis of NYC Bike Share System"</p>
      </div>


<!-- ======= Providers Section ======= -->
  <section id="Providers" class="providers section-bg">
    <div class="container" data-aos="fade-up">


      <div  class="row">
```

```
<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member" data-aos="fade-up" data-aos-delay="100">


    <div class="member-info">
      <h4>Jackson Antony</h4>
      <span>Team Leader</span>
    </div>
  </div>
</div>



<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member" data-aos="fade-up" data-aos-delay="200">
    <div class="member-img">
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <br><h4>Ajmal Baiju</h4>
```

```
      <span>Team Member</span><br>
    </div>
  </div>
</div>

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member" data-aos="fade-up" data-aos-delay="300">
    <div class="member-img">
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <br><h4>Ebin P John</h4>
      <span>Team Member</span><br>
    </div>
  </div>
</div>

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member" data-aos="fade-up" data-aos-delay="400">
    <div class="member-img">
```

```
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <br><h4>Hebrone Edison</h4>
      <span>Team Member</span><br>
</div>

          <div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member" data-aos="fade-up" data-aos-delay="400">
    <div class="member-img">
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <br><h4>Riju Paul</h4>
      <span>Team Member</span><br>
```

```
          </div>
        </div>
      </div>
    </div>
     </div ">
  </div>
</section><!-- End Providers Section -->


  </div>
</section><!-- End About Us Section -->


    <ul class="faq-list">


      <li>

        <div data-bs-toggle="collapse" class="collapsed question" href="#faq1">What does the term "data exploration" mean to you? <i class="bi bi-chevron-down icon-show"></i><i class="bi bi-chevron-up icon-close"></i></div>

        <div id="faq1" class="collapse" data-bs-parent=".faq-list">

         <p>Candidates should describe, in detail, their method of data exploration. Answers should include identifying a business problem, selecting the appropriate data sets to analyze, then analyzing the data with the aim of finding trends and patterns.          </p>

        </div>

      </li>


      <li>
```

** What is root cause analysis? **

** **

** **

This question tests the statistical expertise of a candidate. Candidates should note that root cause analysis is a statistical technique used to solve a data problem by isolating the root cause of the problem.

** **

** **

**
**

<li>

** Your data analysis has yielded business insights that you need to present to management. How do you go about presenting it? **

** **

** **

The best way of communicating data is through the medium of data visualization. Candidates should describe utilizing data visualization tools to supplement their detailed research reports in their communication of data.

** **

** **

```
        </li>

      </ul>

    </div>
  </section><!-- End Frequently Asked Questioins Section -->

  <!-- ======= Contact Section ======= -->
  <section id="contact" class="contact">
    <div class="container">

      <div class="section-title">
        <h2>Contact</h2>
        <p>For any kind of quaries please feel free to contact us <br>
                We are here to help you at any time </p>
      </div>

    </div>

    <div>
      <iframe
src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3949.672
4756993804!2d77.56014511367896!3d8.134787304594212!2m3!1f0!2f0!3f0!3m
2!1i1024!2i768!4f13.1!3m3!1m2!1s0x3b048d4ab981edb3%3A0xf4b387e9787e8
c25!2sRohini%20College%20of%20Engineering%20%26%20Technology!5e
0!3m2!1sen!2sin!4v1668933384296!5m2!1sen!2sin" width="100%"
height="450" style="border:0;" allowfullscreen="" loading="lazy"
referrerpolicy="no-referrer-when-downgrade"></iframe>
```

```
</div>

<div class="container">

  <div class="row mt-5">

    <div class="col-lg-6">

      <div class="row">
        <div class="col-md-12">
          <div class="info-box">
            <i class="bx bx-map"></i>
            <h3>Our Address</h3>
            <p>Kanyakumari Main Road, near Anjugramam, Palkulam, Anjugramam, Tamil Nadu 629401</p>
          </div>
        </div>
        <div class="col-md-6">
          <div class="info-box mt-4">
            <i class="bx bx-envelope"></i>
            <h3>Email Us</h3>
            <p>Hebbrone@gmail.com</p>
          </div>
        </div>
```

```
<div class="col-lg-6">

<form action="forms/contact.php" method="post" role="form" class="php-email-form">

<div class="row">

<div class="col-md-6 form-group">

<input type="text" name="name" class="form-control" id="name" placeholder="Your Name" required="">

</div>

<div class="col-md-6 form-group mt-3 mt-md-0">

<input type="email" class="form-control" name="email" id="email" placeholder="Your Email" required="">

</div>

</div>

<div class="form-group mt-3">

<input type="text" class="form-control" name="subject" id="subject" placeholder="Subject" required="">

</div>

<div class="form-group mt-3">

<textarea class="form-control" name="message" rows="7" placeholder="Message" required=""></textarea>

</div>

<div class="my-3">

<div class="loading">Loading</div>

<div class="error-message"></div>

<div class="sent-message">Your message has been sent. Thank you!</div>

</div>
```

```
          <div class="text-center"><button type="submit">Send Message</button></div>
          </form>
        </div>

      </div>

    </div>
  </section><!-- End Contact Section -->

</main><!-- End #main -->

<!-- ======= Footer ======= -->
<footer id="footer">
  <div class="footer-top">
    <div class="container">
      <div class="row">

        <div class="col-lg-3 col-md-6">
          <div class="footer-info">
            <h3>CSE Dept, Rohini</h3>
            <p>
              Kanyakumari Main Road, near Anjugramam, Palkulam, <br>
               Anjugramam, Tamil Nadu 629401<br><br>
              <strong>Phone:</strong> +91 8589884556<br>
              <strong>Email:</strong> Hebbrone.com<br>
```

```
            </p>
            <div class="social-links mt-3">
              <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
              <a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
              <a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
              <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
              <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
            </div>
          </div>
        </div>

        <div class="col-lg-2 col-md-6 footer-links">
          <h4>Useful Links</h4>
          <ul>
            <li><i class="bx bx-chevron-right"></i> <a class="nav-link scrollto" href="#hero">Home</a></li>
            <li><i class="bx bx-chevron-right"></i> <a class="nav-link scrollto" href="#about">About us</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Services</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Terms of service</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Privacy policy</a></li>
          </ul>
        </div>
```

```
        <div class="col-lg-3 col-md-6 footer-links">
          <h4>Our Services</h4>
          <ul>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Web Design</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Web Development</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Product Management</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Marketing</a></li>
            <li><i class="bx bx-chevron-right"></i> <a href="#">Graphic Design</a></li>
          </ul>
        </div>

      </div>
    </div>
  </div>

</footer><!-- End Footer -->

<div id="preloader"></div>
<a href="#" class="back-to-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>
```

```
  <!-- Vendor JS Files -->
  <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
  <script src="assets/vendor/aos/aos.js"></script>
  <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="assets/vendor/php-email-form/validate.js"></script>

  <!-- Template Main JS File -->
  <script src="assets/js/main.js"></script>

</body>

</html>
```

CSS Code:

```
/*--------------------------------------------------------------
# General
--------------------------------------------------------------*/
body {
  font-family: "Open Sans", sans-serif;
  color: #444444;
}
```

```
a {
  color: #3fbbc0;
  text-decoration: none;
}

a:hover {
  color: #65c9cd;

}

.back-to-top i {
  font-size: 28px;
  color: #fff;
  line-height: 0;
}

.back-to-top:hover {
  background: #5ec6ca;
  color: #fff;
}

.back-to-top.active {
  visibility: visible;
  opacity: 1;
```

```
}

/*--------------------------------------------------------------
# Disable aos animation delay on mobile devices
--------------------------------------------------------------*/
@media screen and (max-width: 768px) {
  [data-aos-delay] {
    transition-delay: 0 !important;
  }
}

/*--------------------------------------------------------------
# Top Bar
--------------------------------------------------------------*/
#topbar {
  background: #3fbbc0;
  color: #fff;
  height: 40px;
  font-size: 16px;
  font-weight: 600;
  z-index: 996;
  transition: all 0.5s;
}

#topbar.topbar-scrolled {
```

```
  top: -40px;
}

#topbar i {
  padding-right: 6px;
  line-height: 0;
}

/*--------------------------------------------------------
# Header
--------------------------------------------------------*/
#header {
  background: #fff;
  transition: all 0.5s;
  z-index: 997;
  padding: 20px 0;
  top: 40px;
  box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
}

@media (max-width: 992px) {
  #header {
    padding: 15px 0;
  }
}
```

```
#header.header-scrolled {
  top: 0;
}

#header .logo {
  font-size: 28px;
  margin: 0;
  padding: 0;
  line-height: 1;
  font-weight: 600;
  letter-spacing: 0.5px;
  text-transform: uppercase;
}

#header .logo a {
  color: #555555;
}

#header .logo img {
  max-height: 40px;
}

/**
* Appointment Button
```

```
*/
.appointment-btn {
  margin-left: 25px;
  background: #3fbbc0;
  color: #fff;
  border-radius: 4px;
  padding: 8px 25px;
  white-space: nowrap;
  transition: 0.3s;
  font-size: 14px;
  display: inline-block;
}

.appointment-btn:hover {
  background: #65c9cd;
  color: #fff;
}

@media (max-width: 768px) {
  .appointment-btn {
    margin: 0 15px 0 0;
    padding: 6px 15px;
  }
}
```

```
/*----------------------------------------------------------
# Navigation Menu
----------------------------------------------------------*/
/**
* Desktop Navigation
*/
.navbar {
  padding: 0;
}

.navbar ul {
  margin: 0;
  padding: 0;
  display: flex;
  list-style: none;
  align-items: center;
}

.navbar li {
  position: relative;
}

.navbar a,
.navbar a:focus {
  display: flex;
```

```
  align-items: center;
  justify-content: space-between;
  padding: 10px 0 10px 30px;
  font-family: "Roboto", sans-serif;
  font-size: 13px;
  color: #626262;
  white-space: nowrap;
  transition: 0.3s;
  text-transform: uppercase;
  font-weight: 500;
}

.navbar a i,
.navbar a:focus i {
  font-size: 12px;
  line-height: 0;
  margin-left: 5px;
}

.navbar a:hover,
.navbar .active,
.navbar .active:focus,
.navbar li:hover>a {
  color: #3fbbc0;
}
```

```
.navbar .dropdown ul {
  display: block;
  position: absolute;
  left: 14px;
  top: calc(100% + 30px);
  margin: 0;
  padding: 10px 0;
  z-index: 99;
  opacity: 0;
  visibility: hidden;
  background: #fff;
  box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
  transition: 0.3s;
  border-radius: 4px;
}

.navbar .dropdown ul li {
  min-width: 200px;
}

.navbar .dropdown ul a {
  padding: 10px 20px;
  text-transform: none;
}
```

```
.navbar .dropdown ul a i {
  font-size: 12px;
}

.navbar .dropdown ul a:hover,
.navbar .dropdown ul .active:hover,
.navbar .dropdown ul li:hover>a {
  color: #3fbbc0;
}

.navbar .dropdown:hover>ul {
  opacity: 1;
  top: 100%;
  visibility: visible;
}

.navbar .dropdown .dropdown ul {
  top: 0;
  left: calc(100% - 30px);
  visibility: hidden;
}

.navbar .dropdown .dropdown:hover>ul {
  opacity: 1;
```

```
  top: 0;
  left: 100%;
  visibility: visible;
}

@media (max-width: 1366px) {
  .navbar .dropdown .dropdown ul {
    left: -90%;
  }

  .navbar .dropdown .dropdown:hover>ul {
    left: -100%;
  }
}

/**
* Mobile Navigation
*/
.mobile-nav-toggle {
  color: #555555;
  font-size: 28px;
  cursor: pointer;
  display: none;
  line-height: 0;
  transition: 0.5s;
```

```
}

.mobile-nav-toggle.bi-x {
  color: #fff;
}

@media (max-width: 991px) {
  .mobile-nav-toggle {
    display: block;
  }

  .navbar ul {
    display: none;
  }
}

.navbar-mobile {
  position: fixed;
  overflow: hidden;
  top: 0;
  right: 0;
  left: 0;
  bottom: 0;
  background: rgba(60, 60, 60, 0.9);
  transition: 0.3s;
```

```
  z-index: 999;
}

.navbar-mobile .mobile-nav-toggle {
  position: absolute;
  top: 15px;
  right: 15px;
}

.navbar-mobile ul {
  display: block;
  position: absolute;
  top: 55px;
  right: 15px;
  bottom: 15px;
  left: 15px;
  padding: 10px 0;
  border-radius: 8px;
  background-color: #fff;
  overflow-y: auto;
  transition: 0.3s;
}

.navbar-mobile a,
.navbar-mobile a:focus {
```

```
  padding: 10px 20px;
  font-size: 15px;
  color: #555555;
}

.navbar-mobile a:hover,
.navbar-mobile .active,
.navbar-mobile li:hover>a {
  color: #3fbbc0;
}

.navbar-mobile .dropdown ul {
  position: static;
  display: none;
  margin: 10px 20px;
  padding: 10px 0;
  z-index: 99;
  opacity: 1;
  visibility: visible;
  background: #fff;
  box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
}

.navbar-mobile .dropdown ul li {
  min-width: 200px;
```

```
}

.navbar-mobile .dropdown ul a {
  padding: 10px 20px;
}

.navbar-mobile .dropdown ul a i {
  font-size: 12px;
}

.navbar-mobile .dropdown ul a:hover,
.navbar-mobile .dropdown ul .active:hover,
.navbar-mobile .dropdown ul li:hover>a {
  color: #3fbbc0;
}

.navbar-mobile .dropdown>.dropdown-active {
  display: block;
}

/*--------------------------------------------------------------
# Hero Section
--------------------------------------------------------------*/
#hero {
  width: 100%;
```

```
  height: 100vh;
  background-color: rgba(60, 60, 60, 0.8);
  overflow: hidden;
  position: relative;
}

#hero .carousel,
#hero .carousel-inner,
#hero .carousel-item,
#hero .carousel-item::before {
  position: absolute;
  top: 0;
  right: 0;
  left: 0;
  bottom: 0;
}

#hero .carousel-item {
  background-size: cover;
  background-position: center;
  background-repeat: no-repeat;
  display: flex;
  justify-content: center;
  align-items: flex-end;
}
```

```
#hero .container {
  text-align: center;
  background: rgba(255, 255, 255, 0.9);
  padding-top: 30px;
  padding-bottom: 30px;
  margin-bottom: 50px;
  border-top: 4px solid #3fbbc0;
}

@media (max-width: 1200px) {
  #hero .container {
    margin-left: 50px;
    margin-right: 50px;
  }
}

#hero h2 {
  color: #2f2f2f;
  margin-bottom: 20px;
  font-size: 36px;
  font-weight: 700;
}

#hero p {
```

```
  margin: 0 auto 30px auto;
  color: #555555;
}

#hero .carousel-inner .carousel-item {
  transition-property: opacity;
  background-position: center top;
}

#hero .carousel-inner .carousel-item,
#hero .carousel-inner .active.carousel-item-start,
#hero .carousel-inner .active.carousel-item-end {
  opacity: 0;
}

#hero .carousel-inner .active,
#hero .carousel-inner .carousel-item-next.carousel-item-start,
#hero .carousel-inner .carousel-item-prev.carousel-item-end {
  opacity: 1;
  transition: 0.5s;
}

#hero .carousel-inner .carousel-item-next,
#hero .carousel-inner .carousel-item-prev,
#hero .carousel-inner .active.carousel-item-start,
```

```
#hero .carousel-inner .active.carousel-item-end {
  left: 0;
  transform: translate3d(0, 0, 0);
}

#hero .carousel-control-next-icon,
#hero .carousel-control-prev-icon {
  background: none;

{
    margin: 0 0 10px 0;
  }
}

.breadcrumbs ol {
  display: flex;
  flex-wrap: wrap;
  list-style: none;
  padding: 0;
  margin: 0;
  font-size: 14px;
}

.breadcrumbs ol li+li {
  padding-left: 10px;
```

```
}

.breadcrumbs ol li+li::before {
  display: inline-block;
  padding-right: 10px;
  color: #6c757d;
  content: "/";
}

@media (max-width: 768px) {
  .breadcrumbs .d-flex {
    display: block !important;
  }

  .breadcrumbs ol {
    display: block;
  }

  .breadcrumbs ol li {
    display: inline-block;
  }
}

/*--------------------------------------------------------------
# Featured Services
```

```
----------------------------------------------------------*/
.featured-services .icon-box {
  padding: 30px;
  position: relative;
  overflow: hidden;
  background: #fff;
  box-shadow: 0 0 29px 0 rgba(68, 88, 144, 0.12);
  transition: all 0.3s ease-in-out;
  border-radius: 8px;
  z-index: 1;
}

.featured-services .icon-box::before {
  content: "";
  position: absolute;
  background: #d9f1f2;
  right: 0;
  left: 0;
  bottom: 0;
  top: 100%;
  transition: all 0.3s;
  z-index: -1;
}

.featured-services .icon-box:hover::before {
```

```
  background: #3fbbc0;
  top: 0;
  border-radius: 0px;
}

.featured-services .icon {
  margin-bottom: 15px;
}

.featured-services .icon i {
  font-size: 48px;
  line-height: 1;
  color: #3fbbc0;
  transition: all 0.3s ease-in-out;
}

.featured-services .title {
  font-weight: 700;
  margin-bottom: 15px;
  font-size: 18px;
}

.featured-services .title a {
  color: #111;
}
```

```
.featured-services .description {
  font-size: 15px;
  line-height: 28px;
  margin-bottom: 0;
}

.featured-services .icon-box:hover .title a,
.featured-services .icon-box:hover .description {
  color: #fff;
}

.featured-services .icon-box:hover .icon i {
  color: #fff;
}

/*--------------------------------------------------------------
# Cta
--------------------------------------------------------------*/
.cta {
  background: #3fbbc0;
  color: #fff;
  background-size: cover;
  padding: 60px 0;
}
```

```
.cta h3 {
  font-size: 28px;
  font-weight: 700;
}

.cta .cta-btn {
  font-family: "Roboto", sans-serif;
  font-weight: 500;
  font-size: 16px;
  letter-spacing: 1px;
  display: inline-block;
  padding: 10px 35px;
  border-radius: 25px;
  transition: 0.5s;
  margin-top: 10px;
  border: 2px solid #fff;
  color: #fff;
}

.cta .cta-btn:hover {
  background: #fff;
  color: #3fbbc0;
}
```

```
/*--------------------------------------------------------------
# About Us
--------------------------------------------------------------*/
.about .content h3 {
  font-weight: 600;
  font-size: 26px;
}

.about .content ul {
  list-style: none;
  padding: 0;
}

.about .content ul li {
  padding-bottom: 10px;
}

.about .content ul i {
  font-size: 20px;
  padding-right: 4px;
  color: #3fbbc0;
}

.about .content p:last-child {
  margin-bottom: 0;
```

```
}

/*--------------------------------------------------------------
# Counts
--------------------------------------------------------------*/
.counts {
  padding-bottom: 30px;
}

.counts .count-box {
  box-shadow: -10px -5px 40px 0 rgba(0, 0, 0, 0.1);
  padding: 30px;
  width: 100%;
}

.counts .count-box i {
  display: block;
  font-size: 30px;
  color: #3fbbc0;
  float: left;
}

.counts .count-box span {
  font-size: 42px;
  line-height: 24px;
```

```
  display: block;
  font-weight: 700;
  color: #555555;
  margin-left: 50px;
}

.counts .count-box p {
  padding: 30px 0 0 0;
  margin: 0;
  font-family: "Roboto", sans-serif;
  font-size: 14px;
}

.counts .count-box a {
  font-weight: 600;
  display: block;
  margin-top: 20px;
  color: #7b7b7b;
  font-size: 15px;
  font-family: "Poppins", sans-serif;
  transition: ease-in-out 0.3s;
}

.counts .count-box a:hover {
  color: #3fbbc0;
```

```
}

/*----------------------------------------------------------
# Features
----------------------------------------------------------*/
.features .icon-box h4 {
  font-size: 20px;
  font-weight: 700;
  margin: 5px 0 10px 60px;
}

.features .icon-box i {
  font-size: 48px;
  float: left;
  color: #3fbbc0;
}

.features .icon-box p {
  font-size: 15px;
  color: #848484;
  margin-left: 60px;
}

.features .image {
  background-position: center center;
```

```
  background-repeat: no-repeat;
  background-size: cover;
  min-height: 400px;
}

/*--------------------------------------------------------------
# Services
--------------------------------------------------------------*/
.services .icon-box {
  margin-bottom: 20px;
  text-align: center;
}

.services .icon {
  display: inline-flex;
  justify-content: center;
  align-items: center;
  width: 80px;
  height: 80px;
  margin-bottom: 20px;
  background: #fff;
  border-radius: 50%;
  transition: 0.5s;
  color: #3fbbc0;
  overflow: hidden;
```

```
  box-shadow: 0px 0 25px rgba(0, 0, 0, 0.15);
}

.services .icon i {
  font-size: 36px;
  line-height: 0;
}

.services .icon-box:hover .icon {
  box-shadow: 0px 0 25px rgba(63, 187, 192, 0.3);
}

.services .title {
  font-weight: 600;
  margin-bottom: 15px;
  font-size: 18px;
  position: relative;
  padding-bottom: 15px;
}

.services .title a {
  color: #444444;
  transition: 0.3s;
}
```

```
.services .title a:hover {
  color: #3fbbc0;
}

.services .title::after {
  content: "";
  position: absolute;
  display: block;
  width: 50px;
  height: 2px;
  background: #3fbbc0;
  bottom: 0;
  left: calc(50% - 25px);
}

.services .description {
  line-height: 24px;
  font-size: 14px;
}

/*--------------------------------------------------------------
# Appointments
--------------------------------------------------------------*/
.appointment .php-email-form {
  width: 100%;
```

```
}

.appointment .php-email-form .form-group {
  padding-bottom: 8px;
}

.appointment .php-email-form .validate {
  display: none;
  color: red;
  margin: 0 0 15px 0;
  font-weight: 400;
  font-size: 13px;
}

.appointment .php-email-form .error-message {
  display: none;
  color: #fff;
  background: #ed3c0d;
  text-align: left;
  padding: 15px;
  font-weight: 600;
}

.appointment .php-email-form .error-message br+br {
  margin-top: 25px;
```

```
}

.appointment .php-email-form .sent-message {
  display: none;
  color: #fff;
  background: #18d26e;
  text-align: center;
  padding: 15px;
  font-weight: 600;
}

.appointment .php-email-form .loading {
  display: none;
  background: #fff;
  text-align: center;
  padding: 15px;
}

.appointment .php-email-form .loading:before {
  content: "";
  display: inline-block;
  border-radius: 50%;
  width: 24px;
  height: 24px;
  margin: 0 10px -6px 0;
```

```
  border: 3px solid #18d26e;
  border-top-color: #eee;
  -webkit-animation: animate-loading 1s linear infinite;
  animation: animate-loading 1s linear infinite;
}

.appointment .php-email-form input,
.appointment .php-email-form textarea,
.appointment .php-email-form select {
  border-radius: 0;
  box-shadow: none;
  font-size: 14px;
  padding: 10px !important;
}

.appointment .php-email-form input:focus,
.appointment .php-email-form textarea:focus,
.appointment .php-email-form select:focus {
  border-color: #3fbbc0;
}

.appointment .php-email-form input,
.appointment .php-email-form select {
  height: 44px;
}
```

```
.appointment .php-email-form textarea {
  padding: 10px 12px;
}

.appointment .php-email-form button[type=submit] {
  background: #3fbbc0;
  border: 0;
  padding: 10px 35px;
  color: #fff;
  transition: 0.4s;
  border-radius: 50px;
}

.appointment .php-email-form button[type=submit]:hover {
  background: #52c2c6;
}

/*--------------------------------------------------------------
# Departments
--------------------------------------------------------------*/
.departments .nav-tabs {
  border: 0;
}
```

```
.departments .nav-link {
  border: 0;
  padding: 20px;
  color: #555555;
  border-radius: 0;
  border-left: 5px solid #fff;
  cursor: pointer;
}

.departments .nav-link h4 {
  font-size: 18px;
  font-weight: 600;
  transition: 0.3s;
}

.departments .nav-link p {
  font-size: 14px;
  margin-bottom: 0;
}

.departments .nav-link:hover h4 {
  color: #3fbbc0;
}

.departments .nav-link.active {
```

```
  background: #f7fcfc;
  border-color: #3fbbc0;
}

.departments .nav-link.active h4 {
  color: #3fbbc0;
}

.departments .tab-pane.active {
  -webkit-animation: slide-down 0.5s ease-out;
  animation: slide-down 0.5s ease-out;
}

.departments .tab-pane img {
  float: left;
  max-width: 300px;
  padding: 0 15px 15px 0;
}

@media (max-width: 768px) {
  .departments .tab-pane img {
    float: none;
    padding: 0 0 15px 0;
    max-width: 100%;
  }
```

```
}

.departments .tab-pane h3 {
  font-size: 26px;
  font-weight: 600;
  margin-bottom: 20px;
  color: #3fbbc0;
}

.departments .tab-pane p {
  color: #777777;
}

.departments .tab-pane p:last-child {
  margin-bottom: 0;
}

@-webkit-keyframes slide-down {
  0% {
    opacity: 0;
  }

  100% {
    opacity: 1;
  }
```

```
}

@keyframes slide-down {
  0% {
    opacity: 0;
  }

  100% {
    opacity: 1;
  }
}

/*--------------------------------------------------------------
# Testimonials
--------------------------------------------------------------*/
.testimonials .testimonials-carousel,
.testimonials .testimonials-slider {
  overflow: hidden;
}

.testimonials .testimonial-item {
  box-sizing: content-box;
  min-height: 320px;
}
```

```
.testimonials .testimonial-item .testimonial-img {
  width: 90px;
  border-radius: 50%;
  margin: -40px 0 0 40px;
  position: relative;
  z-index: 2;
  border: 6px solid #fff;
}

.testimonials .testimonial-item h3 {
  font-size: 18px;
  font-weight: bold;
  margin: 10px 0 5px 45px;
  color: #111;
}

.testimonials .testimonial-item h4 {
  font-size: 14px;
  color: #999;
  margin: 0 0 0 45px;
}

.testimonials .testimonial-item .quote-icon-left,
.testimonials .testimonial-item .quote-icon-right {
  color: #b2e4e6;
```

```
  font-size: 26px;
}

.testimonials .testimonial-item .quote-icon-left {
  display: inline-block;
  left: -5px;
  position: relative;
}

.testimonials .testimonial-item .quote-icon-right {
  display: inline-block;
  right: -5px;
  position: relative;
  top: 10px;
}

.testimonials .testimonial-item p {
  font-style: italic;
  margin: 0 15px 0 15px;
  padding: 20px 20px 60px 20px;
  background: #f0fafa;
  position: relative;
  border-radius: 6px;
  position: relative;
  z-index: 1;
```

```
}

.testimonials .swiper-pagination {
  margin-top: 20px;
  position: relative;
}

.testimonials .swiper-pagination .swiper-pagination-bullet {
  width: 12px;
  height: 12px;
  background-color: #fff;
  opacity: 1;
  border: 1px solid #3fbbc0;
}

.testimonials .swiper-pagination .swiper-pagination-bullet-active {
  background-color: #3fbbc0;
}

/*----------------------------------------------------------
# Doctors
----------------------------------------------------------*/
.doctors .member {
  margin-bottom: 20px;
  overflow: hidden;
```

```
  text-align: center;
  border-radius: 4px;
  background: #fff;
  box-shadow: 0px 2px 15px rgba(63, 187, 192, 0.1);
}

.doctors .member .member-img {
  position: relative;
  overflow: hidden;
}

.doctors .member .social {
  position: absolute;
  left: 0;
  bottom: 0;
  right: 0;
  height: 40px;
  opacity: 0;
  transition: ease-in-out 0.3s;
  background: rgba(255, 255, 255, 0.85);
  display: flex;
  align-items: center;
  justify-content: center;
}
```

```
.doctors .member .social a {
  transition: color 0.3s;
  color: #555555;
  margin: 0 10px;
  display: inline-flex;
  align-items: center;
  justify-content: center;
}

.doctors .member .social a i {
  line-height: 0;
}

.doctors .member .social a:hover {
  color: #3fbbc0;
}

.doctors .member .social i {
  font-size: 18px;
  margin: 0 2px;
}

.doctors .member .member-info {
  padding: 25px 15px;
}
```

```
.doctors .member .member-info h4 {
  font-weight: 700;
  margin-bottom: 5px;
  font-size: 18px;
  color: #555555;
}

.doctors .member .member-info span {
  display: block;
  font-size: 13px;
  font-weight: 400;
  color: #aaaaaa;
}

.doctors .member .member-info p {
  font-style: italic;
  font-size: 14px;
  line-height: 26px;
  color: #777777;
}

.doctors .member:hover .social {
  opacity: 1;
}
```

```
/*----------------------------------------------------------
# Gallery
----------------------------------------------------------*/
.gallery {
  overflow: hidden;
}

.gallery .swiper-pagination {
  margin-top: 20px;
  position: relative;
}

.gallery .swiper-pagination .swiper-pagination-bullet {
  width: 12px;
  height: 12px;
  background-color: #fff;
  opacity: 1;
  border: 1px solid #3fbbc0;
}

.gallery .swiper-pagination .swiper-pagination-bullet-active {
  background-color: #3fbbc0;
}
```

```
.gallery .swiper-slide-active {
  text-align: center;
}

@media (min-width: 992px) {
  .gallery .swiper-wrapper {
    padding: 40px 0;
  }

  .gallery .swiper-slide-active {
    border: 6px solid #3fbbc0;
    padding: 4px;
    background: #fff;
    z-index: 1;
    transform: scale(1.2);
    margin-top: 10px;
  }
}

/*--------------------------------------------------------------
# Pricing
--------------------------------------------------------------*/
.pricing .box {
  padding: 20px;
  background: #fff;
```

```
  text-align: center;
  box-shadow: 0px 0px 4px rgba(0, 0, 0, 0.12);
  border-radius: 4px;
  position: relative;
  overflow: hidden;
}

.pricing h3 {
  font-weight: 400;
  margin: -20px -20px 20px -20px;
  padding: 20px 15px;
  font-size: 16px;
  font-weight: 600;
  color: #777777;
  background: #f8f8f8;
}

.pricing h4 {
  font-size: 36px;
  color: #3fbbc0;
  font-weight: 600;
  font-family: "Poppins", sans-serif;
  margin-bottom: 20px;
}
```

```
.pricing h4 sup {
  font-size: 20px;
  top: -15px;
  left: -3px;
}

.pricing h4 span {
  color: #bababa;
  font-size: 16px;
  font-weight: 300;
}

.pricing ul {
  padding: 0;
  list-style: none;
  color: #444444;
  text-align: center;
  line-height: 20px;
  font-size: 14px;
}

.pricing ul li {
  padding-bottom: 16px;
}
```

```
.pricing ul i {
  color: #3fbbc0;
  font-size: 18px;
  padding-right: 4px;
}

.pricing ul .na {
  color: #ccc;
  text-decoration: line-through;
}

.pricing .btn-wrap {
  margin: 20px -20px -20px -20px;
  padding: 20px 15px;
  background: #f8f8f8;
  text-align: center;
}

.pricing .btn-buy {
  background: #3fbbc0;
  display: inline-block;
  padding: 8px 35px 10px 35px;
  border-radius: 4px;
  color: #fff;
  transition: none;
```

```
  font-size: 14px;
  font-weight: 400;
  font-family: "Roboto", sans-serif;
  font-weight: 600;
  transition: 0.3s;
}

.pricing .btn-buy:hover {
  background: #65c9cd;
}

.pricing .featured h3 {
  color: #fff;
  background: #3fbbc0;
}

.pricing .advanced {
  width: 200px;
  position: absolute;
  top: 18px;
  right: -68px;
  transform: rotate(45deg);
  z-index: 1;
  font-size: 14px;
  padding: 1px 0 3px 0;
```

```
  background: #3fbbc0;
  color: #fff;
}

/*--------------------------------------------------------------
# Frequently Asked Questioins
--------------------------------------------------------------*/
.faq {
  padding: 60px 0;
}

.faq .faq-list {
  padding: 0;
  list-style: none;
}

.faq .faq-list li {
  border-bottom: 1px solid #d9f1f2;
  margin-bottom: 20px;
  padding-bottom: 20px;
}

.faq .faq-list .question {
  display: block;
  position: relative;
```

```
  font-family: #3fbbc0;
  font-size: 18px;
  line-height: 24px;
  font-weight: 400;
  padding-left: 25px;
  cursor: pointer;
  color: #32969a;
  transition: 0.3s;
}

.faq .faq-list i {
  font-size: 16px;
  position: absolute;
  left: 0;
  top: -2px;
}

.faq .faq-list p {
  margin-bottom: 0;
  padding: 10px 0 0 25px;
}

.faq .faq-list .icon-show {
  display: none;
}
```

```
.faq .faq-list .collapsed {
  color: black;
}

.faq .faq-list .collapsed:hover {
  color: #3fbbc0;
}

.faq .faq-list .collapsed .icon-show {
  display: inline-block;
  transition: 0.6s;
}

.faq .faq-list .collapsed .icon-close {
  display: none;
  transition: 0.6s;
}

/*--------------------------------------------------------------
# Contact
--------------------------------------------------------------*/
.contact .info-box {
  color: #444444;
  text-align: center;
```

```
  box-shadow: 0 0 20px rgba(214, 215, 216, 0.5);
  padding: 20px 0 30px 0;
}

.contact .info-box i {
  font-size: 32px;
  color: #3fbbc0;
  border-radius: 50%;
  padding: 8px;
  border: 2px dotted #c5ebec;
}

.contact .info-box h3 {
  font-size: 20px;
  color: #777777;
  font-weight: 700;
  margin: 10px 0;
}

.contact .info-box p {
  padding: 0;
  line-height: 24px;
  font-size: 14px;
  margin-bottom: 0;
}
```

```
.contact .php-email-form {
  box-shadow: 0 0 20px rgba(214, 215, 216, 0.5);
  padding: 30px;
}

.contact .php-email-form .error-message {
  display: none;
  color: #fff;
  background: #ed3c0d;
  text-align: left;
  padding: 15px;
  font-weight: 600;
}

.contact .php-email-form .error-message br+br {
  margin-top: 25px;
}

.contact .php-email-form .sent-message {
  display: none;
  color: #fff;
  background: #18d26e;
  text-align: center;
  padding: 15px;
```

```
  font-weight: 600;
}

.contact .php-email-form .loading {
  display: none;
  background: #fff;
  text-align: center;
  padding: 15px;
}

.contact .php-email-form .loading:before {
  content: "";
  display: inline-block;
  border-radius: 50%;
  width: 24px;
  height: 24px;
  margin: 0 10px -6px 0;
  border: 3px solid #18d26e;
  border-top-color: #eee;
  -webkit-animation: animate-loading 1s linear infinite;
  animation: animate-loading 1s linear infinite;
}

.contact .php-email-form input,
.contact .php-email-form textarea {
```

```
  border-radius: 4px;
  box-shadow: none;
  font-size: 14px;
}

.contact .php-email-form input:focus,
.contact .php-email-form textarea:focus {
  border-color: #3fbbc0;
}

.contact .php-email-form input {
  padding: 10px 15px;
}

.contact .php-email-form textarea {
  padding: 12px 15px;
}

.contact .php-email-form button[type=submit] {
  background: #3fbbc0;
  border: 0;
  padding: 10px 30px;
  color: #fff;
  transition: 0.4s;
  border-radius: 4px;
```

```
}

.contact .php-email-form button[type=submit]:hover {
  background: #65c9cd;
}

@-webkit-keyframes animate-loading {
  0% {
    transform: rotate(0deg);
  }

  100% {
    transform: rotate(360deg);
  }
}

@keyframes animate-loading {
  0% {
    transform: rotate(0deg);
  }

  100% {
    transform: rotate(360deg);
  }
}
```

```
/*--------------------------------------------------------------
# Footer
--------------------------------------------------------------*/
#footer {
  background: #eeeeee;
  padding: 0 0 30px 0;
  color: #555555;
  font-size: 14px;
}

#footer .footer-top {
  background: #f6f6f6;
  padding: 60px 0 30px 0;
}

#footer .footer-top .footer-info {
  margin-bottom: 30px;
}

#footer .footer-top .footer-info h3 {
  font-size: 24px;
  margin: 0 0 20px 0;
  padding: 2px 0 2px 0;
  line-height: 1;
```

```
  font-weight: 700;
}

#footer .footer-top .footer-info p {
  font-size: 14px;
  line-height: 24px;
  margin-bottom: 0;
  font-family: "Roboto", sans-serif;
}

#footer .footer-top .social-links a {
  font-size: 18px;
  display: inline-block;
  background: #3fbbc0;
  color: #fff;
  line-height: 1;
  padding: 8px 0;
  margin-right: 4px;
  border-radius: 4px;
  text-align: center;
  width: 36px;
  height: 36px;
  transition: 0.3s;
}
```

```
#footer .footer-top .social-links a:hover {
  background: #65c9cd;
  text-decoration: none;
}

#footer .footer-top h4 {
  font-size: 16px;
  font-weight: 600;
  position: relative;
  padding-bottom: 12px;
}

#footer .footer-top .footer-links {
  margin-bottom: 30px;
}

#footer .footer-top .footer-links ul {
  list-style: none;
  padding: 0;
  margin: 0;
}

#footer .footer-top .footer-links ul i {
  padding-right: 2px;
  color: #3fbbc0;
```

```
  font-size: 18px;
  line-height: 1;
}

#footer .footer-top .footer-links ul li {
  padding: 10px 0;
  display: flex;
  align-items: center;
}

#footer .footer-top .footer-links ul li:first-child {
  padding-top: 0;
}

#footer .footer-top .footer-links ul a {
  color: #555555;
  transition: 0.3s;
  display: inline-block;
  line-height: 1;
}

#footer .footer-top .footer-links ul a:hover {
  color: #3fbbc0;
}
```

```
#footer .footer-top .footer-newsletter form {
  margin-top: 30px;
  background: #fff;
  padding: 6px 10px;
  position: relative;
  border: 1px solid #d5d5d5;
  border-radius: 4px;
}

#footer .footer-top .footer-newsletter form input[type=email] {
  border: 0;
  padding: 4px;
  width: calc(100% - 110px);
}

#footer .footer-top .footer-newsletter form input[type=submit] {
  position: absolute;
  top: -1px;
  right: -1px;
  bottom: -1px;
  border: 0;
  background: none;
  font-size: 16px;
  padding: 0 20px;
  background: #3fbbc0;
```

```
  color: #fff;
  transition: 0.3s;
  border-radius: 0 4px 4px 0;
}

#footer .footer-top .footer-newsletter form input[type=submit]:hover {
  background: #65c9cd;
}

#footer .copyright {
  text-align: center;
  padding-top: 30px;
}
```

GITHUB LINK:

https://github.com/IBM-EPBL/IBM-Project-48853-1660813708

DEMO LINK:

https://drive.google.com/file/d/1RvcHNzVMppvN3WTW6nZGBCPjHn6eZsYD/view?usp=sharing