Project Design Phase-II

Data Flow Diagram & User Stories

Date	**22 October 2023**
Team ID	**Team- 591267**
Project Name	**Project on Tata Power Stock Analysis**

Data Requirements –

1. **Historical Stock Price Data –**

This critical dataset forms the basis of our in-depth analysis of Tata Power's stock performance. The selection of temporal granularity, whether daily, weekly, or monthly, is required for uncovering nuanced trends and patterns that shape the stock's trajectory. The required composition of the dataset includes critical elements such as opening and closing prices, as well as high and low prices, culminating in the meticulous inclusion of trading volume. This large dataset is critical for providing a comprehensive historical perspective, and it serves as the foundational bedrock for our analytical endeavour.

2. **Final Statements –**

Obtaining comprehensive financial reports from Tata Power appears to be a critical issue in our efforts to conduct a thorough financial analysis. These reports, which are regarded as the foundation of financial transparency, must be comprehensive in nature, containing all of the necessary pillars of fiscal disclosure such as income statements, balance sheets, and cash flow statements. These financial documents are more than just a nice-to-have; they are the foundation of our academic endeavour. They are critical not only in determining Tata Power's fiscal stability, but also in meticulously

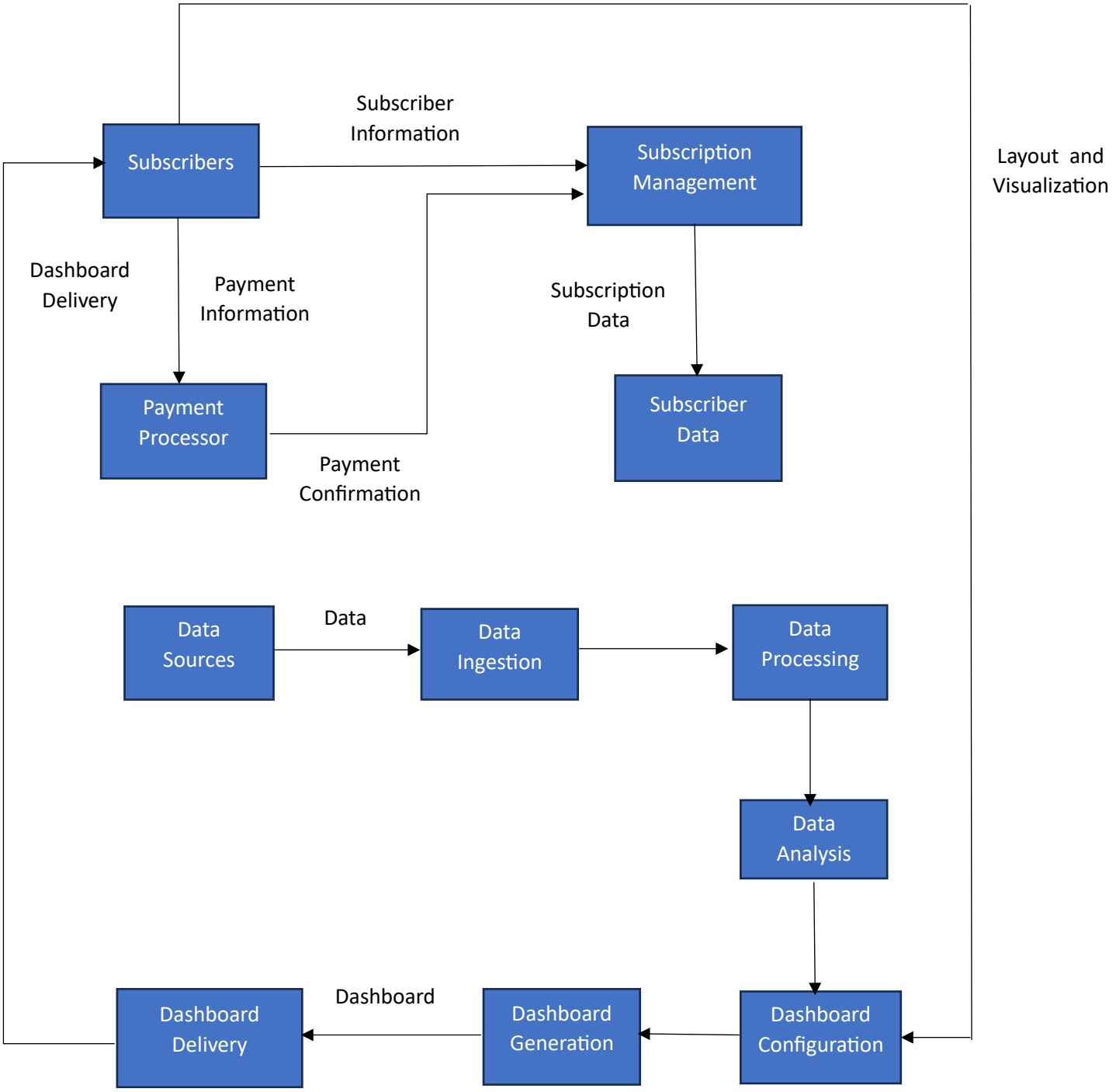
calculating critical financial ratios that serve as the foundation for our analytical scrutiny.

3. **External Data source –**

The expansive scope of our data architecture extends its reach to envelop an assortment of highly pertinent external data sources. These sources serve as a substantial panoramic lens, affording us the opportunity to gain profound insights into the intricate and multifaceted external factors that exert their influence on the performance of Tata Power's stock. Within this expansive panorama of external influences, we meticulously incorporate vital constituents such as the prevailing trends within the energy sector, the ever-evolving landscape of government policies, discernible economic indicators, and the prevailing sentiments propagated through various news sources. The aggregation of these external data facets assumes a pivotal role in our academic expedition, as it offers the indispensable ability to contextually comprehend the intricate mosaic of the market landscape, ultimately enabling us to discern the latent and dynamic forces that underpin the intricate dynamics of Tata Power's stock performance.

Data 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.



A subscriber signs up for a Tata Power Stocks dashboard subscription. The subscriber's information is sent to the Subscription Management process. The subscriber's payment information is sent to the Payment Processor. The Subscription Management process creates a subscription record in the Subscriber Data store. The Payment Processor verifies the payment and sends a confirmation to

the Subscription Management process. The Subscription Management process updates the subscription record in the Subscriber Data store with the payment status. Data from different sources like the historical data sources, external data sources etc. is sent to the Data Ingestion process. The Data Ingestion process cleans and transforms the data. The data is then sent to the Data Processing process. The Data Processing process aggregates and enriches the data. The data is then sent to the Data Analysis process. The Data Analysis process applies data analytics models to the data. The Dashboard Generation process generates dashboards based on the data analysis results and the dashboard configurations stored in the Dashboard Configurations data store. The dashboards are then sent to the Dashboard Delivery process. The Dashboard Delivery process delivers the dashboards to the subscribers. The subscribers can use the dashboards to gain insights regarding the Tata Power Stocks.

User Stories-

User Type	Functional Requirement	User Story Number	User Story/Task	Acceptance Criteria	Priority
Subscriber	Ability to drill down into data	USN-1	As a subscriber, I want to be able to drill down into data so that I can explore the underlying details.	1) I can click on data points to see more detailed information. 2) I can filter data to narrow down and see trends and patterns in the data.	Medium
	Ability to export data	USN-2	As a subscriber, I want to be able to export data from dashboards so that I can use it in other applications	1) I can export data in a variety of formats, such as CSV, Excel, and PDF. 2) I can use the exported data in a way that is easy to use in other applications	Low
	Ability to compare data across time periods	USN-3	As a subscriber, I want to be able to compare data across time periods so that I can see how the stocks are performing over time.	1)I can select different time periods to compare. 2)I can see the difference in data between the selected time periods	Medium
	Ability to create impromptu reports	USN-4	As a subscriber, I want to be able to create impromptu reports so that I can quickly answer questions about my data.	1)I can create reports without the need for IT assistance. 2)I can see the results of the reports in a clear and concise format.	High

Administrator	Ability to manage data sources	USN-5	As an administrator, I want to be able to manage data sources so that I can ensure that data is accurate and up-to-date	1) IT administrator can create, edit, and delete data sources. 2) IT administrator can specify the credentials used to connect to data sources	Medium
	Ability to monitor dashboard performance	USN-6	As an administrator, I want to be able to monitor dashboard performance so that I can identify and resolve any issues	1) I can view dashboard usage statistics. 2) I can investigate and resolve dashboard performance issues	High