Project Title: Enhancing Public Transportation with Data Analysis

Introduction

The goal of this project is to leverage public transportation data to evaluate service efficiency, on-time performance, and passenger feedback, ultimately improving the overall public transportation experience. This document outlines the design thinking process for the project, including analysis objectives, data collection methods, visualization strategies, and code integration.

Data Collection

To achieve the project objectives, we will need to collect data from various sources:

1. **Transportation Schedules**: Obtain schedules and timetables for public transportation services. This data will help in assessing on-time performance.
2. **Real-Time Updates**: Gather real-time data, including GPS tracking, to monitor the actual movements of vehicles and identify delays or deviations from schedules.

Visualization Strategy

To effectively communicate insights, we will use IBM Cognos for data visualization. Here's the strategy for creating informative dashboards and reports:

1. **Key Performance Indicators (KPIs)**: Design dashboards displaying KPIs related to on-time performance, passenger satisfaction, and service efficiency. These KPIs will provide a quick overview of the state of public transportation.
2. **Time-Series Visualizations**: Utilize line charts and time-series plots to visualize trends in on-time performance. Highlight days or time slots with the highest delays