

# TRAIN SCHEDULING SYSTEM



# ABSTRACT

The Train Schedule Management System is a comprehensive project aimed at streamlining and optimizing the scheduling processes within the railway transportation sector. This innovative system leverages advanced technologies to replace manual scheduling methods, ensuring efficiency, accuracy, and improved resource utilization.

# INTRODUCTION

Welcome to an in-depth exploration of the Train Schedule Management System, a pioneering solution designed to revolutionize the railway transportation sector. In this section, we will delve into the core aspects of our project, providing a comprehensive overview of its purpose, scope, and the innovative technologies it employs.

# OBJECTIVE

The objective of the Automated Train Schedule Management System project is to revolutionize the way train schedules are managed, making them more efficient, accurate, adaptable, and user-friendly, thereby enhancing the overall efficiency and effectiveness of railway transportation.

- **Enhanced Scheduling Efficiency:** Transition from traditional, manual scheduling methods to an automated, software-based system. This shift aims to significantly reduce the time and effort required to create and manage train schedules.
- **Increased Accuracy and Reliability:** Improve the accuracy of train schedules by minimizing human errors. The system is designed to reliably handle complex scheduling scenarios, ensuring more dependable service for passengers and cargo.

# METHODOLOGY

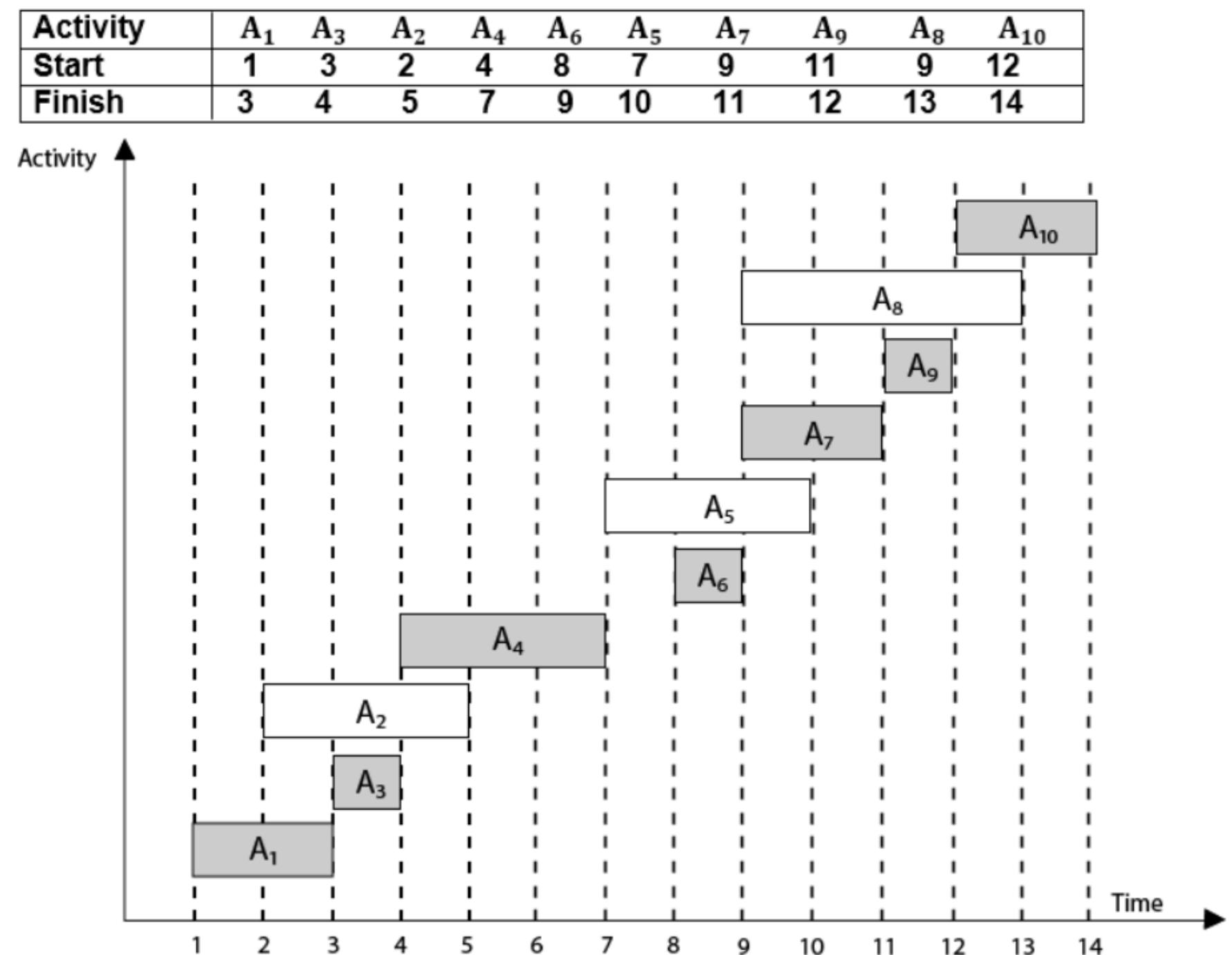
In this project we are creating a webpage for the train scheduling management where we have use the concept of the dsa of the sorting and the activity selection method for schedule the train by their time.

# ACTIVITY SELECTION PROBLEM

The activity selection problem is a mathematical optimization problem. Our first illustration is the problem of scheduling a resource among several challenge activities.

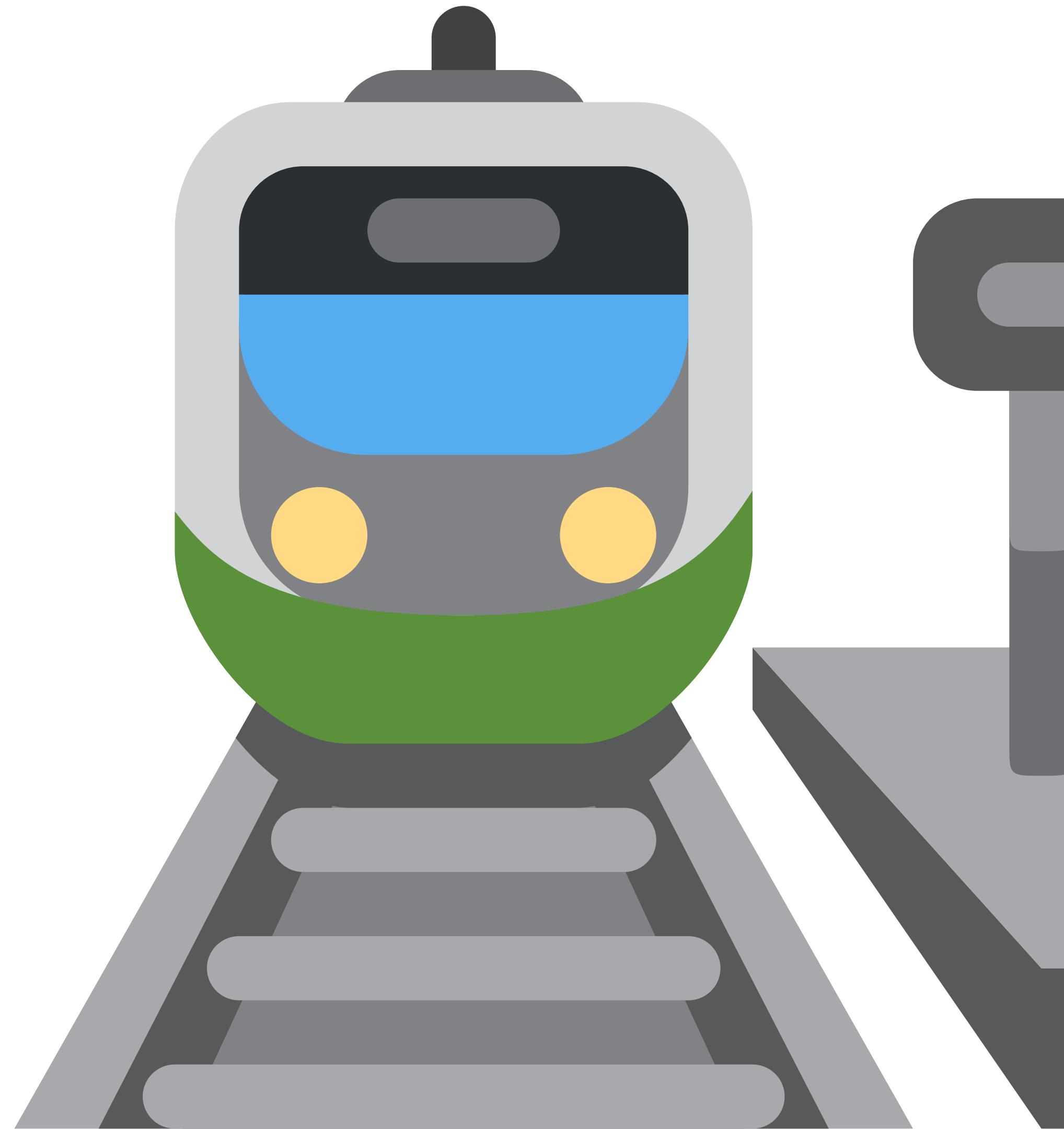
We find a greedy algorithm provides a well designed and simple method for selecting a maximum- size set of manually compatible activities

CONDITION IS == IF STRAT TIME IS GREATER THAN PREVIOUS ACTIVITY FINISH TIME THEN THAT ACTIVITY IS SELECTED



# APPLICATION

High-speed trains were modeled after the streamlined beak of the kingfisher bird to reduce noise and increase efficiency.



# FUTURE SCOPE

It saves the time for the people and help them to decide the time for their train



# ADVANTAGES

Railways timetable will offer you the scheduled time of the different trains which will help you to calculate the travel time for making a trip by train



# DISADVANTAGES

- Systems can experience technical glitches or downtime, which can be inconvenient for passengers.
- Long queues and wait times can be common, especially for last-minute bookings or when making changes to existing reservations.



# THANK YOU

