Table of Contents

[Problem Statement 2](#_Toc156315799)

[Objective: 2](#_Toc156315800)

[Design a Solution: 2](#_Toc156315801)

[Validate and Test: 3](#_Toc156315802)

[Fine-Tune and Optimize: 3](#_Toc156315803)

[Data Sets 3](#_Toc156315804)

[Inputs – Supply side 3](#_Toc156315805)

[Inputs – Demand Side 3](#_Toc156315806)

[Logic 3](#_Toc156315807)

Car Parking Assignment

# Problem Statement

During the handover of flats, the challenge faced by Rustomjee is ………

Causing customer dissatisfaction.

# Objective:

Creating a fair and transparent allocation system.

# Design a Solution:

The total time spent by residents in the process of leaving their apartment, reaching the parking floor, and driving out of the parking facility. This might involve considering the distance/time between apartments, parking spots, and the exit gate, as well as the time it takes to move through these spaces.

This problem falls under the category of Assignment problems (Hungarian Method), One common approach is to use optimization minimize algorithms to minimize the total distance/time spent by residents in the process of leaving their apartment, reaching the parking floor, and driving out of the parking facility.

# Validate and Test:

Once We have a solution, we will validate it against the constraints and requirements of problem. Test the solution with different scenarios to ensure its robustness.

# Fine-Tune and Optimize:

Depending on the results, we may need to fine-tune the parameters of algorithm or explore different optimization approaches to improve the efficiency of parking assignments.

# Data Sets

## Inputs – Supply side

1. Parking - parking no. (**Parking Slot)**
2. Podium Level – Level categorization based on preference. **(Podium)**
3. Distance / Time from Lift to Parking space. **(TravelTimeToLobby)**
4. Exit distance/time from parking to Exit gate. **(TravelTimeToExitGate)**
5. Exceptions (if any)

## Inputs – Demand Side

1. Unit No – format [Tower + Unit No] (**FlatNo)**
2. No. of parking **(NoOfParkings) –** How many parking to be allocated.
3. Unit Type – Premium, Super Premium, Aspirational

# Logic

1. Preferably all Dependent/Dependent Small is manual allocation.
2. Applying Hungarian Method, we will be able to allocate the overall distance/time minimum spent by residents from start point to end point.