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# User Manual

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This manual is your guide to explore,
understand, and interact with our modest yet
vibrant simulation

## INTRODUCTION:

- Welcome to the dynamic world of our Urban Mobility Simulation! This simulation project aims to provide you with an insightful glimpse into the intricate dance of passengers and public transport vehicles within a virtual city. As you embark on this journey, our modest endeavor unfolds the complexities of urban transportation systems, emphasizing simplicity and user interaction.

- This simulation represents more than just lines of code, it encapsulates the vibrancy of city life, showcasing the movements of passengers, the rhythm of vehicles, and the unexpected twists brought by disturbances. Whether you are a coding enthusiast, a transportation aficionado, or simply curious about urban dynamics, this user manual is your compass to navigate through the simulation and uncover the stories hidden within the digital streets.

## SYSTEM REQUIREMENTS:

- All you need is a standard web browser! No additional installations or complex setups required.
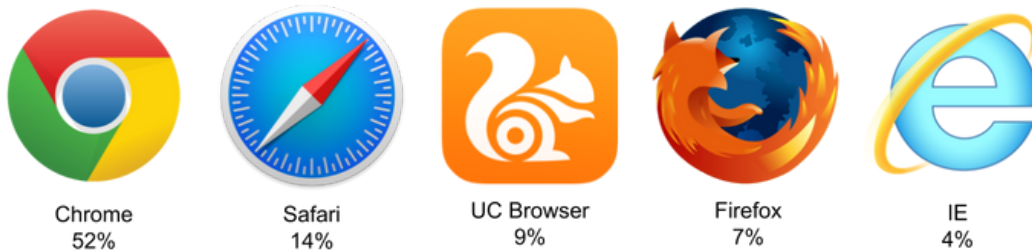
## PARAMETERS INPUT PAGE:

Interface Overview:

In this section of the simulation, you are presented with a user-friendly interface that allows you to customize the essential parameters of the virtual city. Take a moment to familiarize yourself with the key elements:

1. City Size:
   - Adjust the size of the simulated city grid using the designated input field. Experiment with different sizes to observe how the dynamics change across varying urban landscapes.

2. Number of Vehicles:
   - Set the number of public transport vehicles that traverse the city. Find the balance that best represents the level of mobility you want to simulate.

3. Number of Passengers:
   - Define the population of the virtual city by specifying the number of passengers. Observe how different passenger densities influence the overall flow of the simulation.

# 4. Number of Simulation Steps:

- Determine the duration of the simulation by inputting the number of steps. Each step represents a unit of time, allowing you to control the duration and observe changes over the specified period.

## City Simulation Parameters

City Size:

8

Number of Vehicles:

10

Number of Passengers:

4

Number of Simulation Steps:

4

Run Simulation

Simulation Visualization Interface:

In this interface, you'll witness the bustling activity of the virtual city in real-time. Take a closer look at the key features to enhance your understanding of the simulation:

1. Real-Time Visualizations:
   - The dynamic graphics illustrate the movements of passengers and public transport vehicles as they navigate through the city. Watch as the city comes to life with each simulation step.

2. Footsteps and Vehicle Steps:
   - Each passenger's and path is followed by calculating his foot and vehicle steps.
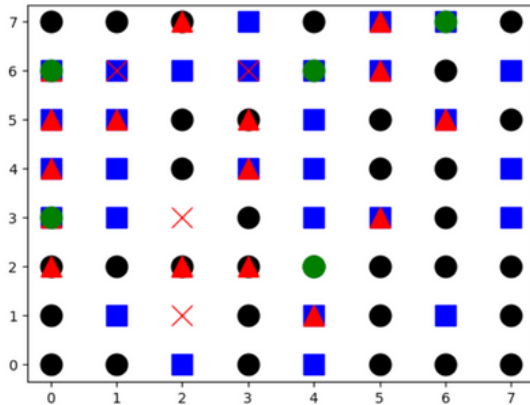
3. Color-Coded Elements:
   - Passengers, vehicles, and disturbances are color-coded for easy identification. Observe how different elements interact and influence one another within the simulation.

4. Dynamic Updates:
   - The interface updates in real-time, providing a continuous visual representation.

## Simulation Results

Simulation in progress. View the plot below:

### Simulation Statistics

| Passenger | Foot Steps | Vehicle Steps |
|-----------|-----------|---------------|
| Passenger 1 | 4 steps | 0 steps |
| Passenger 2 | 4 steps | 0 steps |
| Passenger 3 | 4 steps | 0 steps |
| Passenger 4 | 4 steps | 0 steps |
| Passenger 5 | 4 steps | 0 steps |
| Passenger 6 | 1 steps | 1 steps |

## CONCLUSION:

In exploring this simulation, you're delving into the basics of urban mobility. Adjust a few settings, watch the movements on the screen, and that's it—no need for grand expectations. Have a play around, see what happens, and enjoy the simplicity of this straightforward project. Happy simulating!