PHASE 3:PROJECT DEVELOPMENT

INTRODUCTION:

* Developing a traffic management project using Wokwi, a platform that allows you to simulate and program electronic circuits, can be an interesting and educational project. To create such a project, you'll need to use virtual components, microcontrollers, sensors, and actuators to simulate and control traffic. Here's a step-by-step guide to creating a basic traffic management system using Wokwi:

1.Sign Up for Wokwi:

* If you haven't already, sign up for a Wokwi account and familiarize yourself with the platform.

2. Select a Microcontroller:

* Choose a microcontroller board compatible with Wokwi. Arduino boards are commonly supported. You can use the Arduino Uno or other boards depending on your project requirements.

3. Design the Circuit:

* Design your traffic management circuit virtually on Wokwi's platform.
* This will include:
* Simulated traffic lights: Use LEDs to represent traffic lights.
* Simulated vehicles: You can create simple vehicle representations using LEDs or other components.

4. Code the Microcontroller:

* Write the code to control the traffic lights and simulate the flow of vehicles. Here's a basic example using Arduino code

5. Upload Code to the Microcontroller:

* Use Wokwi's interface to upload your code to the microcontroller. Ensure that the pins in your code match the connections in your circuit.

6. Test and Debug:

* Run the simulation to observe how the traffic management system works. Make any necessary adjustments to your code or circuit if needed.

7.Expand and Customize:

* You can expand the project by adding more traffic lights, pedestrian signals, sensors to detect vehicles or pedestrians, and create a more complex traffic simulation.

8. Documentation and Presentation:

* Document your project's design, code, and any unique features. Create a presentation or report explaining the purpose of your traffic management system.

CONCLUSION:

* This project can serve as an excellent way to learn about microcontrollers, circuit design, and simulation. It can also be a creative way to explore the world of traffic management systems.