

# Introduction to Automotive

## Report

### Lab 5: EV

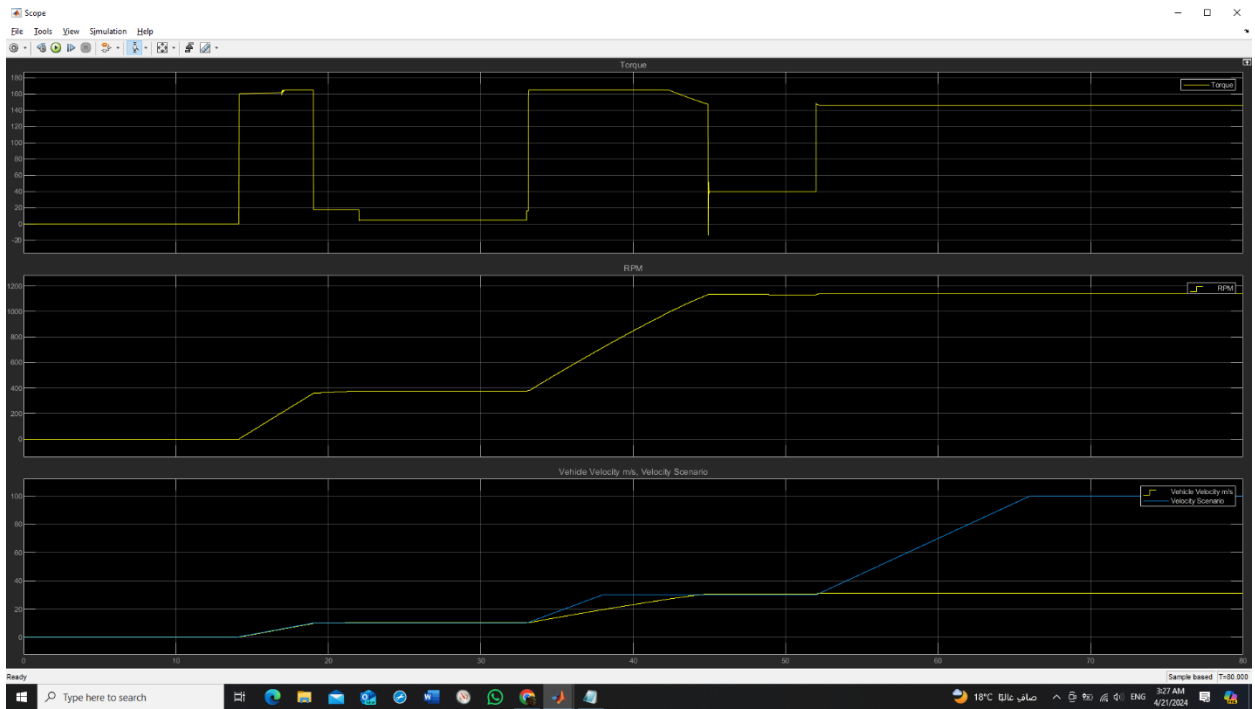
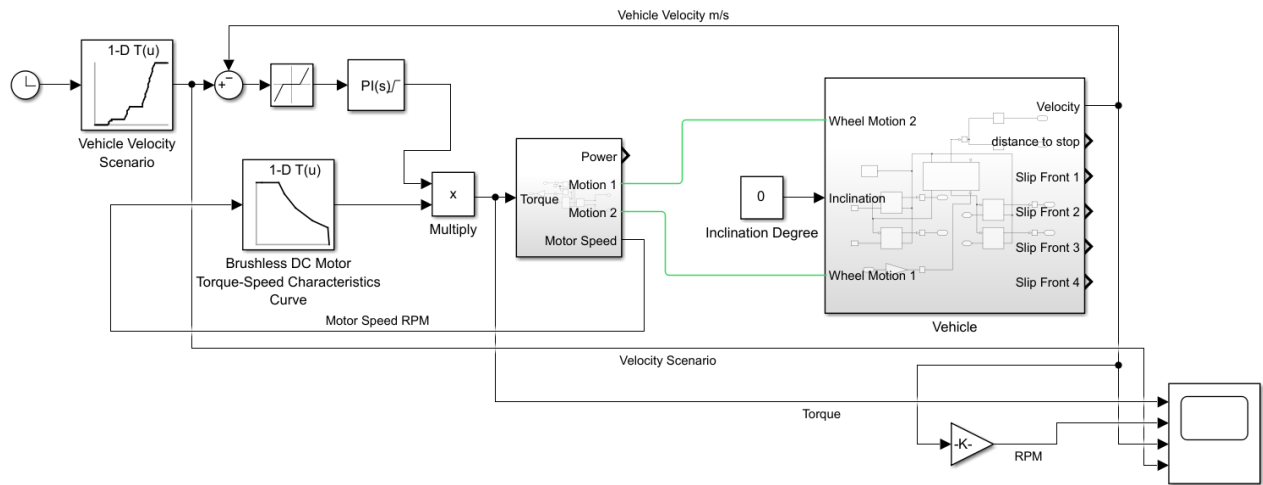


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## EV:

Electric vehicles (EVs) are revolutionizing the way we think about transportation by offering a cleaner, more efficient mode of travel. Unlike traditional gasoline-powered cars, EVs run on electricity stored in rechargeable batteries, eliminating the need for fossil fuels and reducing greenhouse gas emissions. With advancements in technology, EVs are becoming increasingly popular among consumers, offering not only environmental benefits but also cost savings through reduced fuel and maintenance expenses. Additionally, electric vehicles are driving innovation in the automotive industry, spurring developments in battery technology, charging infrastructure, and vehicle design. As the world shifts towards sustainability and renewable energy, electric vehicles are poised to play a vital role in shaping the future of transportation.

## MATLAB Snippets:



## Comments:

- At the end of the simulation there is an error between the scenario speed and the actual vehicle speed, which is because the DC brushless motor can't supply enough torque to reach this speed.
- The PI controller controls the actual vehicle speed to be the same as the scenario speed.