

809T Assignment 4

Autonomous Robotics

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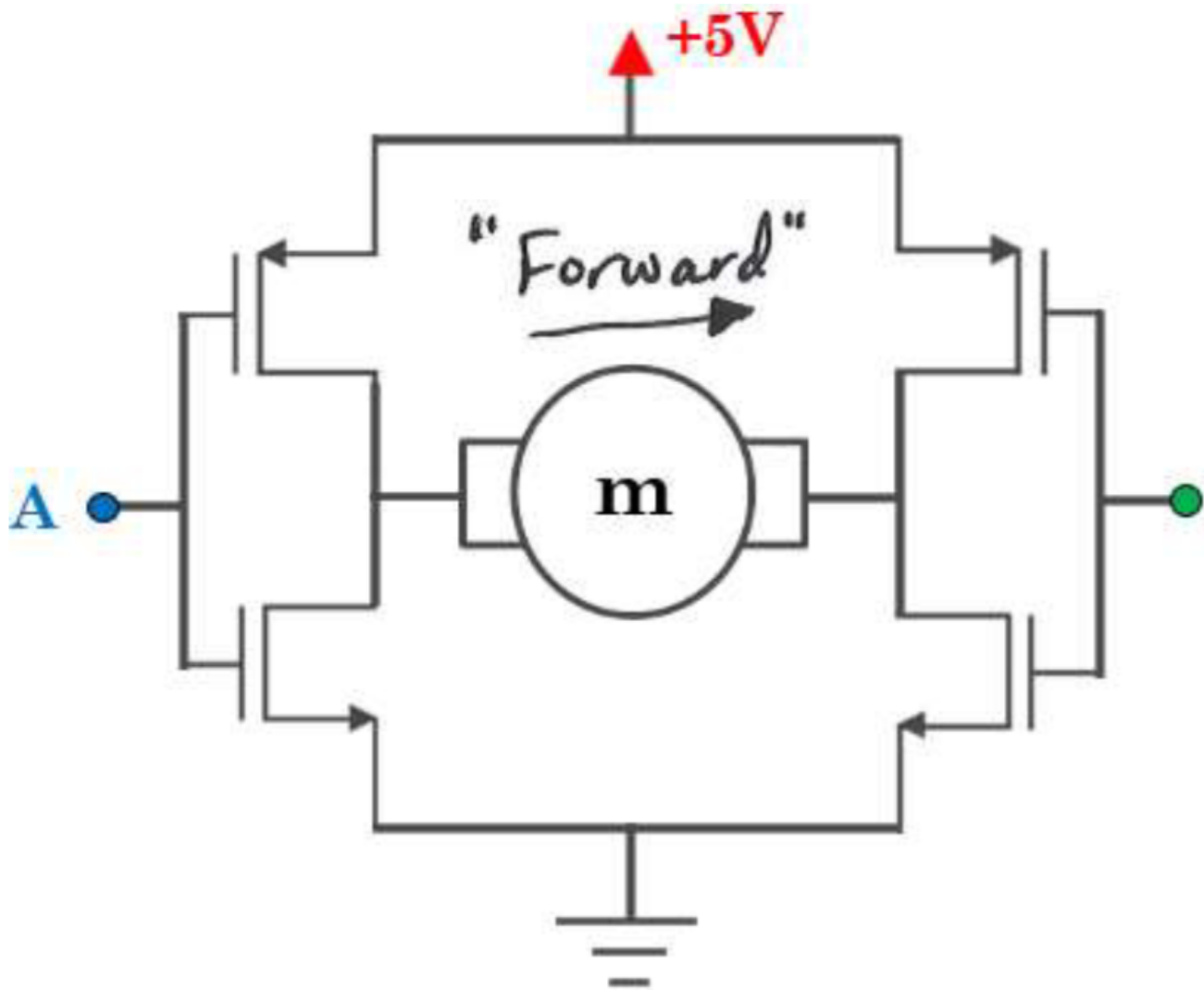
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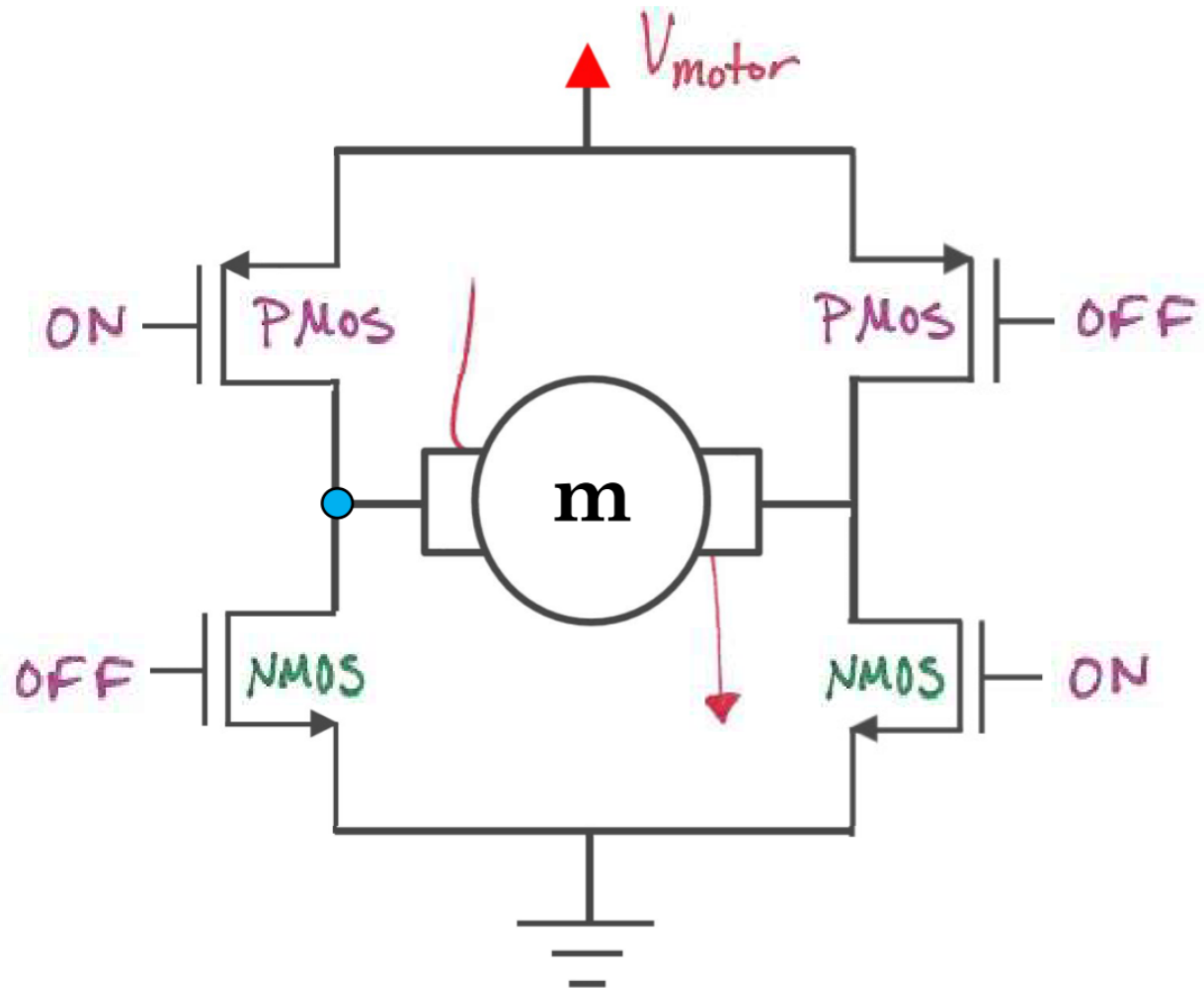
Chapter 1

In Class Exercise:

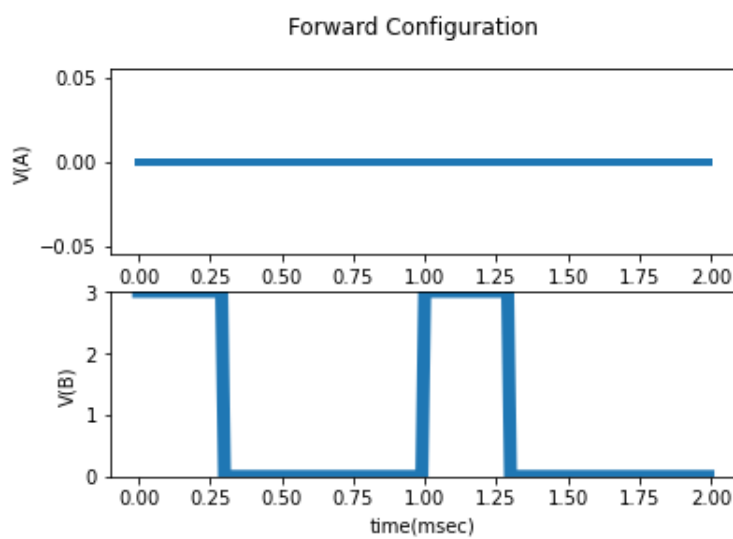


1.0.1 Forward Configuration:

From the above given information we know that the T1 PMOS AND T4 NMOS are ON for the forward configuration.



Duty Cycle

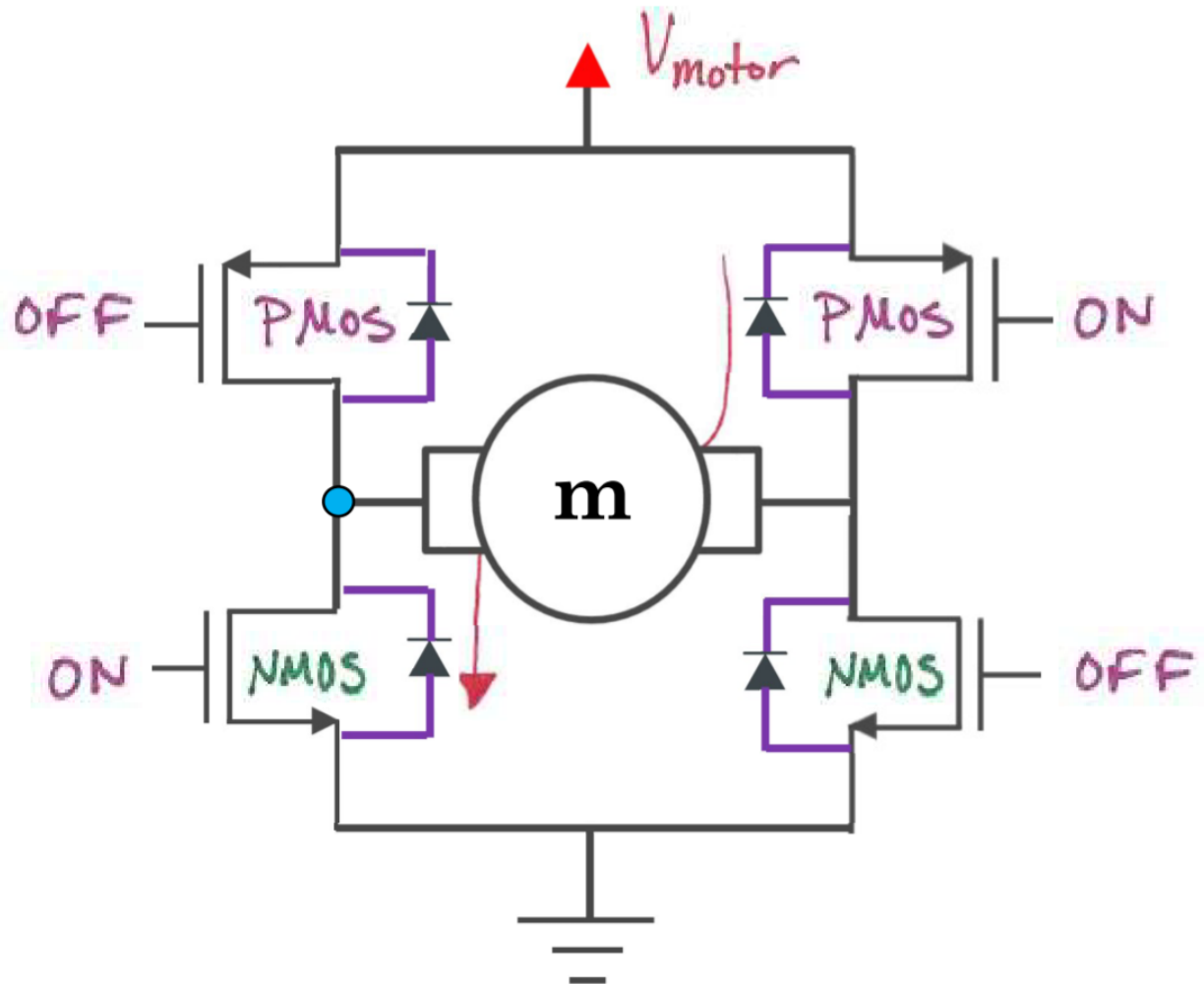


It is given that the speed is proportional to the voltage hence the 30 percent of the full speed would be given for 30 percent of the cycle to B which means 0.3 ms if a cycle is considered to be of 1 ms. As for A the entire signal is given as zero. As the voltage

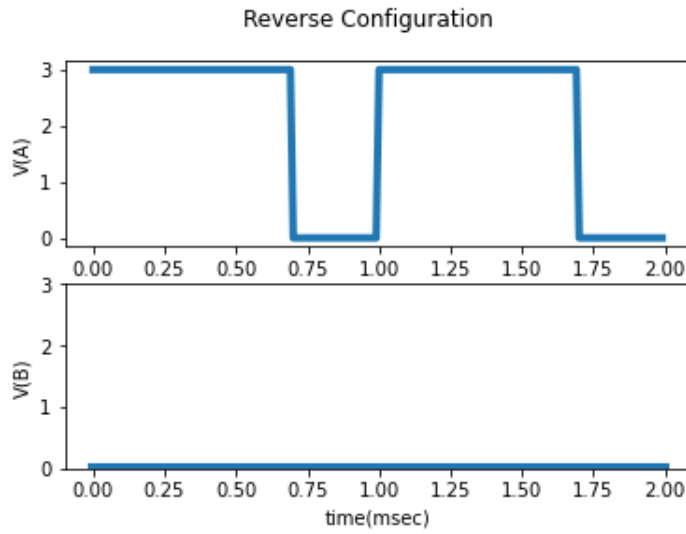
flows through only one channel which is B.

1.0.2 Reverse Configuration:

And the T2 NMOS AND T3 PMOS are ON for the reverse configuration.



Duty Cycle



It is given that the speed is proportional to the voltage hence the 70 percent of the full speed would be given for 70 percent of the cycle to A which means 0.7 ms if a cycle is considered to be of 1 ms. As for B the entire signal is given as zero. As the voltage flows through only one channel which is A.

Chapter 2

Teleop Video:

Video link: <https://youtu.be/Conv2TclMb8>