Speed control of BLDC motor using PID control implementation

PID Controller stands for Proportional – Integral – Derivative Controller. These controllers are among the most stable and accurate controllers used to control process variables.

We've decided to undertake a project to learn how to optimise a PID controller and how its constants affect the process variable. In this project, we aim to maintain the speed of a motor constant through a control loop feedback mechanism. When executed correctly, the hall effect sensor measuring the speed of the motor would complete the loop along with the PID implementation to maintain the speed of the output constant even if the resistance against the output increases.

Components required:

- Brushless DC motor
- LCD Display
- Magnets
- Hall effect sensor
- Motor driver
- Arduino UNO + Cable
- Breadboard + Jumper wires
- DC 12V Power supply adapter