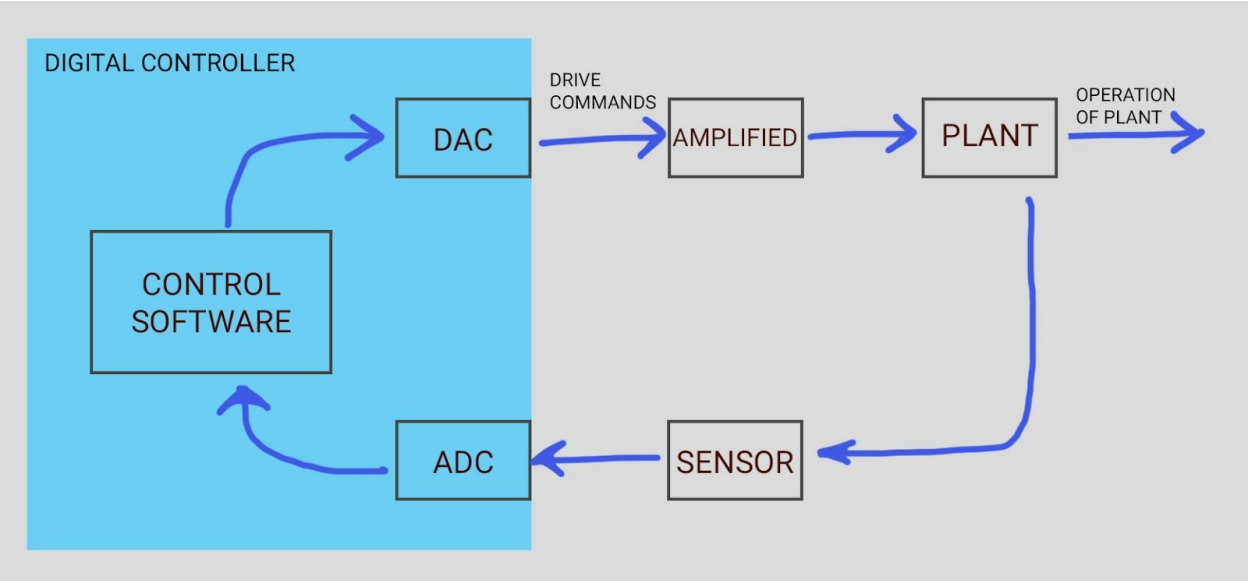
Definition : A control system
Example : A closed loop embedded control system



*DAC - Digital Analog Converter
*ADC - Analog Digital Converter

A sequences of values going out and a sequences of values coming back , this is the control model / theory.

We would model this using discrete mathematics as the real time running is far too large and complex.

The Loop may be open if the actions of the plant is not safety critical. If the system is the braking system of a car then the sensor needs to be fed back information from the plant. If the system is the watering system for a house plant then it's less important.

The plant is the thing that is being controlled and could stand in for anything except the core piece of software implementing the controller.

Key Characteristics of an Embedded System

- Designed to perform specific functions and not general purpose.
- In many cases the computing capabilities of the device are invisible to the engine.
- The function provided by the device is the only thing that matters.