

> CONTROL

- A word usually taken to mean *regulate*, *direct*, or *command*.

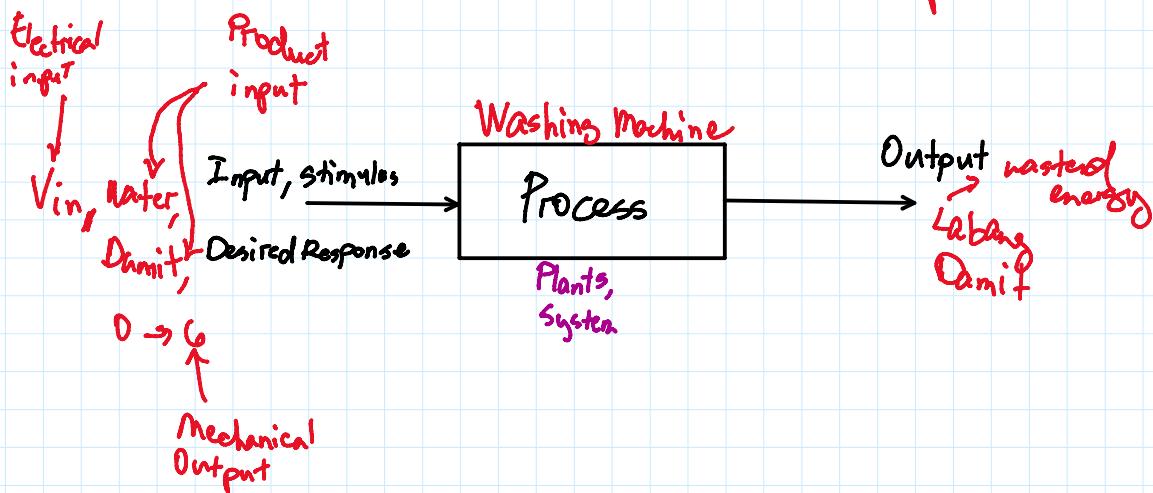
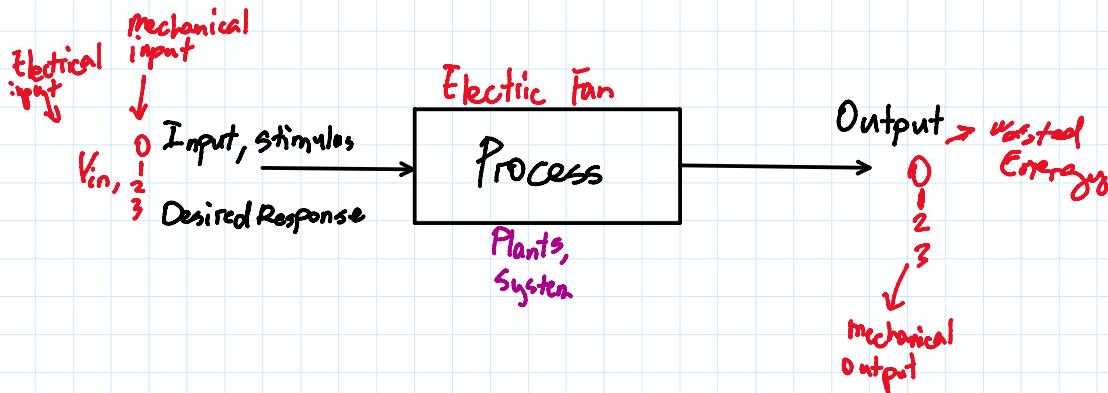
> SYSTEM

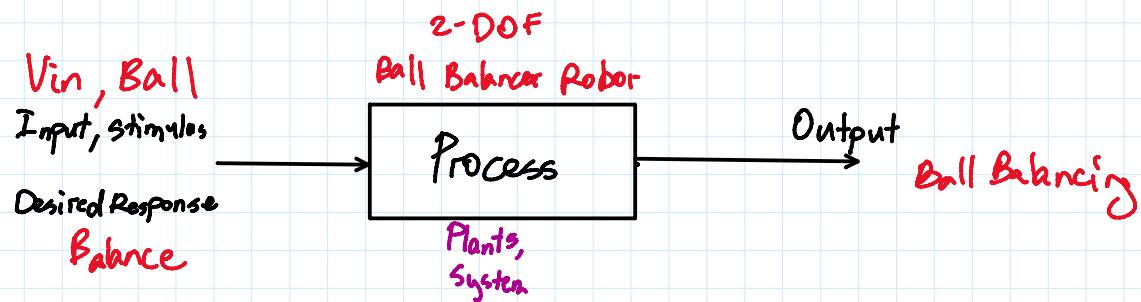
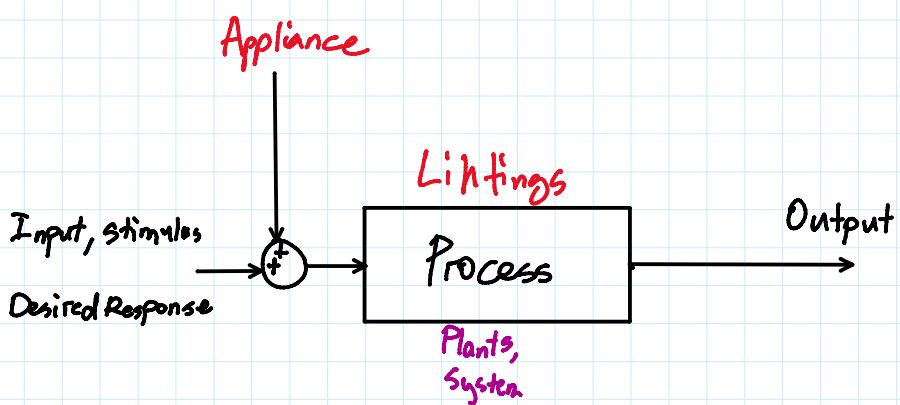
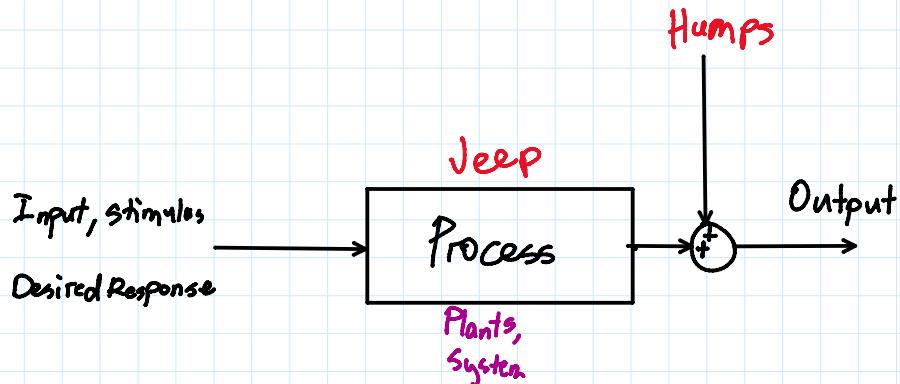
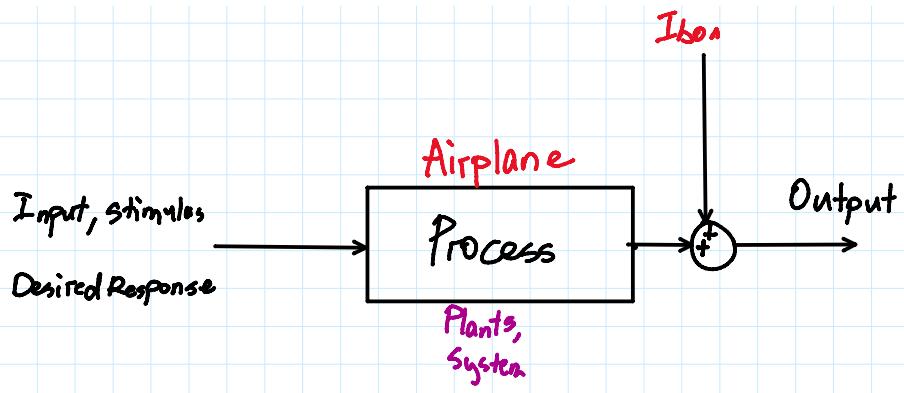
- It is an arrangement, set, or collection of things connected or related in such a manner as to form an entirety or whole.
- It is an arrangement of physical components connected or related in such a manner as to form and/or act as an entire unit.
- An interconnection of elements and devices for a desired purpose.

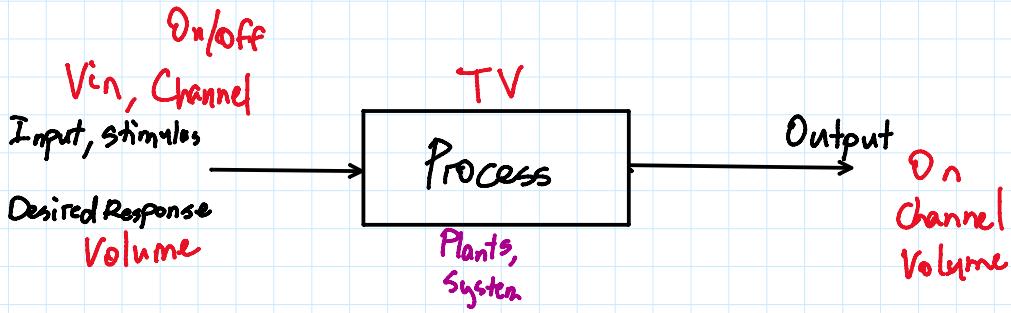
Control System

- > An arrangement of physical components connected or related in such a manner as to *command*, *direct* or *regulate* itself or another system.
- > In its simplest form, a control system provides an output or response for a given input or stimulus.

Block Diagram

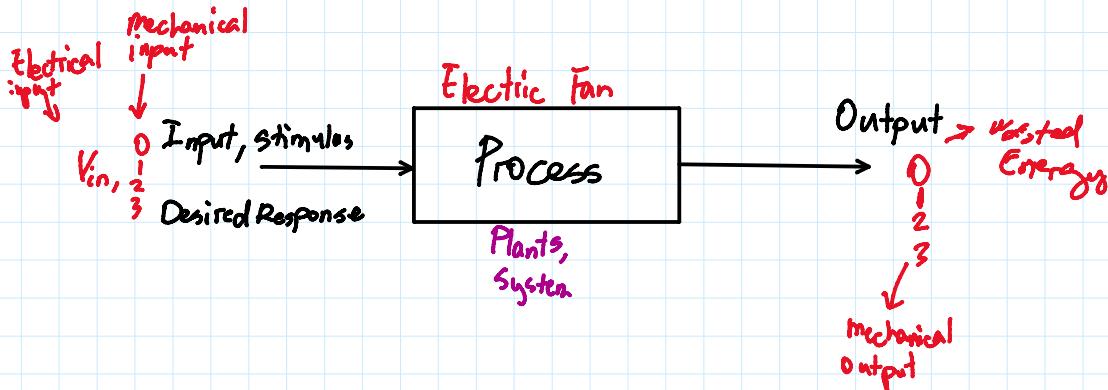






2 Categories of Control Systems

1) Open Loop

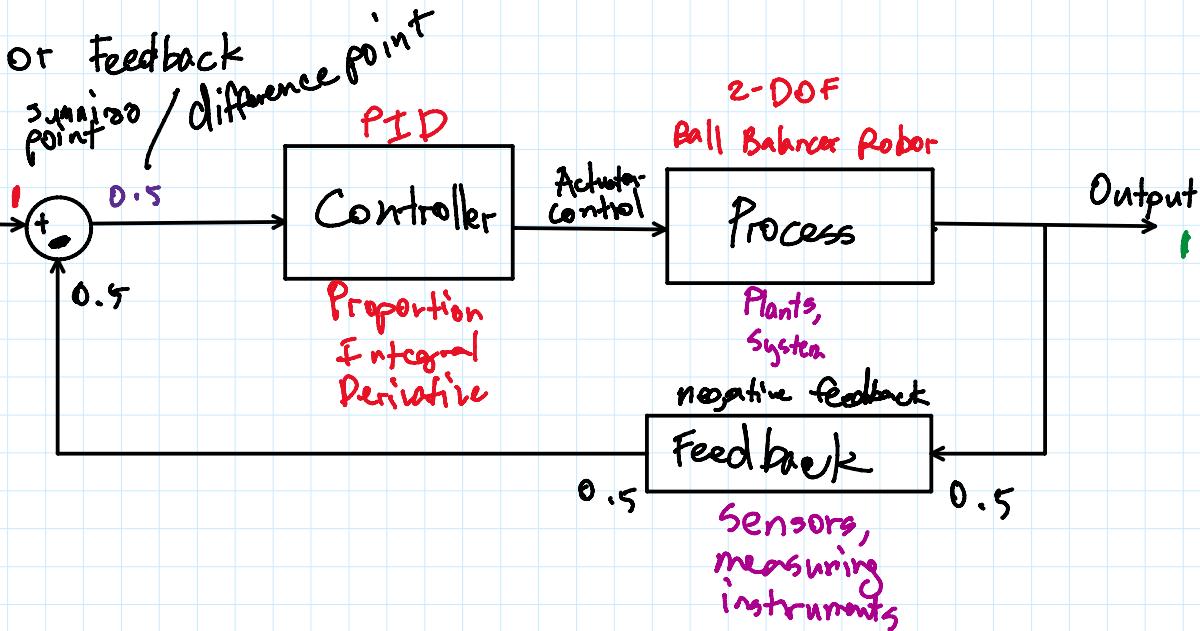


2) Closed Loop or Feedback

$0 \rightarrow 1 \rightarrow 2$

Input, Stimulus

Desired Response



Actuator \rightarrow mechanical part

Proportional \rightarrow tilts the motor to put the ball at the desired position

Integral \rightarrow fixes the error if the ball is still drifting

Derivative \rightarrow fixes the overcorrection of Integral,
slows the tilting