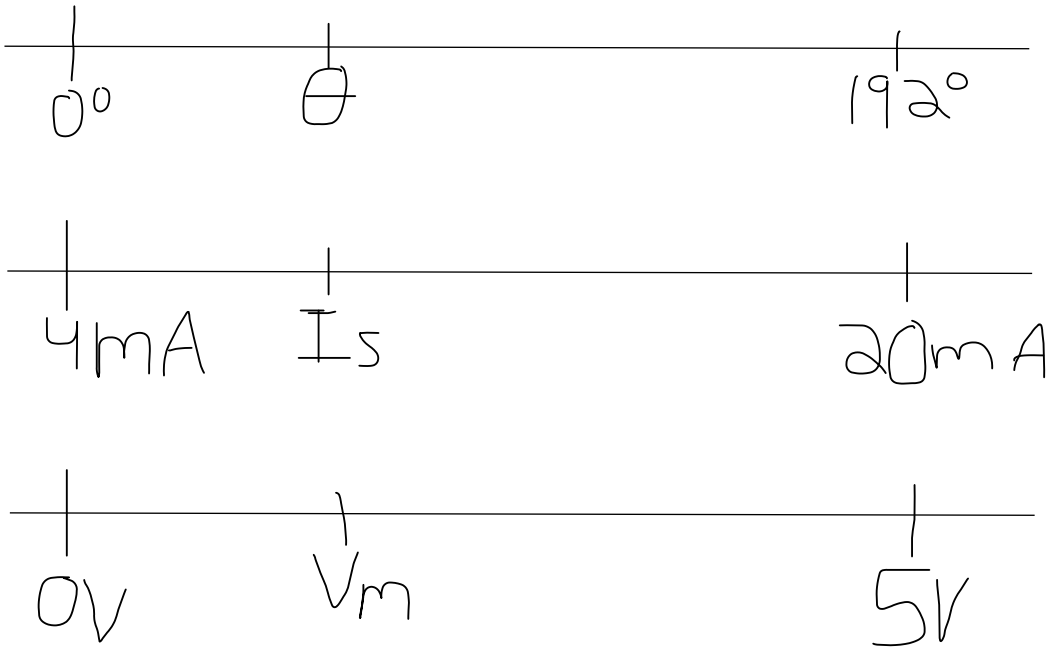
Maximum Power current consumption check-out

The maximum power current consumption of the HS-422 is 800mA and the maximum current consumption of the Arduino is 800mA. So, the Arduino cannot power the 6 motors, because it will burn out therefore the external power source is needed. The total maximum current consumption is 0.8*(6)+0.8 = 5.6 A, if we compare this value with the actual value of the adaptor(2A) we realise, that this doesn't work, so if we make this change we will need to find an other adaptor.

Maximum PWM current consumption check-out

The PWM pin of the Arduino emit a constant signal between 0 and 20mA, who contain an 8bits signal corresponding of the position send. The servo motor will have in entry the signal sends by the Arduino and the power input/output. So, the servo motor will adjust itself for that the power used for functionate the motor will be proportional to the angle signal and we will have the angle desired. Therefore, the angle will be expressed in a ratio between the maximum and minimum angle:



New Schematic