Line Follower robot movement pattern

Documentation

Requirements:

* Arduino UNO
* Selector (4051)
* Four channel push pull driver (L293D)
* LCD display (LM016L)
* 2x DC Motor
* Variable resistor (POT-HG)

Config:

* Open proteus
* Select all the components mentioned above and place them
* Connect all the pins according to the schema
* Add the HEX file to the Arduino UNO board
* Run simulator

Working Principle:

After starting the simulation, input would be passed through variable resistor to the selector. Selector will receive an input sequence to it’s pin X0,X1,X2,X3,X4,X5. Analog pin A1, A2, A3 of the Arduino will give the selector its options i.e. if the selection combination is 000 then X0 value of selector will be passed to A0, if the combination is 001 then X1 value of the selector will be passed to A0. After that depending on the sequence of input Arduino will decide what function to call i.e. move forward, backward etc. These functions are pre-defined with rotation speed of the motor. The movement of the robot and the sequence will be shown in a LCD display.