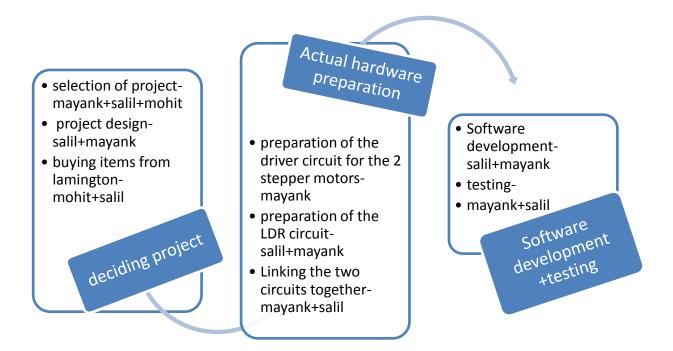
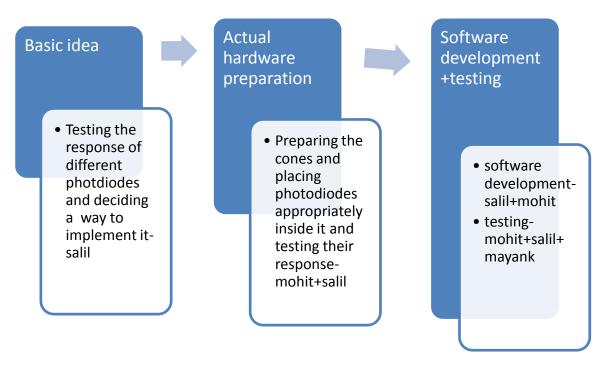
First Project (using the stepper motor)



Second Project (without using the stepper motor)



Algorithm (first project)

take 10 distinct voltage readings in 50 ms at each of the 4 LDR's compute the average readings(v1,v2;h1,h2) and compare the values



Note that we are adding 0.1 to the voltage readings while comparing because we intend to minimize random errors, and changes in readings due to them

if v1>v2+0.1; clockwise(); if v2>v1+0.1; anticlockwise();

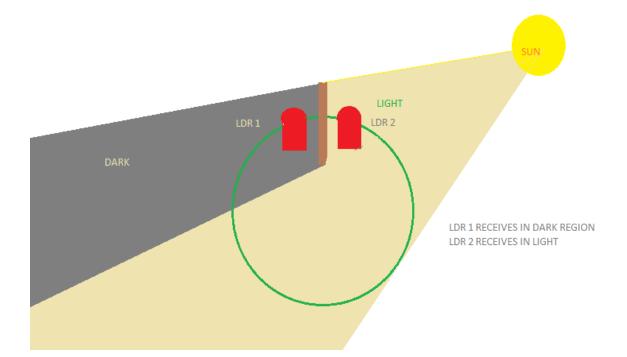
Repeat step 3 till |v1-v2|>0.1; Stop when |v1-v2|<0.1;

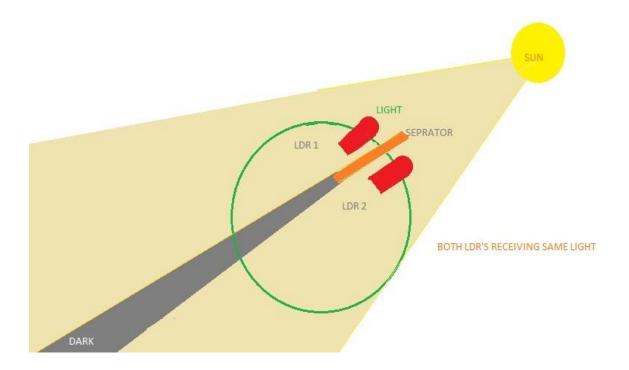


repeat steps 3 to 5 for the horizontal tracking

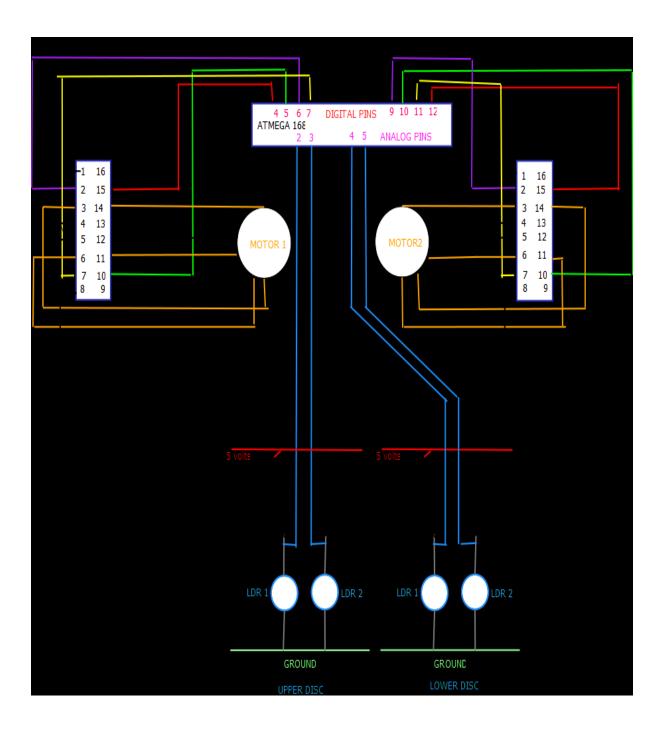
again continue with vertical tracking and hotizontal tracking

wait for 15 mins





Circuit diagram



Take average of 10 readings from all the 4 photodiodes. (a1,a2,a3,a4)

wait for 10 secs

Print "i " if ci>0.20 depending upon which ci is the highest if ci<0.20, print the value of " i" obtained in the previous cylce

> Take average of 10 readings from all the 4 photodiodes. (b1,b2,b3,b4)

compute ci=(ai-bi)/ ai we consider a change in the value of ci only if ci>.20. Other changes are considered random

Project 2

List of components

component name	number of components
Arduino board	1
L293D	2
Opamps (741)	4
LDRS(We tried many types)	4+4+4
Stepper motors	2
Photodiodes(We tried	4+4+4
many types)	
connectors	6
resistors	many
Acryline sheets	2

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