EP1000 Digital Fabrication Fundamentals
Module Project

Group: Gp XX

Adm No: pNNNNNNN

Name: Steven Chew

Project Title:

A Mood lamp which changes the lighting based on temperature.

What does it do?

This is a mood lamp in the shape of a lantern. Vinyl cut stickers on the sides give off shadows which enhance the mood. You can select a variety of mood colors or have a combination or random display to light up your room. You can also select the color of the mood based on the ambient temperature of the room.

What are it's features?

a. Provides different lighting moods
b. Select moods and functions using a push button switches
c. Side panels have vinyl cut patterns that enhance visuals
d. Mood color can be set using temperature sensor

What will you make?

CAD Design, Graphics	Lantern design, CPU housing, Panel patterns
Laser cutting Vinyl cutting	Casing for lantern, pixel mounting Side panel patterns
3D Printing	Neopixel mounting, CPU PCB mounting, switch holding
Processing	Clock, push-button presses, display, readings
Input devices	Push-button switches, LM35 Temperature sensor
Output devices	8 unit Neopixel WS2812 string

Bill of materials

Sn.	Qty	Item Description	Approx Cost
1	1	Arduino Nano	$8.05
2	8 pcs	WS2812 RGB Neopixel	$5.40
3	1	Push-buttons (push to make)	$1.00
4	1	3mm indicator LED	$0.20
5	1	LM35 Temperature sensor	$1.35
6	1	5V DC power jack	$0.30
7	1	A4 sized 3mm frosted acrylic sheet	
8	1	A4 sized vinyl sheet assorted color	

References:

1. Arduino Project Hub: Mood Lamp Project