

EP1000

Final Presentation

Assignment

Schedule

Typical Schedule		
Week 13~15	Integration of Project Final construction Write-up	Final laser cutting
Week 15~16	Complete: - Presentation slide - 1 minute video - Ownership card Write-up on project Complete updates on site	Ownership card template is available. Used to “show-off” your project in the gallery.
Week 16	Last date for website documentation updates	
Week 16 + 1	Physical Presentation	Refer to booking table

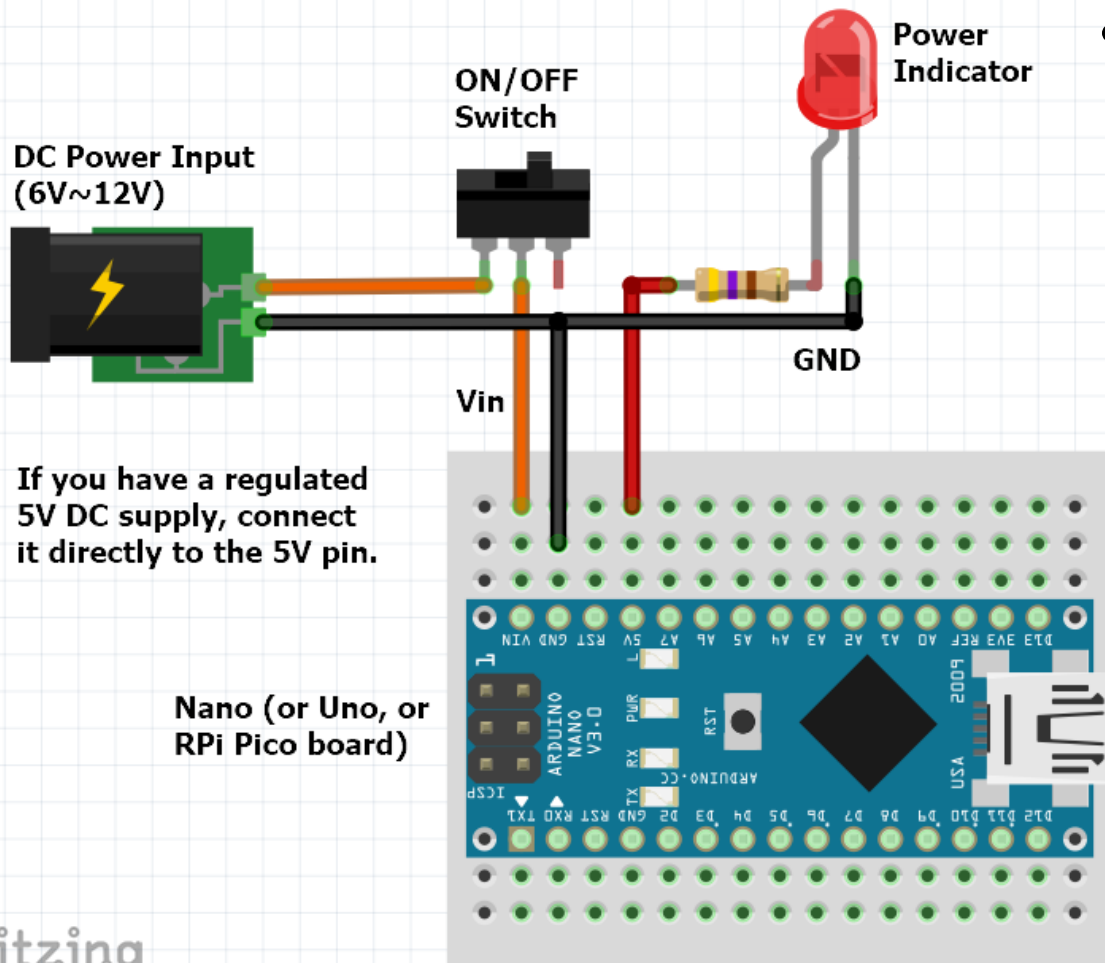
Project Integration

- Complete construction of your project
- Do minor touch-ups using glue, hand-drill
- Remember to include a Power socket
- Convert microcontroller board from Uno to Nano (ref: [Arduino UNO moving to Nano](#) shows how to transfer your project from the UNO to the Nano board.)

Power & Wiring

- Use a DC Power Socket (Ref : [DC Female Power Jack](#))
- Color code your wires for better visibility
 - RED (Vcc)
 - BLACK (Gnd)
- Use a multi-meter to check connectivity, voltages (Ref: [The Best Multimeter Tutorial](#))
- Use multi-core flexible wires, check the thickness of the wire
- Solder your connections (Ref: [Soldering Crash Course](#))
- Be tidy (Ref: [Breadboarding tips](#))

DC Power Supply



- You need to include
 - DC Power Supply (either external or battery)
 - An OFF/ON Switch
 - Power indicator

Final connections

- Power sockets, push-buttons, external connections
 - Hand-drill holes
 - Use hot-glue to mount loose connections
- Try to keep your wiring tidy
- Leave one side open for “fixes”
- Use tape to secure (temporarily) and note changes in your documentation

Documentation

- Documentation accounts for 40% of the marks (added up in all the sections)
- Include your RAW files
 - .f3d designs, .dxf, .svg (no need for .STL)
 - .ino, .cpp and code
 - Show the machine settings you use
- Balance the photos and text
 - Keep your images to 1024 x 768
 - You need descriptive text
- Explain how you built your project.

CA3 Summative Project

SNo	Description	Weightage
1	3D Printing	15%
2	Computer Controlled Cutting	15%
3	Embedded Systems (with Input/Output)	15%
4	Integration	20%
5	Presentation	15%
6	Documentation	15%
7	Innovation, Expertise, Work done	10%
	Total	105

Note: You can score a maximum of 100 marks out of 105. The 5 marks are bonus marks which may be gained in any section

CA3 Breakdown

- 3D Printing, Computer Controlled Cutting requires
 - RAW Design files (5%)
 - Implementation – settings, how you cut etc (5%)
 - Documentation on the process (5%)
- Embedded systems
 - Requires use of a microcontroller, preferably Nano (5%)
 - Uses at least 1 input device (5%)
 - Uses at least 1 output device (5%)

CA3 Breakdown 2

- Integration (15%)
 - How well you fit your project together
 - Power, Wiring, Placement & Organisation
- Presentation (20%)
 - [Presentation Slide](#) (5%), [Video](#) (5%)
 - Oral Presentation (10%)
- Documentation (15%)
 - Instructions & How-to, Readability, Use of images
- Innovation, Expertise (10%)
 - Show us that you have learnt and done something well!


Final Presentation 1

- Presentation Slide

- **Single** slide showing your project
- Must include:
 - Title of your project
 - Your Name, Course, Course Code: EP1000
 - It's purpose and how you achieve it
 - Any interesting features
- Format: **.PNG** file 1920x1080 pixels.

- Presentation Video

- Approx. 1 minute video (in landscape mode) on what your project does, how it works/operates, how you created it



Follow the links
for an example

Final Presentation 2

- Registration site (link to be provided later)
 - Register for your presentation date/time-slot
 - Upload your presentation slide (.png), rename it to {name}.png
 - Upload your video (or provide a link to YouTube)
 - Upload your Project Owner Card
- Be present at least 15 minutes earlier
- Bring and prepare your project for demonstration

EP1000

Final Presentation

End

1920 pixels

1080
pixels

Rainbow Digital Clock

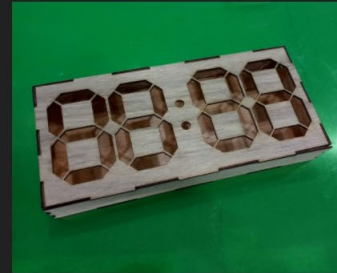


This is a simple yet aesthetic clock that is different from normal clocks as the color of the digits can change.

Input: DS3231 RTC
Output: Neopixel LEDs

How it works: Neopixels are all connected together and they will light up according to the time of the RTC

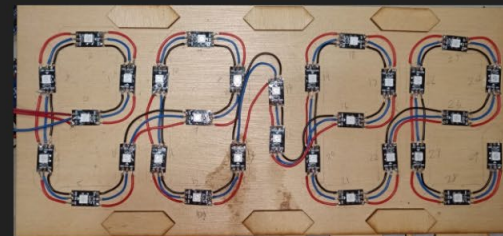
Lazer Cut Parts: Box Casing



3D Printed Parts: Box Support



Neopixel Wiring



Muhammad Farhan DBEN
EP1000
Sem 1, 2020

MUST include

- Title of your project
- Your Name, Course,
- EP1000, Year/Sem
- It's purpose and how you achieve it
- Any interesting features
- Saved as a .PNG file
(e.g. MFarhan_presentation.png)
- Size 1920x1080 pixels



Sample Video



YouTube: [Rainbow Digital Clock](#)

