EP1000

Final Presentation
Assignment

Schedule

Session 20/21 Sem 2		
16th August 2021	Integration of Project Final construction Write-up	Final laser cutting
23rd August 2021	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.
28th August	Last date for website documentation updates	
30th – 31st August 2021	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](#))

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 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

Rainbow Digital Clock

Lazer Cut Parts: Box Casing

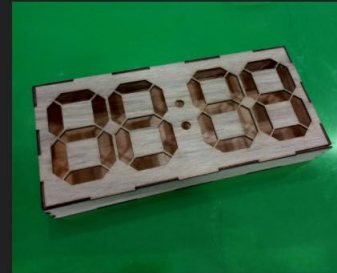3D Printed Parts: Box Support

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

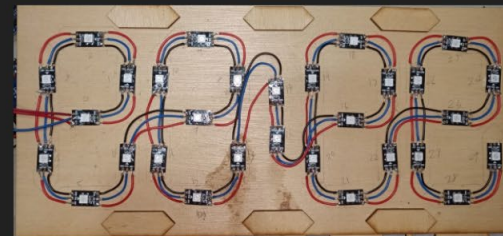How it works: Neopixels are all connected together and they will light up according to the time of the RTC

Neopixel Wiring

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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](#)