

# Release The **Clutch!**

## Target:

### Practice:

- Basics of electronics

## Description:

You will be divided into sub-teams; each team consists of 6 to 7 members. Work with your teammates to design the following circuits:

- 1- A single traffic light circuit
- 2- A IR module using op - Amp

These two circuits must be implemented using physical components and you will be presenting your project at a specified date ***after the deadline.***

***Bonus: batteries are lava!***

## Project presentation:

### Description:

To showcase your great projects, a presentation must be made.

You must follow the following rules:

1. Each member in the team must participate in the presentation
2. The slides must include every little thing about the project; from the input to the output and how every component contributes to the output of the circuits
3. All calculations and timings in the circuit must be included and well explained
4. Videos and pictures must be used to document your work in the presentation

## Submission:

**Send a compressed file named “Project I – Group ID” with the following data:**

- Your proteus simulation file for each circuit
- **A very brief** video of the circuit in action(**Hardware**)
- A presentation file named “Project I Presentation – Group ID”

**Note:** Make sure the size of compressed file does not exceed **25Mb**.

## How To Submit Your Project:

1. Go to thread of the task in tasks channel in discord and use command `/send_project`  
**Note:** Make sure the window of thread is Fullscreen
2. Enter the Project number which is **Project 1**
3. Choose file you want to upload then hit **Enter**

## Evaluation:

**Teamwork** → 3 points

**Hardware** → 12 points

**Simulation** → 5 points

**Presentation** → 5 points

## Rules:

- Each team member must contribute in the project, no solo work permitted
- Teamwork
- A minimum of one offline meeting must be held
- The hardware presented must match the simulation
- Teamwork
- If you are brave enough for the bonus, kindly do not get yourself killed
- Run!

## Stores:

- [Circuits](#) (Recommended)
- [جرجس](#)

## Workspaces:

- [Supernova](#)
- [EMLE Notes](#)

## Deadline:

**4 Days** //Thursday – Dec 14<sup>nd</sup> at 23:00