



UNIVERSITY OF
ILLINOIS
URBANA-CHAMPAIGN

ECE 198 JS

Electrical & Computer Engineering

Lecture 2

Lecture (1005 ECEB)

- Draft Proposal
- Mini-Project
- Circuit Theory; Falstad Circuit Simulator

In Lab (1001 ECEB)

- Mini-Project (~30 min)
- Teams + Ideation (~20 min)
- Draft Proposal (~20 min)

Attendance Form

Sign in with this QR Code:



Project Proposals

Draft Proposal (in blue)

- Title, Names, netIDs
- Abstract ➤ State your objective clearly in one paragraph
- Background Information (include Past Work if continuing a project)
- Project Outline ➤ Inputs, outputs, and processing in a Flow Chart
- Planned Timeline & Milestones
- Parts List
- References ➤ One or two references as a starting point

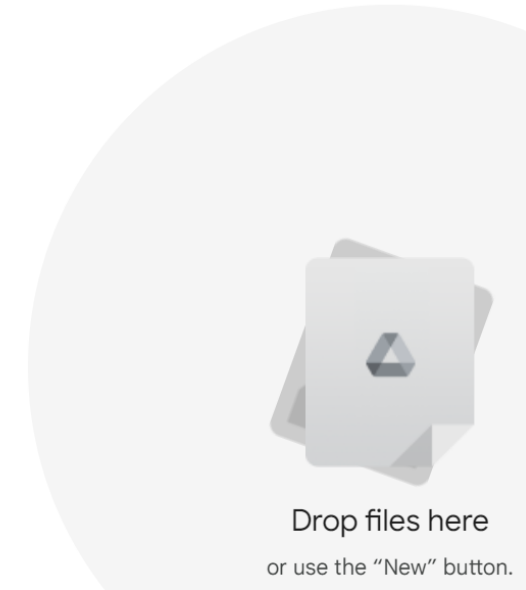
Google Apps @ Illinois

<https://help.uillinois.edu/TDClient/42/UIUC/Requests/ServiceDet?ID=135>

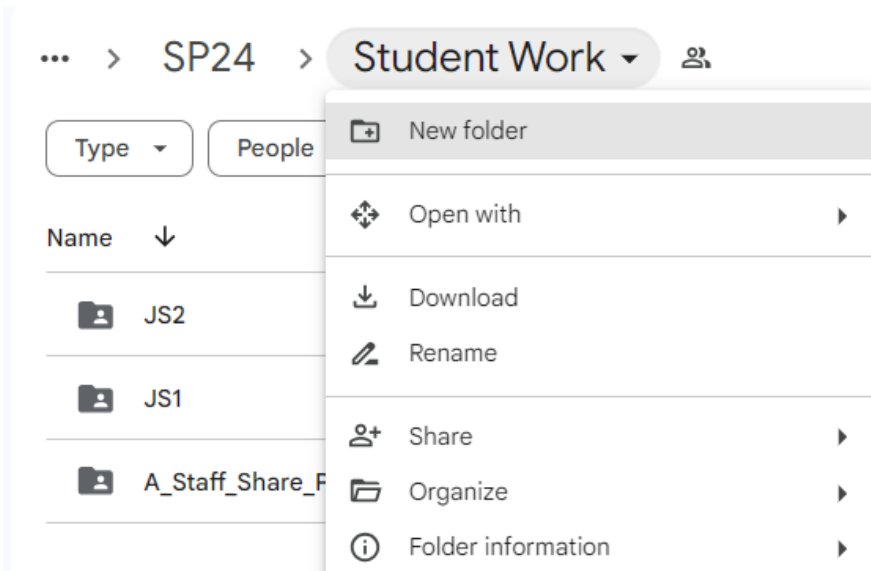


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Draft Proposal: Due at Google Docs Friday 1/26 at midnight



https://drive.google.com/drive/folders/1yXrSYoLJpqP_aZLxBsu_tB8wT-aFuqRG?usp=sharing

1. Right-Click within the “Student Work” folder and create a New folder with an abbreviation of your project name. Example: *ThermoGlow*
2. Then, create a Google Doc inside that folder called *draftProposal*.
3. In your draft proposal, add the details requested in these slides.
4. At the end of the proposal (and every document produced in this course), always include a section that highlight the contributions of each teammate. How did each contribute to research and write the proposal?

Note: you will use the Google Drive folder you create all semester to share documents with the staff.


Draft Proposal: Due at Google Docs Friday 1/26 at midnight

Today's Mini-Project: ThermoGlow



... > Student Work > A_Staff_Share_Point

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Name	↓	Owner
 MiniProject_ThermoGlow.pdf		 me

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Today's mini-project will require many parts and many tools. Expect to request help early and often as you build and explore.

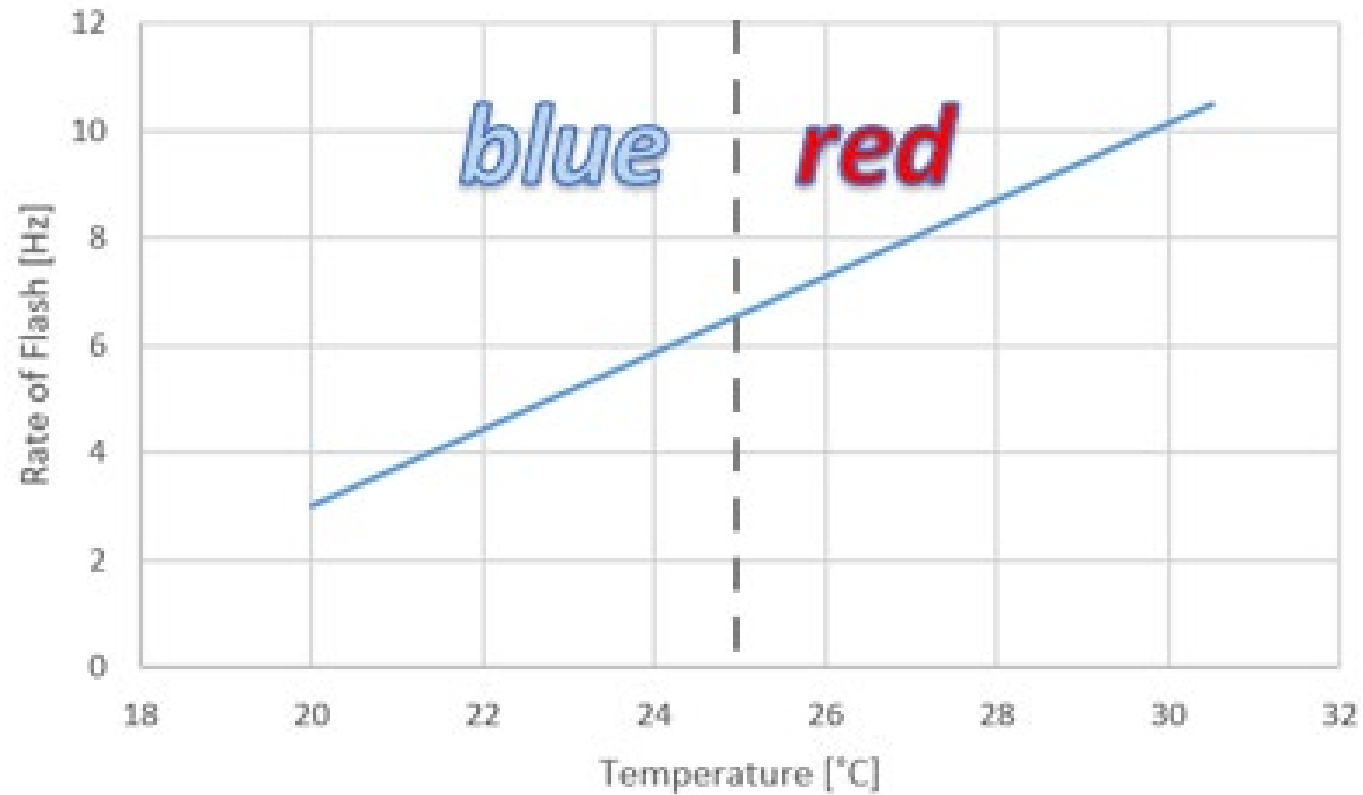


Figure 1: Desired LED behavior plotted vs. temperature.

Today's Mini-Project: ThermoGlow

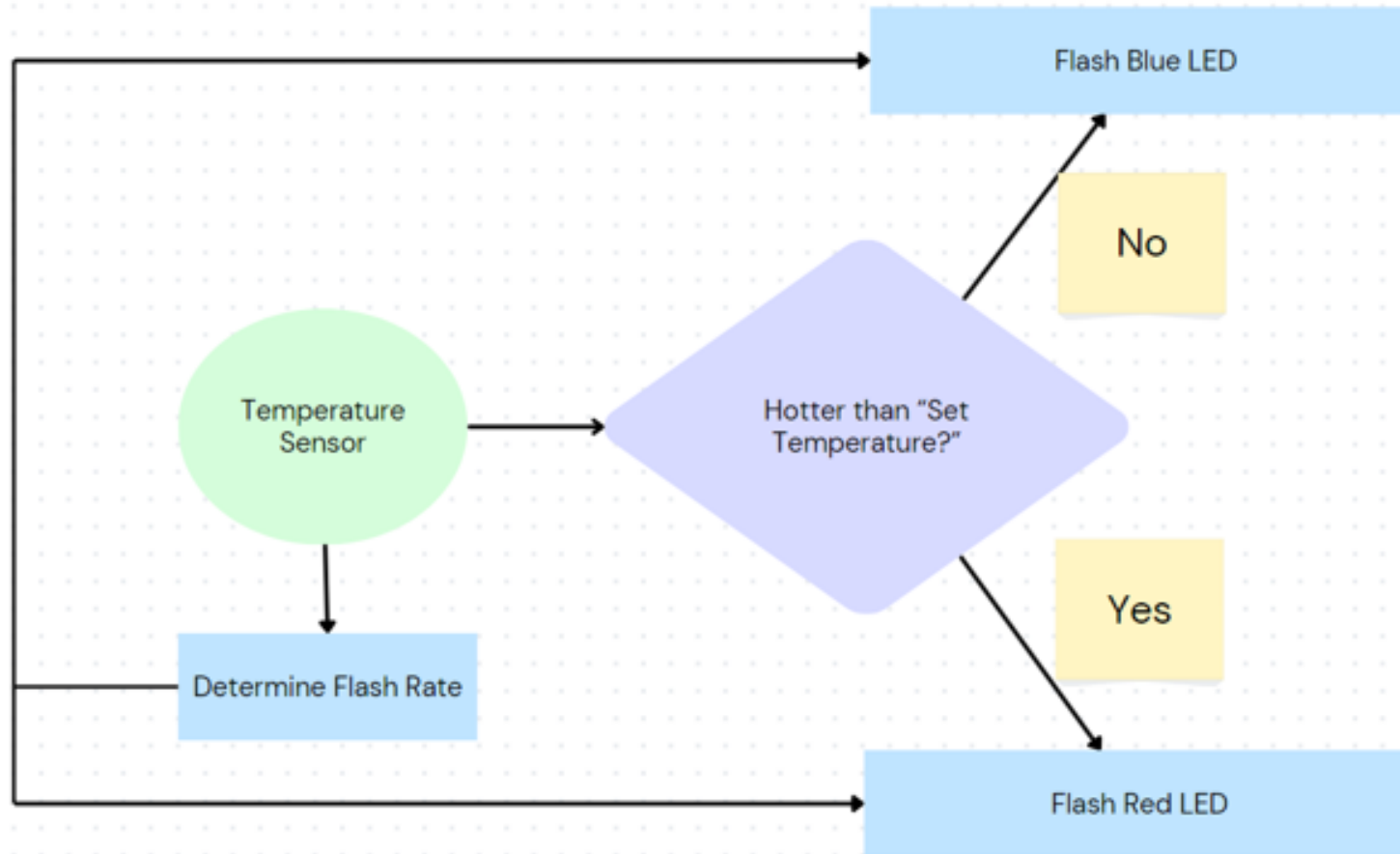
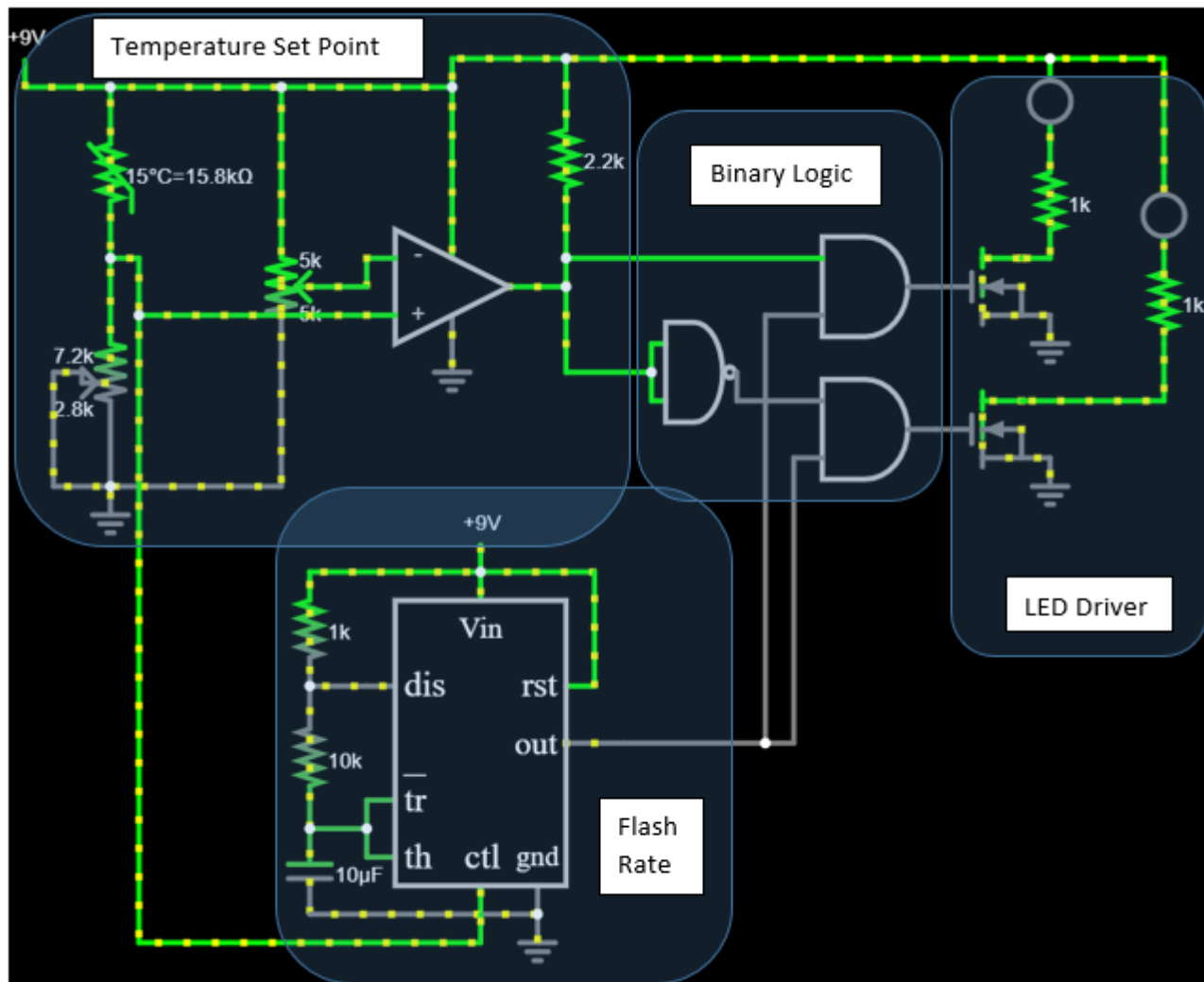


Figure 2: A Flow Chart to explain the processes used to achieve our project goals.

Flowchart tutorial: https://courses.engr.illinois.edu/ece110/content/labs/archive/Skill_Flowcharting.pdf



ThermoGlow Mini-Project

Timeline; Milestones:

- Jan. 23/25; Temperature Set Point
- Jan. 30/Feb 1; Flash Rate
- Feb. 6/8; Binary Logic and LED Driver

Be warned, there may be a few "errors" to correct along the way! 😊

Figure 3: A circuit design to implement the LED behavior of Figure 1 through the plan of Figure 2's flow chart.



Falstad Circuit Simulator: Live Tutorial

<https://www.falstad.com/circuit/>

Covered in Tutorial:

- Series resistances and voltage divider rule
- Falstad simulator menu and shortcuts



Thank you!