Iteration 3 Report
EECE 2140: Computing Fundamentals
Interactive Logic Circuit Simulator

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Important: Each student must submit individually, even though the project is completed as a team. Prepare this report in **Overleaf** and export it as a **PDF** for submission.

GitHub Link: `https://github.com/davidcharles7/EECE2140_Final/tree/main`

Contents

1 Summary of Team Progress and Development Updates

For Iteration 3, we focused on getting the basics of our project coded and onto Github. After solidifying our scope and objectives in Iteration 2, we were able to assign tasks to our members and begin to actualize our ideas. We began with creating the logic gates classes and evaluation logic. We also began creating the GUI with the basic layout and settings to be used throughout the development of this project. This included the creation of sprites for inputs, outputs, and gates to be dragged and dropped throughout the program.

For our next checkpoint in Iteration 4, we will be solidifying the layout of our GUI, inputting the gate logic to work with the sprites, adding pop-up info for the logic gates, and will eventually work on the generation of truth tables for the user created circuit.

2 Implemented Core Features

Logic for Gates

Goal: Create logic ideas .py file that will be attached to the sprite gates **Implementation:** Created classes for each gate that takes two inputs and outputs a 1 or 0 based on the inputs given by user (ex. when an AND get receives a 1 and 1, it will output a 1). **Validation:** Verified with test inputs ensuring gates work properly

GUI First Draft

Goal: GUI opens and runs given .py files in GitHub **Implementation:** Added settings and allow display screen to open up to easily implement future additions to the project **Validation:** Running the file will open the GUI without any errors.

Add Sprites

Goal: Create sprites images of logic gates **Implementation:** Take already created images of logic gates to be used for the sprites and create separate .py file to **Validation:** Make sure sprites appear properly and no errors occur when implementing the feature with already working text.

3 Challenges and Resolutions

- **Challenge 1:** GitHub Difficulty with shared files **Resolution:** With re-sharing the repository and adjustments on individuals ends, we were able to get the repository to work with all members.
- **Challenge 2:** Calling gates during testing **Resolution:** Trouble with calling the gates during user testing, needed to add ".upper()" to make sure the gates are always in all caps

4 Leadership Rotation and Team Contributions

Leadership Summary

Week/Span	Leader	Responsibilities	Key Outcomes
Week 3	Kyra	Created logic gates coding	Created the baseline of the project
Week 4	David	Implemented GUI and Settings	Get the GUI working so that layout
Week 5	Bethany	Research new features and create Overleaf	Added documentation and informat
Week 6	David	Added Sprites	Addition of sprites for user to drag

Individual Contributions

Team Member	Contributions (Technical / Documentation)	Hours
David Charles	Implemented GUI and created Github Repository	8 hrs
Kyra Pallod	Coded basic logic gates	6 hrs
Bethany Davies	Researched additional features suggested by Prof Nafa and Created Overleaf	6 hrs

Statement by the Individual Submitter

I, **Bethany Davies**, confirm that the above table accurately reflects my personal contributions during Iteration 3.

I, **Kyra Pallod**, confirm that the above table accurately reflects my personal contributions during Iteration 3.

I, **David Charles**, confirm that the above table accurately reflects my personal contributions during Iteration 3.