**Project Title:**

***Logic Designer***

**Project Members:**

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**System Introduction:**

Our project will simulate the outcomes of either simple or complex logic gates mixed with different chips. It will generate truth table for the user created circuit. Before simulating the application will check the whole circuit for any errors. We need to know about the following points:

* Vast knowledge of logic gates and operation of chips.
* Detailed information of the chips used in logic circuits.
* An IDE like JAVA.
* Knowledge about JAVA GUI.

**Requirement analysis:**

* User can design, develop logical circuits virtually.
* User can freely develop knowing that all chips are working.
* User can experiment with different kind of chips without causing any accident.
* The output generated will always be accurate.

**Development Plan:**

* Create a GUI where any gates or chips can be dragged and dropped from a menu.

**GATES: AND, OR, NOT ;**

We will also include various input devices (i.e. switches) and output device (LED) and wires to connect one object with another. If needed, we will add more CHIPS and necessary devices.

* All gates and chips will be created as object.
* When user connects an object with another we will merge inputs and outputs where they are necessary.
* When user compiles we will check if all objects got their required inputs.
* If everything is valid we will simulate the output.
* During runtime if there is such a case where propagation delay will come into play we will take necessary actions according to convention.