CSC 402-02 Assignment #2

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Original Due: 4:25 PM, Thursday, September 30
    Extended: 4:25 PM, Thursday, October 7
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You must complete this assignment by yourself. You cannot work with anyone else in the class or with someone outside of the class. You are not allowed to copy solutions from the world wide web.

Submission

i. Take a screen snapshot of your UML diagrams, copy and paste the UML images into a Microsoft Word document named **A2.docx**

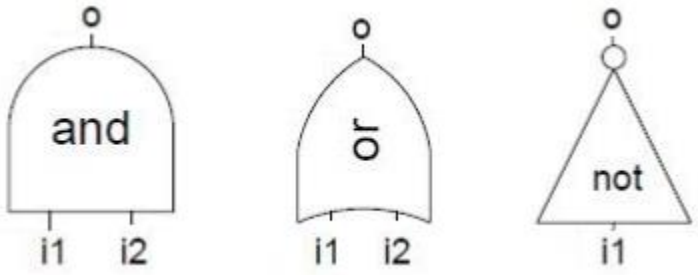
ii. Add a header (below) to your **A2.docx** file. You must replace **<*Your Full Name*>** with your full name

On my honor, **<*Your Full Name*>**, this assignment is my own work. I, **<*Your Full Name*>**, will follow the instructor's rules and processes related to academic integrity as directed in the course syllabus.

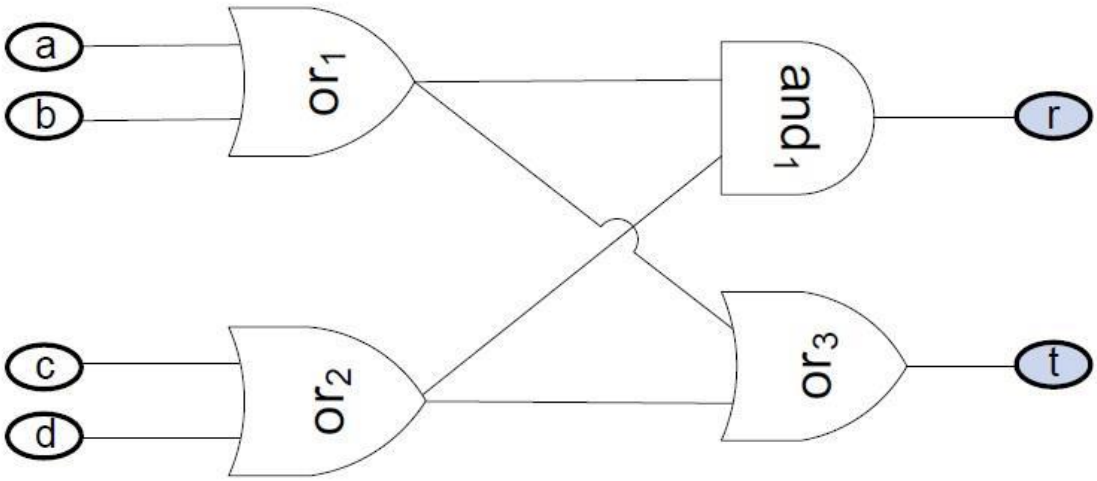
iii. Submit **A2.docx**, **Bank.dia**, **Logic.dia** and **Category.dia** through D2L

(1) (10 points) Convert the provided Java program (BankAccount.java) to an equivalent UML diagram (named **Bank.dia)** using Dia Diagram Editor.

(2) (10 points) A logic diagram consists of the following symbols (AND, OR, NOT) called **gates**:

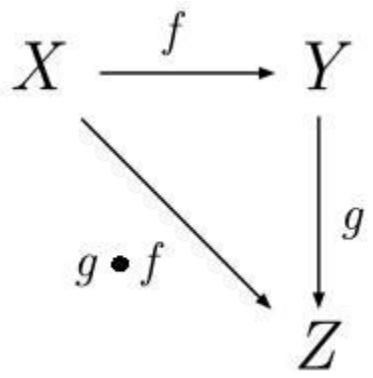


Each gate has exactly one **output**, o, and one or two **inputs** (i.e., i1 and i2). A simple logic diagram is shown below:



A **wire** connects a gate output or input. There are 10 wires in the above diagram. Create a UML diagram (named **Logic.dia**) that describes the relationships between **gate**, **input**, **output** and **wire** using Dia Diagram Editor.

(3) (10 points) A category is a directed graph with nodes called **domains** and directed edges called **arrows**. An arrow always connects one domain to another (possibly the same) domain. The figure below illustrates a category with domains X, Y, Z and arrows f, g and composite g·f:



Create a UML diagram (named **Category.dia)** that describes the relationships between **domain** and **arrow** using Dia Diagram Editor. Hint: create more than one association between two classes