**California State University, Sacramento**
**College of Engineering and Computer Science**

**Computer Science 28: Discrete Mathematics**

**Assignment #5 – Regular Expressions**

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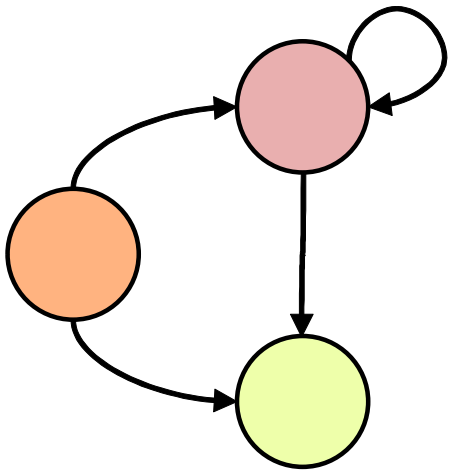
## Due Date

Homework should be ready to turn-in, on either Thursday or Wednesday class on the last week of the Semester. So, either May 9th or 10th.

If you cannot turn-in your work in class, then you may submit your homework at Riverside Hall 3018 instead, but you must time-stamp and write "Cook CSc 28" across the top of your submission.



## Regular Expressions

1. Create a regular expression that accepts a single B, then 1 to infinite A's or C's. It must end with a D.

2. Create a regular expression that accepts a Java-style Identifier. Identifiers are used for the names of classes, variables, and more. Make sure to define your sets and use them in your expression.

3. The COBOL Programming Language has fallen out of favor, but, for a long time, it was the language used for business applications. COBOL has a very interesting identifier format.

   COBOL identifiers must start with a letter and then can be followed by a series of letters, numbers or dashes (minus sign). There is one restriction: dashes cannot appear next to each other. Create a regular expression for COBOL identifiers.

   Here are some examples: **`Aliens, First-Name, Tax-Amount, Average-Test-Score`**

## Finite Automata

4. Draw a Finite Automata for Question #1 above

5. Draw a Finite Automata for Question #2 above

6. Draw a Finite Automata for Question #3 above