CSCI 445/545 Programming Assignment 3

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Using any programming language of your choice, implement a simple simulation program that solves problem 48(a) in page 164 in the textbook. The *essential* part of a simple Monte-Carlo simulation to solve the problem can be describe in the following algorithm.

Algorithm 1: Essential part of the simulation.
Initialize collision *counter* as 0
Randomly generate a 48-bit Mac Address A_1
Randomly generate a 48-bit Mac Address A_2
if $A_1 = A_2$ **then**
| *counter* $\leftarrow$ *counter* $+ 1$
end

You can extend your solution to answer questions 48(b) and 48(c) for extra points.

Submission:
Submit your Blackboard by 5PM, September 30, 2016.

In your submission, include source code files, the computation result, a test case, and any observation you have.