CMSC 330 Spring 2017 Quiz #1

Name (as it appears on gradescope) ____________________________________________________________

Discussion Time (circle one) 10am   11am   12pm   1pm   2pm   3pm
Discussion TA (circle one)   Aaron   Alex   Austin   Ayman   Daniel   Eric 
                            Greg     Jake    JT       Sam     Tal      Tim     Vitung

Instructions
• Do not start this quiz until you are told to do so.
• You have 15 minutes for this quiz.
• This is a closed book quiz. No notes or other aids are allowed.
• For partial credit, show all of your work and clearly indicate your answers.

1. (2 point each) True or False – Circle whether each statement is True or False
   T    F    0, nil and false are all treated as false in Ruby
   T    F    Ruby has static type checking
   T    F    Variables in Ruby are implicitly declared
   T    F    Ruby requires a main method to execute code
   T    F    The @ prefix creates global class variables

2. (2 points each) Ruby Execution – Write the expected output of the code snippets below, if there
   would be an error, write FAIL.
   a. \[ a = [5,4,3,2,1] \]
      Output:
      a.sort
      a.select! { |x| x % 2 == 0 }
      puts a

   b. \[ h = Hash.new(0) \]
      Output:
      h["330"] = 3
      h["351"] = 3
      a = ["132", 7, "330", "351"]

      a.each{|e| 
          puts h[a]
      }
3. (6 points) Define a method frequency that given an array, prints the number of occurrences of each element in the array on separate lines. The return value of the method can be anything.

   Example
   irb(main):01> frequency [4,3,2,3,4]
   4: 2
   3: 2
   2: 1
   => nil