CMSC330 Fall 2011 Example Quiz #1 Solutions

1. (4 pts) Describe a benefit of using implicit declarations in Ruby.

   **Reduce programming effort.**

2. (12 pts) What is the output (if any) of the following Ruby programs? Write FAIL if code does not execute.

   a. (3 pts)
   ```ruby
   puts "Win" if 1 < 0  
   puts "The" if 0 < 1  
   if 0 then            
     puts "Future"    
   end
   # Output = The Future
   ```

   b. (3 pts)
   ```ruby
   a = [5,"foo", 2.1] 
   puts "Found #{x[1]}" 
   # Output = Found foo
   ```

   c. (3 pts)
   ```ruby
   a = { } 
   a["foo"] = 2  
   puts a[1] 
   # Output = nil
   ```

   d. (3 pts)
   ```ruby
   a = [ ] 
   a[2] = 5       
   a.each { |x| puts x } 
   # Output = nil nil 5
   ```

3. (14 pts) Given an array of strings \( x \), write a Ruby method `printRepeats(x)` using Hash and code blocks to print out all strings in \( S \) followed by the number of occurrences, with each string on a separate line.

   ```ruby
   def printRepeats(x)
     counts = { }  
     x.each { |a| 
       if counts[a] == nil 
         counts[a] = 1  
       else 
         counts[a] = counts[a] + 1  
       end  
     } 
     counts.keys.sort.each { |b| puts "#{b} #{counts[b]}" } 
   end
   ```