CMSC330 Fall 2014 Quiz #1

Name ______________________________

Discussion Time  10am  11am  noon  1pm  2pm  3pm
TA Name (circle):  Casey  Casey  Xuefang  Xuefang  Ian  Ian
(for picking up graded quiz)  Ilse  Daniel  Yogarshi

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

1. (2 pts) Programming language (PL). For the following multiple choice questions, circle the letter(s) on the right corresponding to the best answer(s) to each question.

   a. Which following term is not a PL programming paradigm?  A  B  C  D
      A) imperative  B) functional  C) logical  D) hierarchical

   b. Which following term is not a desirable PL attribute?  A  B  C  D
      A) libraries  B) relational  C) verifiable  D) natural

2. (8 pts) Ruby. What is the output (if any) of the following Ruby programs? Write FAIL if code does not execute. Output “nil” for “puts x” when x is nil (as in Ruby 1.8.7), instead of outputting a blank line (as in Ruby 1.9.3).

   a.  a = [ ]
      a[“turtle”] = “terrapin”
      puts “turtle = #{a[“turtle”]}”

      OUTPUT =

   b.  a = { }
      a[1] = “tortuga”
      puts “turtle = #{a[1]}”
      puts “shell” if a[2]

      OUTPUT =

   c.  if “tortoise” =~ /(tr|is)/
       puts “found #{1}”
     else
       puts “missing #{1}”
     end

      OUTPUT =

   d.  a = { }
      a[1] = “tesudo”
a[“Chelonii”] = 2
      a.keys.each { |x| puts x }

      OUTPUT =
3. (5 pts) Write a Ruby method `find_course_num` that given a string `str`, uses regular expressions and back references to find the first course number in the string. A course number has 4 uppercase letters, followed by a 3 digit number. The method should return the course number as an integer value, or `nil` if no course number is found.

Examples:

```ruby
find_course_num("CMSC131 CMSC330")  # returns 131
find_course_num("CMsC131 CMSC330")  # returns 330
find_course_num("CMsC131 CMS330")   # returns nil
```

4. (5 pts) Write a Ruby method `print_str_array` that given an array of strings, uses the `Array.each` method and a code block to print out each string on a separate line, prefixed by the index of the string in the array, separated by a single space.

Examples:

```ruby
print_str_array ("terrapin", "tortoise", "turtle") # prints
0 terrapin
1 tortoise
2 turtle
```