

CMSC330 Fall 2014 Quiz #1

Name _____

Discussion Time	10am	11am	noon	1pm	2pm	3pm
TA Name (circle):	Casey	Casey	Xuefang	Xuefang	Ian	Ian
<i>(for picking up graded quiz)</i>		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 = []` **OUTPUT =**
`a[“turtle”] = “terrapin”`
`puts “turtle = #{a[“turtle”]}”`

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

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

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

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

Some helpful functions (not all need to be used)	
<code>a.each { ... }</code>	// apply code block to each element in array
<code>puts b</code>	// print b followed by a newline
<code>s.to_i</code>	// returns integer value for string s
<code>n.to_s</code>	// returns string for integer n

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: `print_str_array(["terrapin","tortoise","turtle"])` # prints
0 terrapin
1 tortoise
2 turtle