CMSC330 Fall 2011 Quiz #1

Name _____

Discussion Time (circle one):   9am   10am   11am   12pm   1pm   2pm

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.
- Answer essay questions concisely in 2-3 sentences. Longer answers are not needed.
- For partial credit, show all of your work and clearly indicate your answers.
- Write neatly. Credit cannot be given for illegible answers.

1.   (4 pts) Explain why languages like Java do not use implicit declarations.

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

    a.   (4 pts)

```
a = [ ]                          # Output =
a["foo"] =  5
puts a[5]
```

    b.   (4 pts)

```
a = { }                          # Output =
a["bar"] =  4
puts "Found #{ a["bar"] }"
```

    c.   (4 pts)

```
a = [ ]                          # Output =
a[3]  = "Terp"
a.each { |x| puts x if x }
```

3. (14 pts) Given an array of strings *x*, write a Ruby method printWords(*x*) using Hash and code blocks to go through the array elements in order, printing out all strings in *x* the first time they are encountered, with each string on a separate line. In other words, print out all strings in x if the string has not been printed already.

Some helpful functions (not all need to be used):

a = h.keys	// returns keys in hash h as an array a
a = h.values	// returns values in hash h as an array a
b = a.sort	// b = new array similar to a, but in sorted order
a.sort!	// sorts elements of array a in place
a.size	// number of elements in the array
a.each { ... }	// apply code block to each element in array
a.push / a.pop	// treat array as stack

Example Input (value of x)	Example Output
x = ["c", "b", "a", "b", "a", "d", "b"]	c
	b
	a
	d

Answer:

def printWords(*x*)