MASSACHVSETTS INSTITVTE OF TECHNOLOGY
Department of Electrical Engineering and Computer Science
6.01—Introduction to EECS I
Spring Semester, 2008

NanoQuiz Week #2 (sections 1 and 2)

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This quiz is due promptly 15 minutes after the start of the lab period. There are **two problems**—A and B. See both sides of this paper.

You may use the weekly assignment handout, but the quiz is **otherwise closed book and closed computer**. For programming problems, we won't penalize you for minor syntactic bugs: we're going only to read your answers, not run them.

(A) The following procedure takes a list of integers as input and returns an integer:

```
def myProc(intList):
    i=0
    result=0
    while i < len(intList):
        if intList[i] % 5 == 0:
            result = result + intList[i]**3
        i=i+1
    return result
```

Rewrite this procedure using a list comprehension.

Why might some people say that your rewritten version exhibit "better programming style"? Answer in at most two sentences.

(B) Here are some procedures:

```
def a():
    return set([stop, go])

def b(sensors):
    return set([stop, go])

def c(limit):
    def f(sensors):
        if sensors[0][1] > limit:
            return set([stop, left, right])
        else:
            return set([go])
    return f
```

For each of the following Python expressions, indicate whether the **value** of the expression is a non-deterministic behavior (as described in the assignment handout) and, if not, briefly why not.

(1) `a`

(2) `a()`

(3) `b`

(4) `b(1.2)`

(5) `b([sonarDistances(), pose()])`

(6) `b(1.2)([sonarDistances(), pose()])`

(7) `c`

(8) `c(1.2)`

(9) `c([sonarDistances(), pose()])`

(10) `c(1.2)([sonarDistances(), pose()])`