University of Washington
CSE 140 Data Programming
Winter 2013

Practice midterm exam

February 3, 2013

Name: ____

CSE Net ID (username): ______________________________

UW Net ID (username): _______________________________

This exam is closed book, closed notes. You have **50 minutes** to complete it. It contains 14 questions and 10 pages (including this one), totaling 100 points. Before you start, please check your copy to make sure it is complete. Turn in all pages, together, when you are finished. **Write your initials on the top of *ALL* pages** (in case a page gets separated during test-taking or grading).

Please write neatly; we cannot give credit for what we cannot read.

Good luck!

1 Execute Python expressions

Execute each of the following expressions.

- If it executes without an error, then:

  value state the value that it evaluates to

- If it suffers an error during evaluation:

  error describe the error (in one phrase — a brief explanation in your own words)
  frame state the name of the current environment frame: "global" or a function name
  operator state the operator that caused the error
  arguments state the values to which the operator was being applied

Your answer will contain either part "value", ***or*** parts "error", "frame", "operator", and "arguments".

1. `(4.0 + 5) * 6`

   value ____________________

   error ____________________

   frame ____________________

   operator ____________________

   arguments ____________________

2. `len(str(5 * 2)) + "10"`

   value ____________________

   error ____________________

   frame ____________________

   operator ____________________

   arguments ____________________

Execute Python statements

Execute each of the following code snippets, just as if they were written in a program. (Each one is a sequence of statements.) Your answer to each question contains up to 5 parts.

output write any output that it prints (before any error). This part might be blank. If it does not print any output.

If there is an error during execution:

error describe the error (in one phrase — a brief explanation in your own words)

frame state the name of the current environment frame: “global” or a function name

operator state the operator that caused the error

arguments state the values to which the operator was being applied

Your answer will contain either only part “output”, ***or*** parts “output”, “error”, “frame”, “operator”, and “arguments”.

3.
```
a = [1, 2]
b = []
b = b + a
b = b + a
a.append(3)
print b
```

output

error ____________________

frame ____________________

operator ____________________

arguments ____________________

4.
```
a = [1, 2]
b = []
b.append(a)
b.append(a)
a.append(3)
print b
```

output

error ____________________

frame ____________________

operator ____________________

arguments ____________________

5.
```
lst = [1, 2, 3]
myvar = lst[0]
lst[0] = 18
print lst
print myvar
```

   output

   error ________________

   frame ________________

   operator ________________

   arguments ________________

6.
```
myvar = 18
lst = [myvar, 2, 3]
myvar = 22
print lst
print myvar
```

   output

   error ________________

   frame ________________

   operator ________________

   arguments ________________

7.
```
plane = ("Passengers", "Luggage")
plane[1] = "Snakes"
print plane
```

output

error

frame

operator

arguments

8.
```
numb3rs = ([1, 2, 3], [4, 5, 6])
numb3rs[0][2] = 0
print numb3rs
```

output

error

frame

operator

arguments

9.
```
for x in [1, 2]:
    for y in [3, x]:
        print x, y
```

output

error ________________

frame ________________

operator ________________

arguments ________________

10.
```
bar = 1
def foo():
    bar = 2
    foo = 3
    return bar
foo()
print foo()
print bar
```

output

error ________________

frame ________________

operator ________________

arguments ________________

11.
```
total = 0

def sum1(n):
    total = 0
    for i in range(n):
        total = total + i
    return total

def sum2(n):
    total = 0
    for i in range(n):
        total = total + i
    print total

print sum1(5)
print total
print sum2(5)
print total
```

output

error ____________________

frame ____________________

operator ____________________

arguments ____________________

12.
```
def f1(n):
    print "A"
    return 2

print "B"

def f2():
    return 1
    print "C"

print f1(f2())
```

output

error ____________________

frame ____________________

operator ____________________

arguments ____________________

13.
```
x = 22
def reset_x():
    x = 0
reset_x()
print x
```

output

error ____________________

frame ____________________

operator ____________________

arguments ____________________

14.
```
a = [42, 39, 123]
b = sorted(a, reverse=True)
a[0] = b
b[0] = 7
b.sort()
print a
```

output

error

frame

operator

arguments