

Class Activity - 1/30/23

1. Which of the following identifier forms is most readable? Support your decision.

SumOfSales

sum_of_sales

SUMOFSALES

The middle one because it is closer to actual English with spaces between words. The first one is the second most readable. The last one is the least readable because the end of words isn't obvious.

6. Consider the following JavaScript skeletal program:

Assume that the execution of this program is in the following unit order:

- main calls sub1
- sub1 calls sub2
- sub2 calls sub3

a. Assuming static scoping, in the following, which declaration of x is the correct one for a reference to x?

- I. Sub1 sub1
- II. Sub2 sub1
- III. Sub3 main

b. Repeat part a, but assume dynamic scoping.

- I. Sub1 sub1
- II. Sub2 sub1
- III. Sub3 sub1

7. Assume the following JavaScript program was interpreted using static-scoping rules.

What value of x is displayed in function sub1? Under dynamic-scoping rules, what value of x is displayed in function sub1?

Static Scoping: x = 5

Dynamic Scoping: x=10

9. Consider the following Python program:

```
x = 1;
y = 3;
z = 5;
def sub1():
    a = 7;
    y = 9;
    z = 11;
    ...
def sub2():
```

```

global x;
a = 13;
x = 15;
w = 17;
...
    def sub3():
        nonlocal a;
        a = 19;
        b = 21;
        z = 23;
        ...
...

```

List all the variables, along with the program units where they are declared, that are visible in the bodies of sub1, sub2, and sub3, assuming static scoping is used.

	<u>Variable</u>	<u>Where it's defined</u>
In sub 1:	a	sub1
	x	main
	y	sub1
	z	sub1
In sub 2:	a	sub2
	w	sub2
	x	sub2
	y	main
	z	main
In sub 3:	a	sub3
	b	sub3
	w	sub2
	x	sub2
	y	main
	z	sub3