



CL03 - Memory Diagrams + Conditionals Practice

Conditionals Practice

```
1 x: int =  
2 y: int = 9  
3  
4 if x % 2 == 0:  
5 |     print("A")  
6 |     if x == 2:  
7 | |     print("B")  
8 else:  
9 |     if x < y:  
10 | |     print("C")  
11 if x ** 2 == y:  
12 |     print("D")
```

Choose a value of x (if possible) to give the following outputs:

1.

A
B

2.

A

3.

C

4.

D

5.

C
D

6.

A
D

Memory Diagram

```
1  a: int = 2
2  b: int = 6
3  if a > b:
4      |    print(a-b)
5  elif b < 10:
6      |    print(b/a)
7  else:
8      |    print(a+b)
9  print(b)
```

Stack

Globals

Output

Memory Diagram

```
1 x: str = "Hello"
2 y: int = len(x)
3 if y % 4 == 1:
4     |   y *= 2
5 y -= 6
6 print(y)
7 print(x[y])
```

Stack

Globals

Output

Memory Diagram

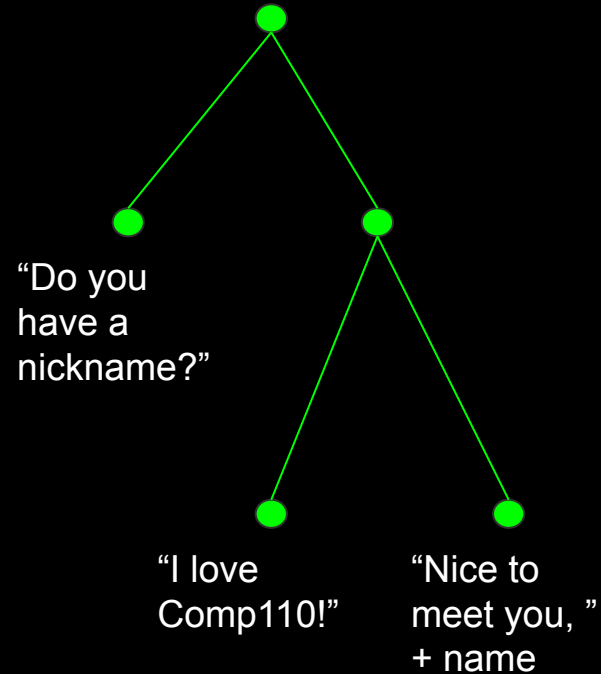
```
1  x = 1
2  y = 2
3  z = "x"
4
5  if x > y:
6      print(str(x))
7  else:
8      if y % 2 == 0:
9          print(str(y))
10 print(z)
```

Stack

Globals

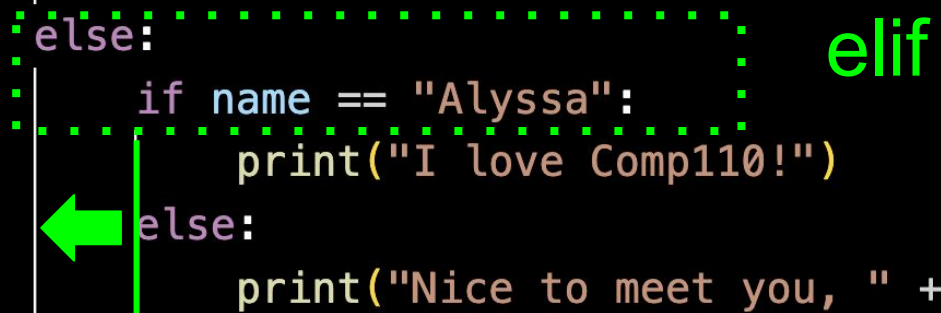
Output

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1 name: str = input("Name? ")
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3 if len(name) > 6:
4     print("Do you have a nickname?")
5 else:
6     if name == "Alyssa":
7         print("I love Comp110!")
8     else:
9         print("Nice to meet you, " + name)
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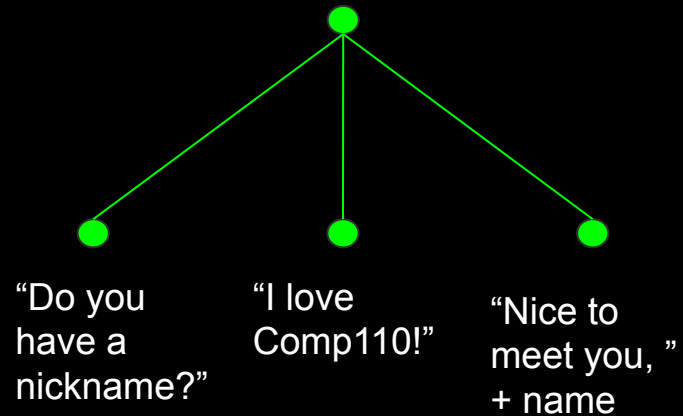
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The diagram illustrates an if-elif-else structure. A green dashed box encloses the 'else' block (lines 5-7). A green arrow points to the 'else:' line (line 8).


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