



COMPSCI 105 S1 2017 Principles of Computer Science

17 Linked List(1)



Exercise 1

► What is the output of the following program?

```
def print_chain(n):
    while not n == None:
        print(n.get_data(), end = " ")
        n = n.get_next()
```

```
n5 = Node(15)
n6 = Node(34)
n7 = Node(12)
n8 = Node(84)
n6.set_next(n5)
n7.set_next(n8)
n8.set_next(n6)
n5.set_next(None)
```

```
print_chain(n5)
print()
print_chain(n6)
print()
print_chain(n7)
print()
print_chain(n8)
print()
```

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n5.set_next(None)
```

```
print_chain(n5)
print()
print_chain(n6)
print()
print_chain(n7)
print()
print_chain(n8)
print()
```

```
15
34 15
12 84 34 15
84 34 15
```

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Exercise 2

► What is the output of the following program?

```
def TestUnorderedList():
    my_list = UnorderedList()
    number_list = [11, 17, 7, 3, 26, 54, 2]
    for num in number_list:
        my_list.add(num)
        print(my_list.size())
    print(my_list.search(17))
    print(my_list.search(1))
    my_list.remove(2)
    my_list.remove(54)
    print(my_list.size())
```

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Exercise 2

► What is the output of the following program?

```
def TestUnorderedList():  
    my_list = UnorderedList()  
    number_list = [11, 17, 7, 3, 26, 54, 2]  
    for num in number_list:  
        my_list.add(num)  
        print (my_list.size())  
    print (my_list.search(17))  
    print (my_list.search(1))  
    my_list.remove(2)  
    my_list.remove(54)  
    print (my_list.size())
```

```
7  
True  
False  
5
```