Chapter 8 Reading Questions

David Letscher

Saint Louis University

CSCI 1300: Introduction to Object-Oriented Programming

Interpreting Nested Conditions

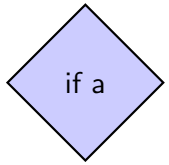
Example

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

What is the structure of conditions?

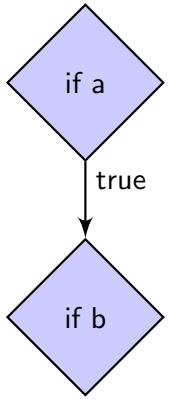
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



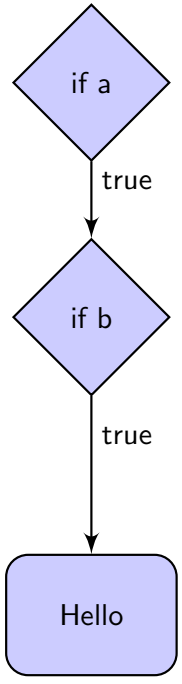
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



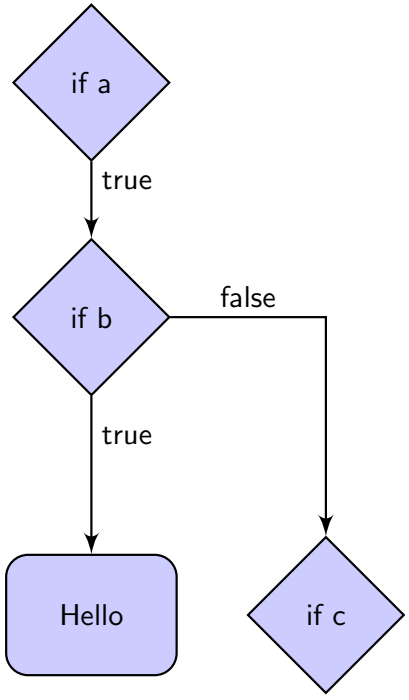
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



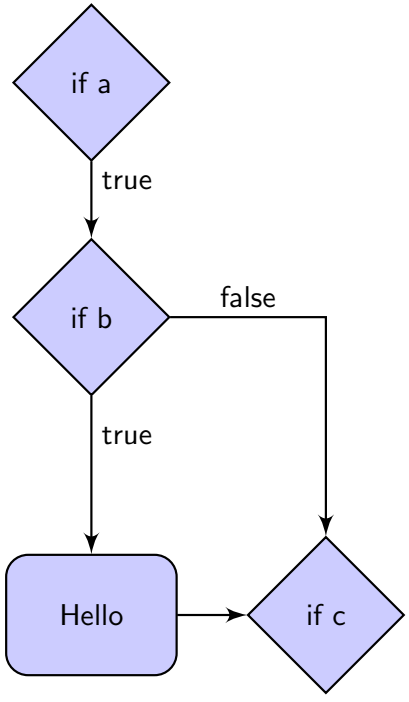
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



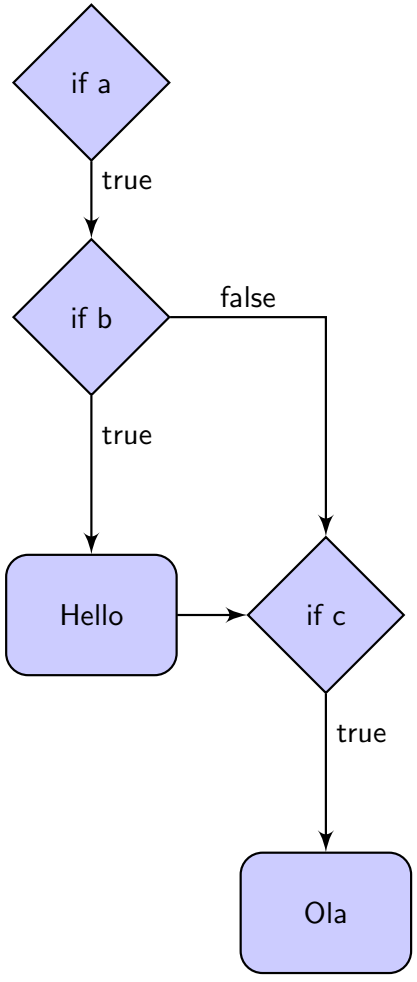
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



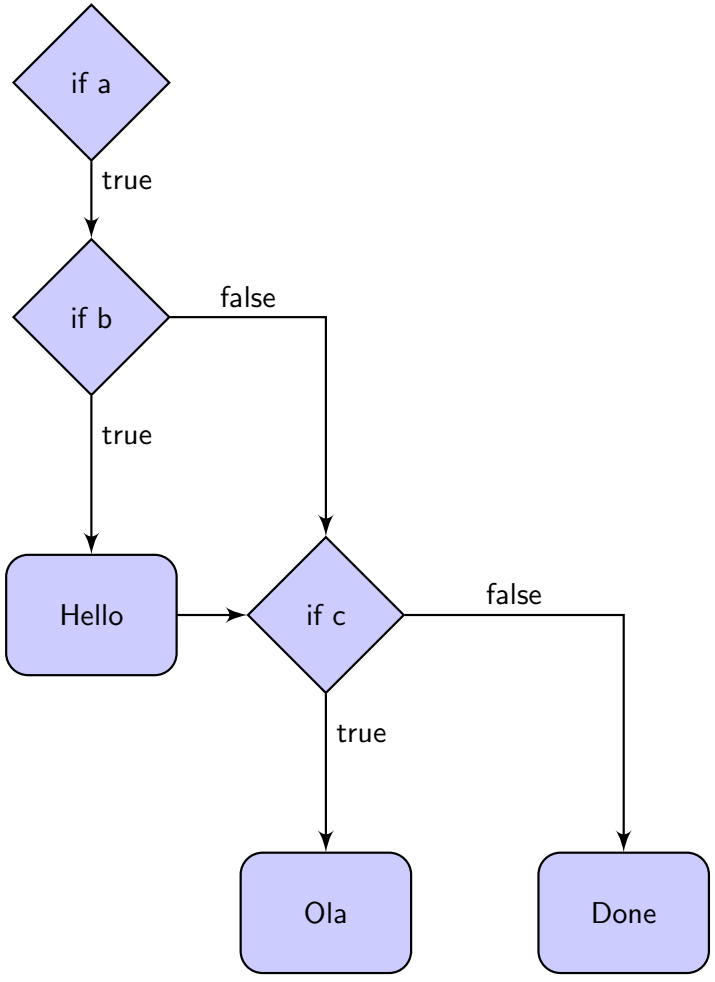
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



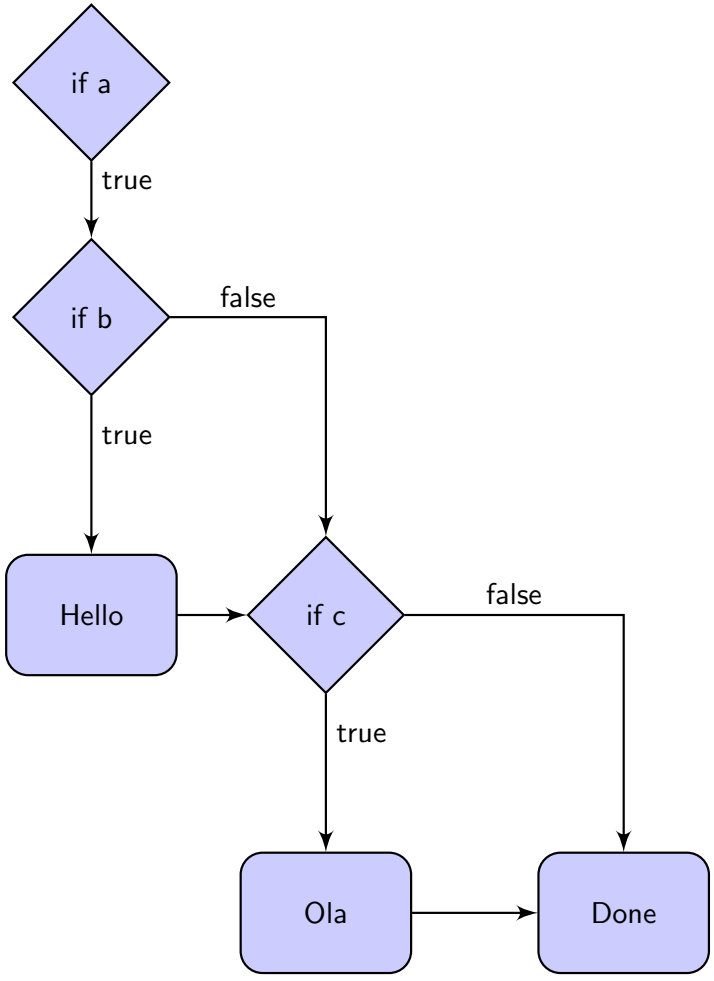
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



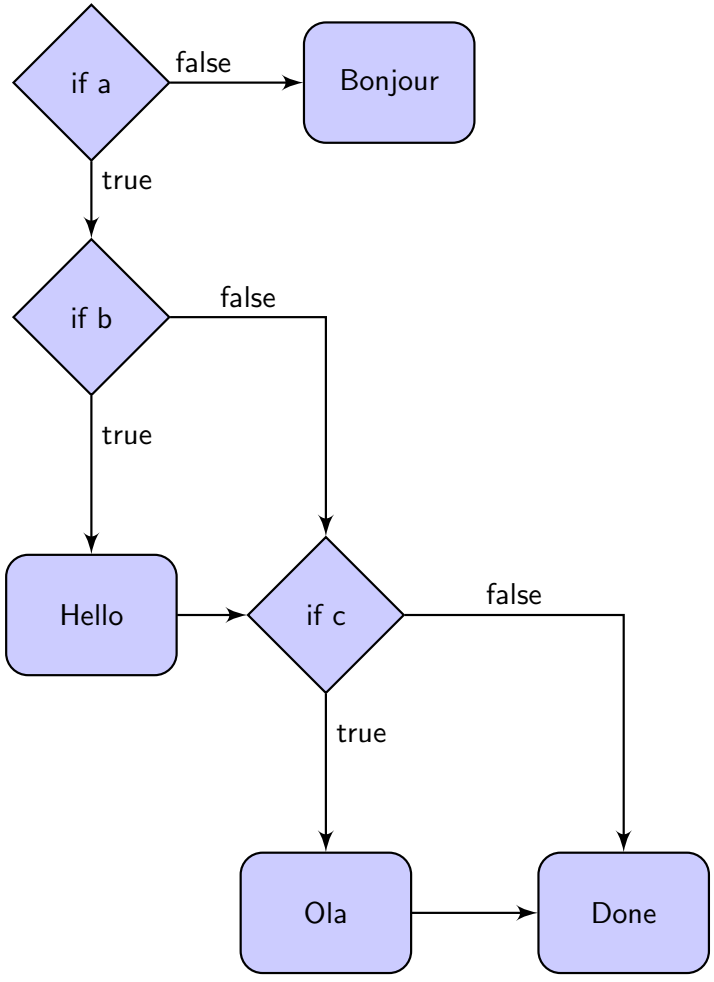
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



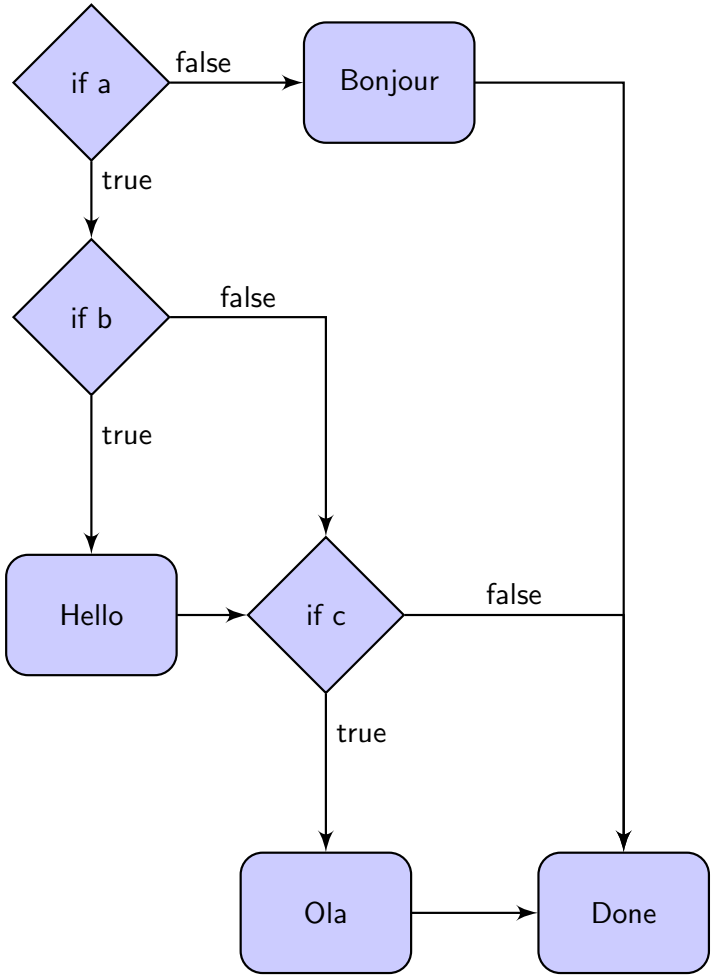
Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



Interpreting Nested Conditions

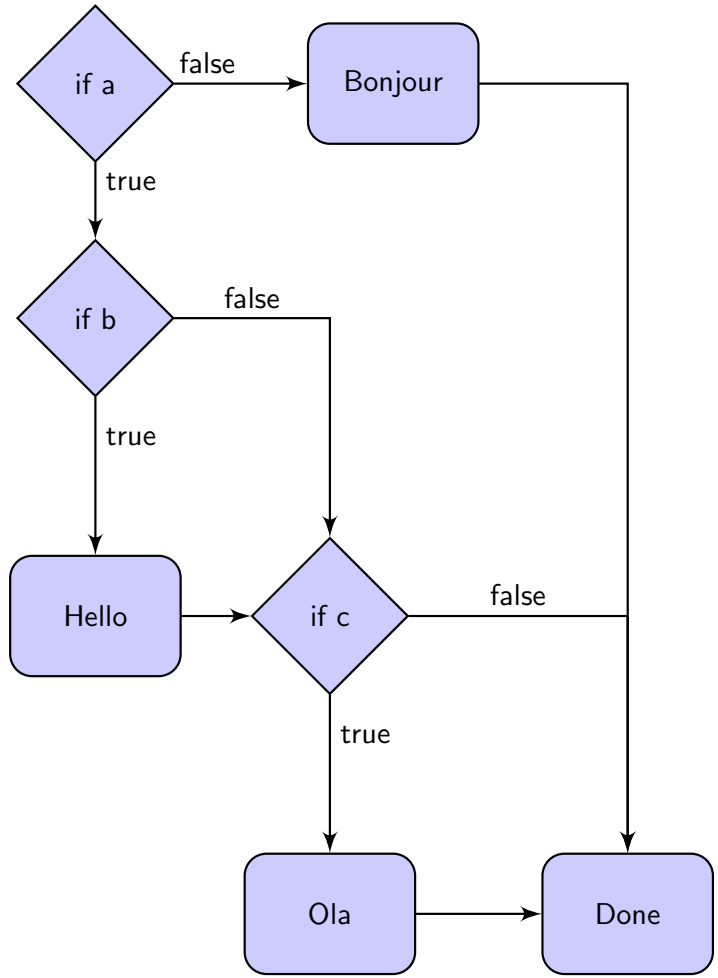
```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

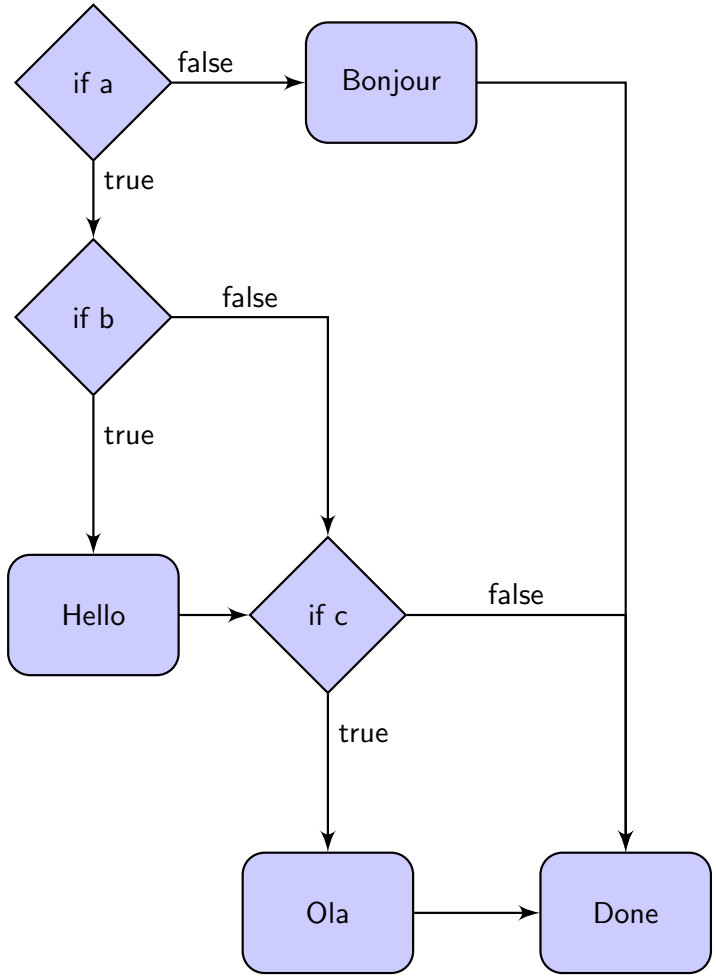
a	b	c	Output



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

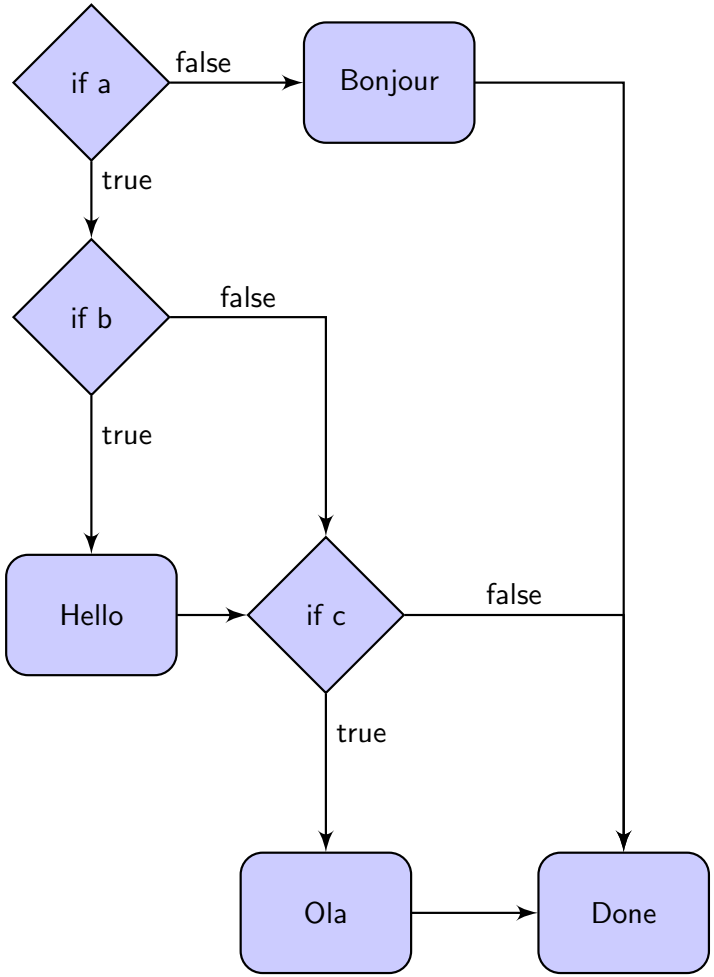
a	**b**	**c**	**Output**
True	True	True	Hello/Ola/Done



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

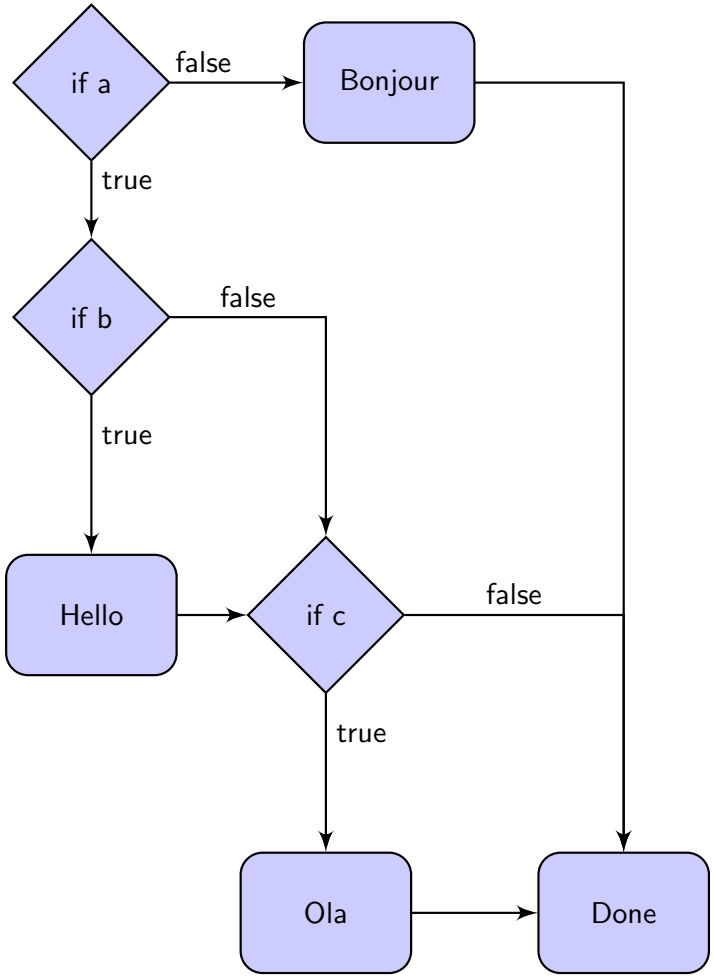
a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

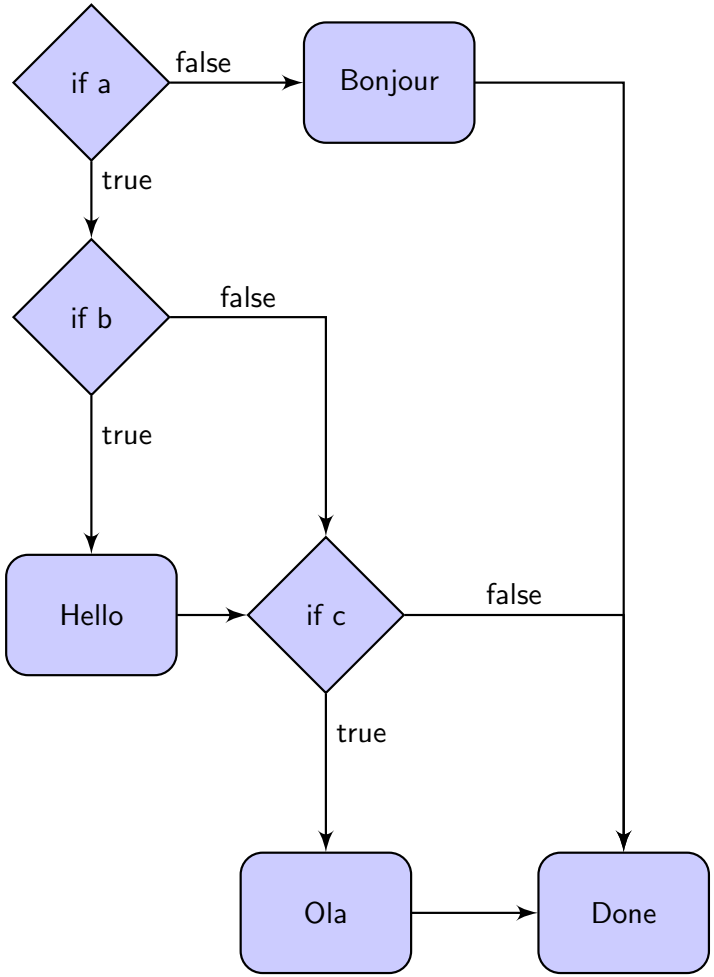
a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

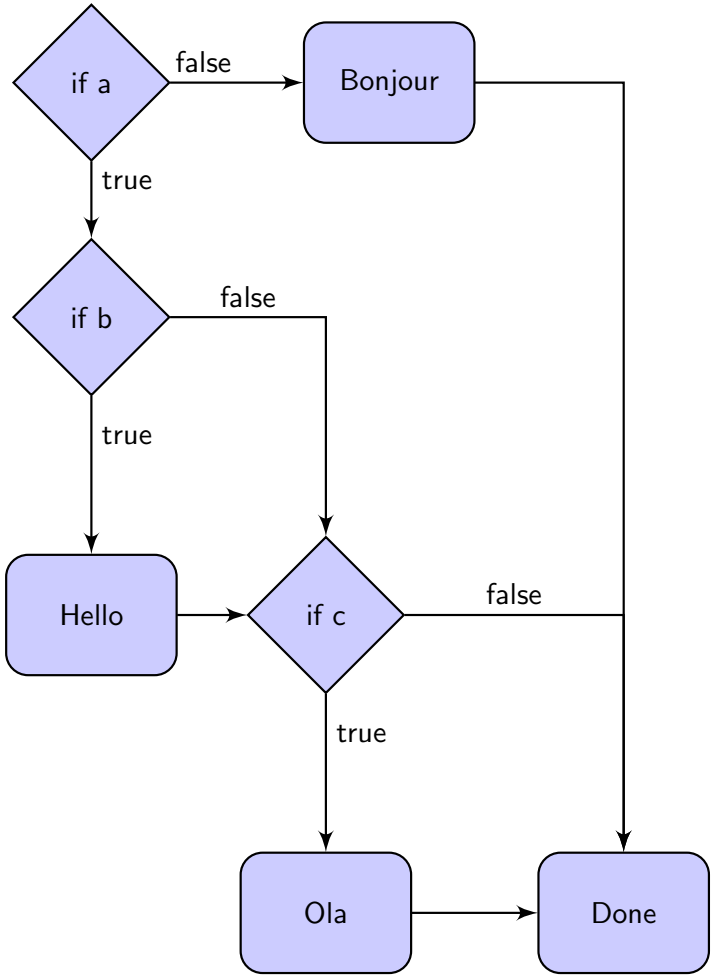
a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done
True	False	False	Done



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

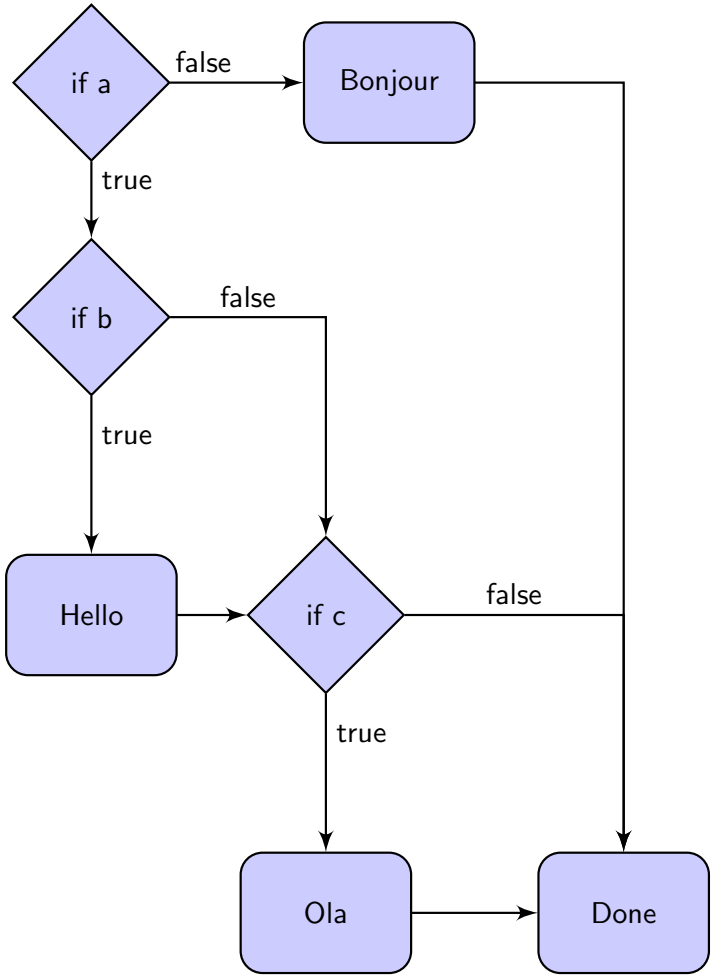
a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done
True	False	False	Done
False	True	True	Bonjour/Done



Interpreting Nested Conditions

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done
True	False	False	Done
False	True	True	Bonjour/Done
False	False	True	Bonjour/Done
False	True	False	Bonjour/Done
False	False	False	Bonjour/Done



Nested Conditions: Equivalent Form

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done
True	False	False	Done
False	True	True	Bonjour/Done
False	False	True	Bonjour/Done
False	True	False	Bonjour/Done
False	False	False	Bonjour/Done

Nested Conditions: Equivalent Form

```
if a:
    if b:
        print('Hello')
    if c:
        print('Ola')
else:
    print('Bonjour')
print('Done')
```

a	b	c	Output
True	True	True	Hello/Ola/Done
True	True	False	Hello/Done
True	False	True	Ola/Done
True	False	False	Done
False	True	True	Bonjour/Done
False	False	True	Bonjour/Done
False	True	False	Bonjour/Done
False	False	False	Bonjour/Done

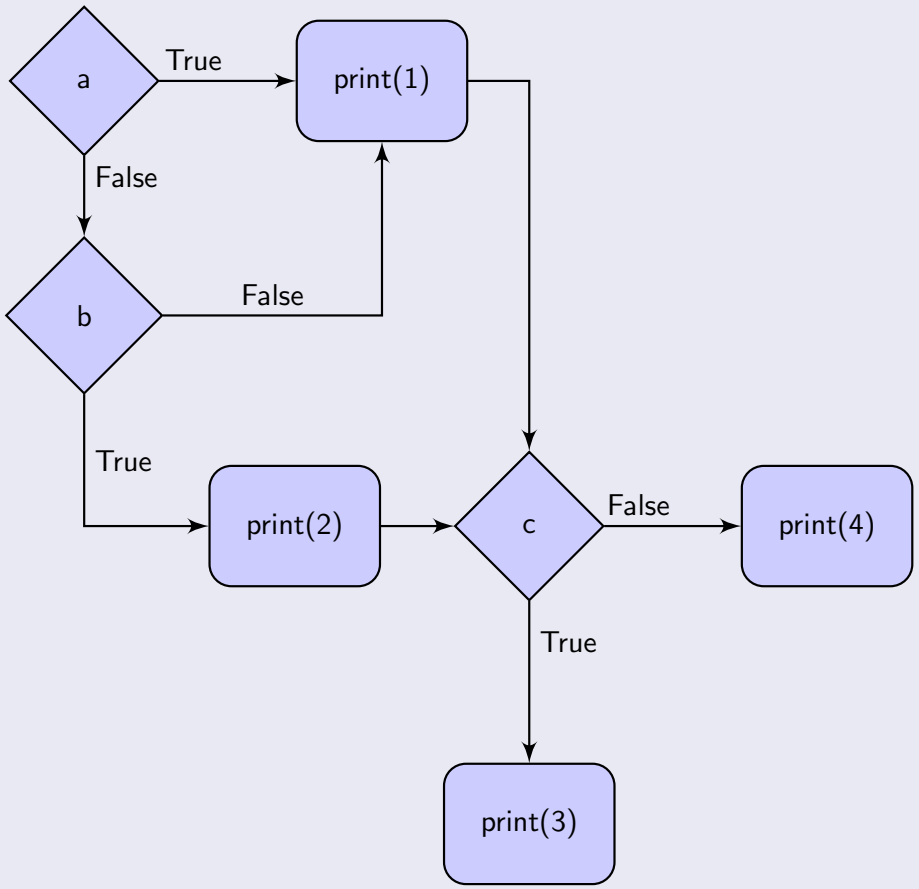
```
if a and b and c:
    print('Hello')
    print('Ola')
    print('Done')
elif a and b:
    print('Hello')
    print('Done')
elif a and c:
    print('Ola')
    print('Done')
elif not a:
    print('Bonjour')
    print('Done')
else:
    print('Done')
```

Draw a Flowchart and Truth Table

Code fragment

```
if a:
    if b:
        print(1)
    elif c:
        print(2)
elif b:
    print(3)
else:
    print(4)
```

Write the Python



- Write Python code using nested conditions equivalent to the flow chart.
- Build the truth table for the flowchart.
- Write Python code without nesting that is functionally equivalent to the flowchart.