Selections

COMP16321 - Introduction to Programming 1

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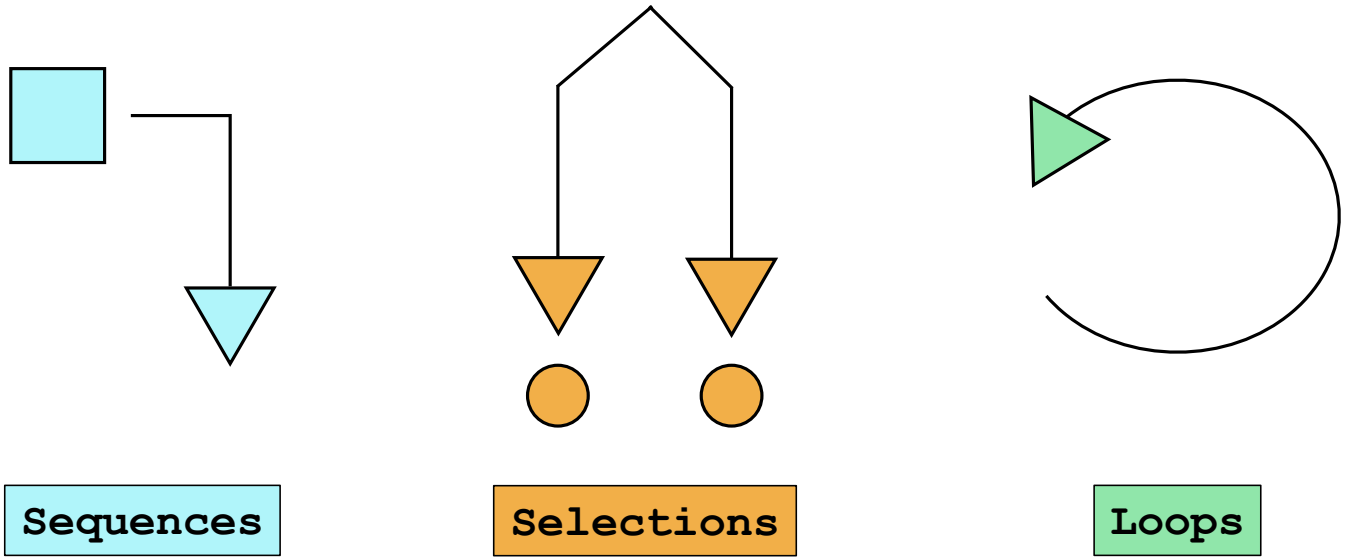
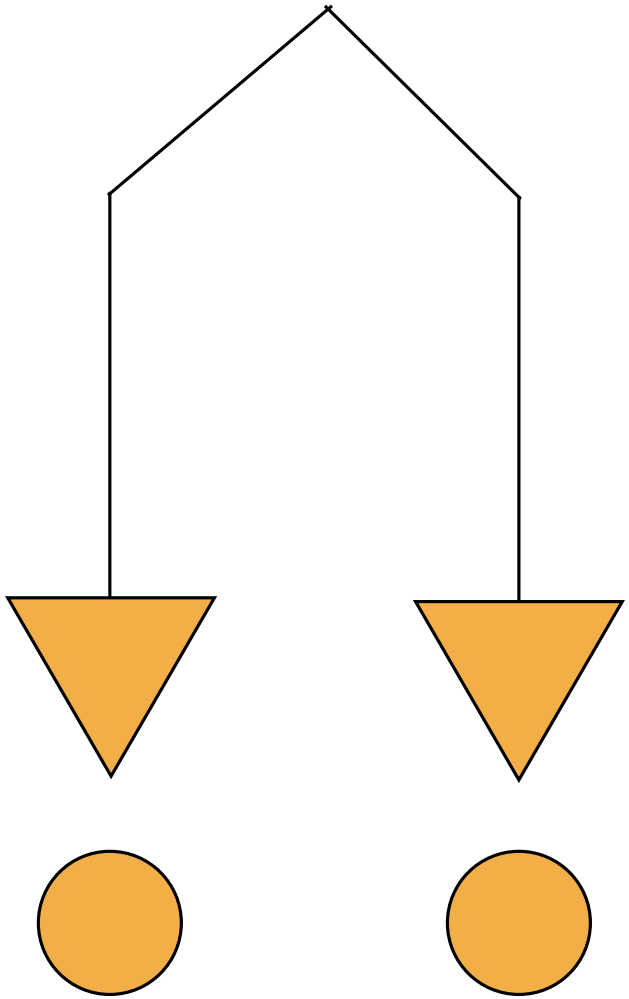
How Do We Program?



Selections



If Statements Syntax

```
if <test1>:
     <statements1>
else:
     <statements2>
```

If Statements Syntax

```
if <test1>:
     <statements1>
elif <test2>:
     <statements2>
else:
     <statements3>
```

If Statements

Statements execute one after the other, until you say otherwise

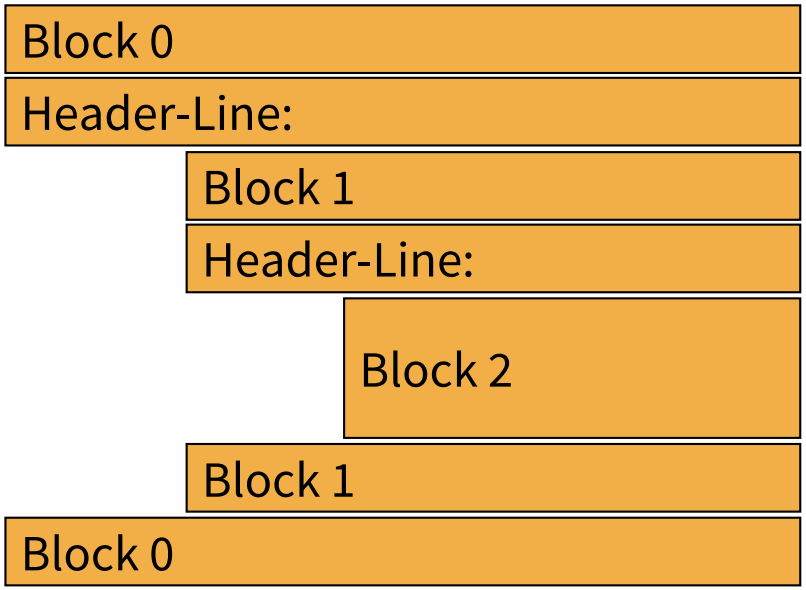
Block and statement boundaries are detected automatically

Compound statements = header + “:” + indented statements

Blank lines, space, and comments are usually ignored

Block Delimiter: Indentation Rules

```
x = 1
if x:
     y = 2
     If y:
          print(”block2”)
     print(“block1”)
print(“block0”)
```



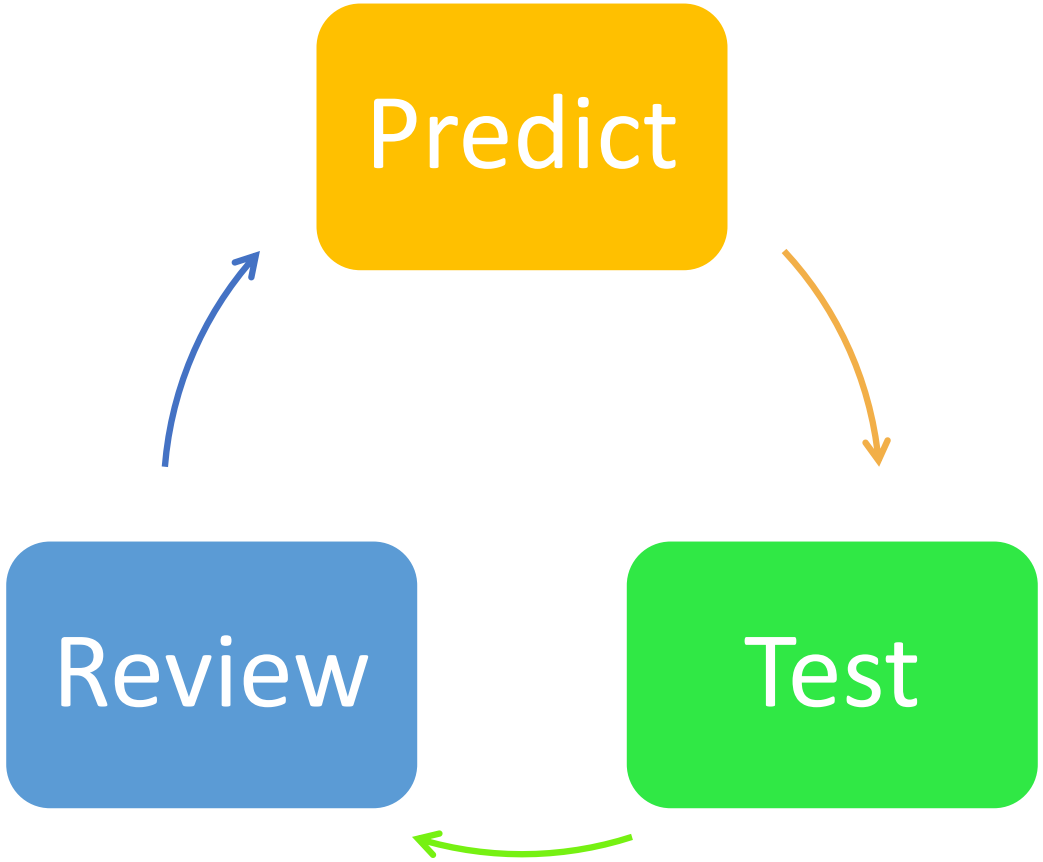
Truth Tests

There are 3 Boolean operators in Python:

```
X and Y          # Is true if both X and Y are true

X or Y           # Is true if either X or Y is true

not X            # Is true if X is false
```


Predict
Test
Review

Debugging Code (10 Tips)

1. Print things (a lot)
2. Start with code that already works
3. Run your code every time you make a small change
4. Read the error message
5. Google the error message

Debugging Code (10 Tips)

6. Guess and Check

7. Comment-out code

8. If you're not sure where the problem is, do a binary search

9. Take a break and walk away from the keyboard

10. Ask for help