POWERING POTENTIAL

Control Flow - Selection

LESSON OBJECTIVES

In this chapter, you'll learn about:

- Python Control Flow statements
  - if
  - else
  - elif
- Logical OR and AND operators

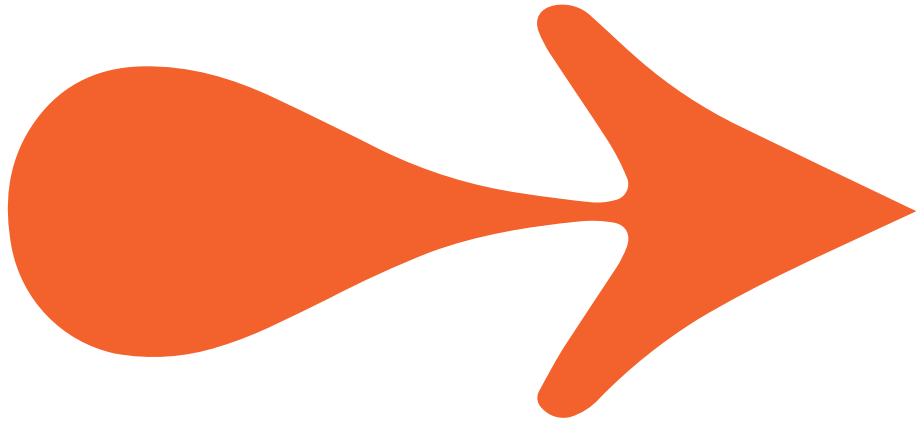
What is Control Flow?

- It’s for controlling the order we do things
- Sequence
- Running code step by step, in order
- Selection
- Deciding *which* lines of code should run
- Iteration
- Doing the same thing many times, i.e., in a loop

Control Flow - Selection

Making decisions

```
if  some condition :
      do this
else:
   do something else
```



Comparing values

Relational operators for making a selection

>	Greater than
>=	Greater than or equal to
<	Less than
<=	Less than or equal to
==	Equal to comparison
!=	Not Equal to comparison

Note:

== not the same as =

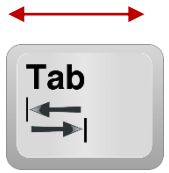
Selection example – IF statement

```
X = 5

if x == 5:
    print("X equals 5")
```

Condition
Is x equal to 5?

Yes, it is... so do this



Use the Tab key to include lines in an IF statement

Selection example – IF … ELSE

```
X = 5

if x == 5:
    print("X equals 5")
else:
    print("X does not equal 5")
```

Is x equal to 5?

Yes, it is… so do this

No it isn't… so do this instead

Control flow using "else if" - elif

```
salary = 2500

if salary > 100000:
    print('Band A')
elif salary > 55000:
    print('Band B')
elif salary > 32000:
    print('Band C')
elif salary > 25000:
    print('Band D')
else:
    print('Band E')
```

Creates a chain of tests

When a test passes the other
tests will not execute and the statement ends.

The last else is optional

Logical OR and AND

- What would you conclude from the following two IF statements?

```
course='Python'
age = 19

if course == 'Python' and age > 18:
    print('Welcome!')


if course == 'Python' or age > 20:
    print('Please start your', course, 'course!')
```

Python Fundamentals

In this chapter you learned about:

- **Python Control Flow statements**
  - if
  - else
  - elif

- **Logical OR and AND operators**

Exercise

Please see your Exercise Guide:

- **06-Selection.docx**
- **Duration 2 hours**

FURTHER READING

- https://www.python.org/
- https://www.python.org/dev/peps/pep-0008/#a-foolish-consistency-is-the-hobgoblin-of-little-minds