COMP110: Principles of Computing

2: Basic Principles for Computation

FALMOUTH
UNIVERSITY

Learning outcomes

- ► Explain the role and basic functions of the IDE
- ► Produce some basic Python programs
- ► Apply computational thinking to puzzle solving

Basic Python programs

Your first Python program

```python
print "Hello, world!"
```

Your second Python program

```
print "This is a very long line of code which had to ←
    be split to fit on the slide, but you should type ←
    it as a single line."
print "This is the second line of code."
```

Assigning to variables

```
a = 10
print a
```

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```
a = 10
print a
```

Variable	Value
a	

Remember!

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- A program is a **sequence of instructions**

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- The Python interpreter executes the **first line** of your program, then the **second line**, and so on

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- A program is a **sequence of instructions**
- The Python interpreter executes the **first line** of your program, then the **second line**, and so on
- When it reaches the end of the file, it **stops**

Reassigning variables (1)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
b = a
print a
print b
```

Reassigning variables (1)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
b = a
print a
print b
```

Variable	Value
a	
b	

Reassigning variables (2)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
a = b
print a
print b
```

Reassigning variables (2)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
a = b
print a
print b
```

Variable	Value
a	
b	

Reassigning variables (3)

Socrative room code: `FALCOMPED`

```
big = 10
small = 20
big = small
print big
print small
```

Reassigning variables (3)

Socrative room code: `FALCOMPED`

```
big = 10
small = 20
big = small
print big
print small
```

Variable	Value
big	
small	

Reassigning variables (4)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
a = b
b = a
print a
print b
```

Reassigning variables (4)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
a = b
b = a
print a
print b
```

Variable	Value
a	
b	

Reassigning variables (5)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
c = 30

a = b
b = c

print a
print b
print c
```

Reassigning variables (5)

Socrative room code: `FALCOMPED`

```
a = 10
b = 20
c = 30

a = b
b = c

print a
print b
print c
```

Variable	Value
a	
b	
c	