

Learning Goals/Objectives

Be able to read, comprehend, trace, adapt and create

Python code that:

- Uses Boolean conditions
- Uses simple selection code
- Uses selection using IF for one situation.
- Uses selection using IF and ELSE for two situations
- Uses selection using IF, ELIF and ELSE for more than two situations

Boolean Conditions

True

OR

False

Boolean Operators - Used in Conditions

`==` Equal to/The same as

`!=` Not equal to

`>` Greater than

`>=` Greater than or equal to

`<` Less than

`<=` Less than or equal to

Boolean Operators are used to compare
TWO pieces of data

data1 ***boolean operator*** data2

What do these conditions return?

5 == 5

5 != 5

6 < 4

4 >= 4

4 > 4

“Giraffe” == “Giraffe”

“Giraffe” == “giraffe”

“Giraffe” != “Hippo”

Selection

Starts the selection statement.

Colon - because syntax

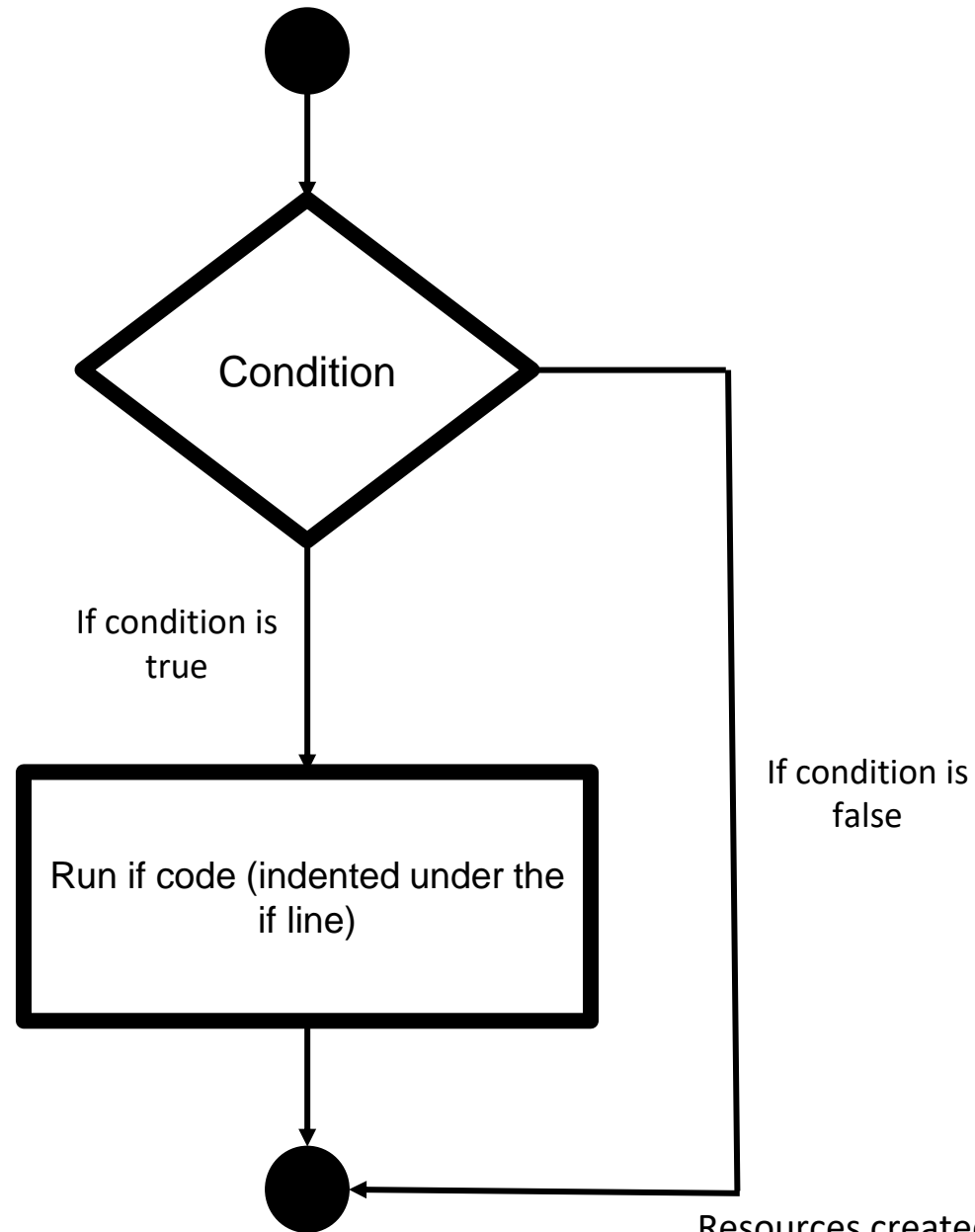
if boolean condition:

Do this

This instruction is only carried out if the condition is TRUE.

Indented - use the tab key. Your code won't work if you don't indent inside the selection statement.

Selection With One Outcome - Flowchart



Selection With One Outcome - coding tips

1. Start with
if.

2. Then a condition - use a Boolean operator to
compare two pieces of data (variables or the actual
data).

3. DON'T FORGET THE
COLON after the condition.

```
if num1 == 10:  
    print("This text is output because the condition was true")
```

4. Code that should run if the
condition is **true**. DON'T
FORGET TO INDENT (use
the **tab** key)

Selection With Two Outcomes

```
num1 = 100
```

```
num2 = 50
```

```
if num1 > num2:
```

```
    print("num1 is bigger")
```

```
print("End of program")
```



Selection - Two Outcomes

```
num1 = 100
```

```
num2 = 50
```

```
if num1 > num2:
```

```
    print("num1 is bigger")
```

```
else:
```

```
    print("num2 is bigger")
```

```
print("End of program")
```

Selection - Two Situations

```
num1 = 100
```

```
num2 = 50
```

```
if num1 > num2:
```

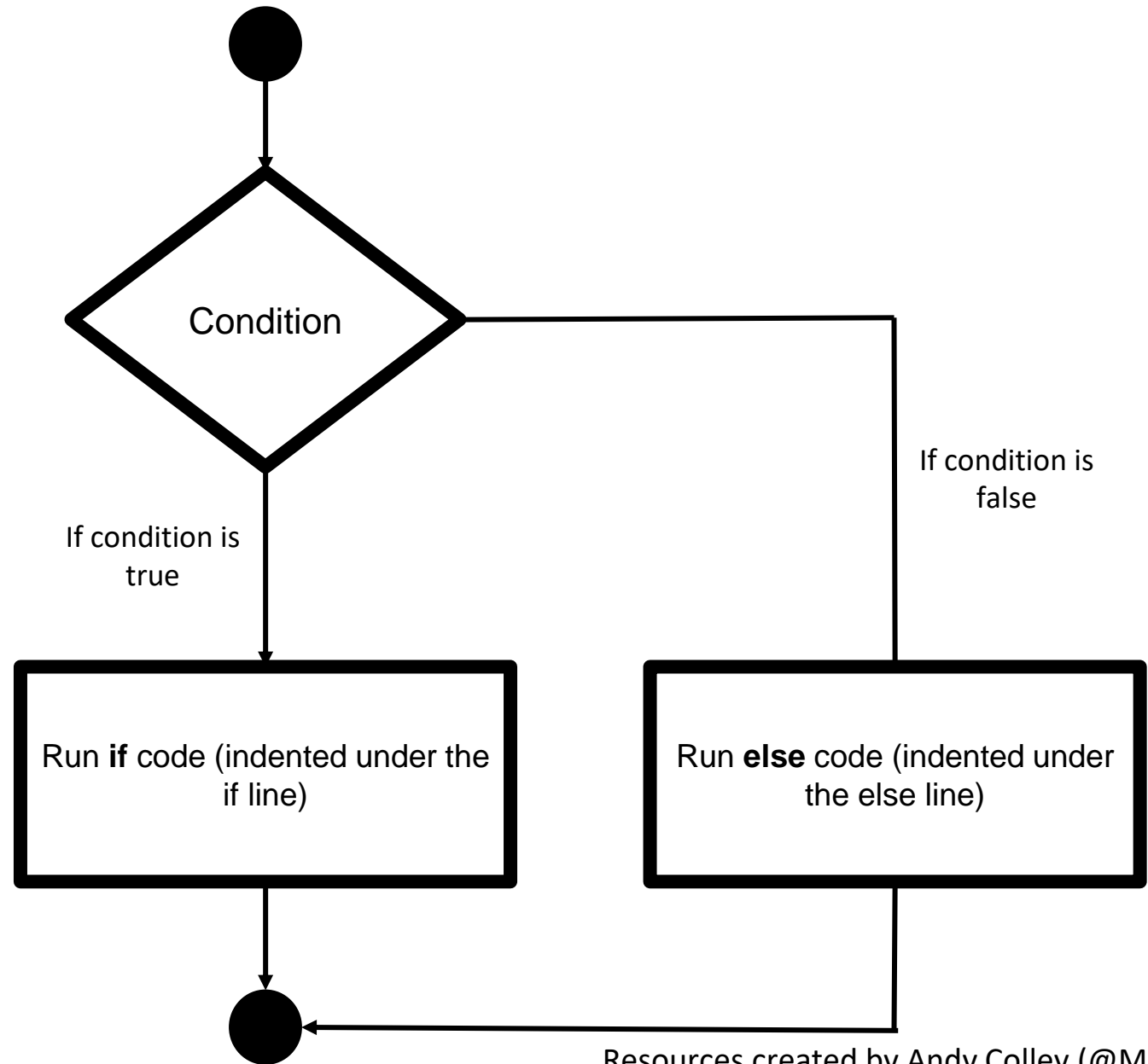
```
    print("num1 is bigger")
```

```
else:
```

```
    print("num2 is bigger")
```

```
print("End of program")
```

Selection With Two Outcomes - Flowchart



Selection With Two Outcomes - coding tips

1. Start with
if.

2. Then a condition - use a Boolean operator to compare two pieces of data (variables or the actual data).

3. DON'T FORGET THE COLON after the condition.

```
if num1 == 42:
```

4. Code that should run if the condition is **true**. DON'T FORGET TO INDENT (use the **tab** key)

```
    print("You have discovered the meaning of life!")
```

```
else:
```

5. Add an else. No condition needed, but you do need a colon.

```
    print("Sorry, you have failed to discover the meaning of life!")
```

6. Code that should run if the condition is **false**. DON'T FORGET TO INDENT (use the **tab** key)

Selection With Two Outcomes - Tasks Part 2

Task 3 - The login checker

Write a program that:

- Stores the number 1337 in a variable called 'password'

- Asks the user to guess the password and stores their input in a new variable (you choose the name)

- If the user inputs 1337 then output 'Password correct', otherwise output 'Password incorrect'

Task 4 - Biggest number

Write a program that:

- Asks the user to input two different numbers and stores them in two variables

- Outputs the biggest number entered