

Computing

Lesson 3: At a Crossroads

Introduction to Python Programming

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Worked Example Greeting

This is an example of the Python program that you have developed so far: it prompts the user for their name and reserves a special greeting for anyone named Elizabeth.

```
1 print("What's your name?")
2 user = input()
3 if user == "Elizabeth":
4     print("Good morning Your Majesty")
5 else:
6     print("Hello", user)
```



Syntax checklist

Help with errors

If you encounter an error message, read it and try to fix the problem. Use the list below to check for common errors.

- misspelt `if` or `else` (this includes using capitals)

- forgot the colon `:` after the `if` condition or after `else`

- forgot to **indent** statements in the `if` block or the `else` block

- indented `if` or `else` by mistake

- used `=` instead of `==` in the condition for `if`, to check if two values are equal

- used quotes around the name of a variable

- forgot to use quotes around a string literal (like `"Elizabeth"`)



Testing your program

How to

Once you manage to run your program successfully, test it at least twice, once for every possible branch of the `if, else` statement.

Tip: In every task, the problem statement includes sample interactions between the user and the program. Use the values provided in these examples to test your program.



Task 1 Film critic

You are going to make a program that asks for the user's favourite film. The program will either react enthusiastically to one particular film or display a generic comment.

Example

Note: The result displayed depends on user input, so it will not always be the same.

The program displays a prompt
and waits for keyboard input.

Best film ever?

The user types in a reply.

Star Wars

The program displays the result.

Star Wars is not too bad



Task 1 Film critic

Another example...

Example

Note: The result displayed depends on user input, so it will not always be the same.

The program displays a prompt
and waits for keyboard input.

Best film ever?

The user types in a reply.

BFG

The program displays the result.

BFG is my favourite too!



Task 1 Film critic

Step 1

Open this incomplete program oaknat.uk/comp-py-critic-30 in oaknat.uk/comp-repl-it:

```
1 print("Best film ever?")
2 film = input()
3 if :
4     print(film, "is not too bad")
5 else:
6     print(film, "is my favourite too!")
```



Task 1 Film critic

Step 2

Complete **line 3** with the condition that your program will need to check.

Tip: Use `==` to check if two values are equal, or `!=` to check if two values are different.

Step 3

Indent any line(s) of code that you believe should be indented.

Step 4

Once you manage to run your program successfully, test it.



Task 2 Lucky number

Open the Python program below oaknat.uk/comp-py-lucky-31 in oaknat.uk/comp-repl-it. It picks a specific 'lucky number' and displays it to the user.

```
1 lucky = 13
2 print("My lucky number is", lucky)
```



Task 2 Lucky number

Step 1 - Extend this program into a number guessing game. The program should ask the user to guess the lucky number, and then it should display a message, depending on whether or not the user guessed the lucky number.

Example

Note: The result displayed depends on user input, so it will not always be the same.

The program displays a prompt and waits for keyboard input.

Guess my lucky number:

The user types in a reply.

13

The program displays a message that the user's guess is correct.

Amazing, that's right!



Task 2 Lucky number

Another example...

Example

Note: The result displayed depends on user input, so it will not always be the same.

The program displays a prompt
and waits for keyboard input.

Guess my lucky number:

The user types in a reply.

7

The program displays a message
that the user's guess is incorrect.
It also displays the lucky number.

Sorry, it's not 7
My lucky number is 13



Task 2 Lucky number

Tip

Introduce a variable called `guess`, to refer to the number entered by the user.

Tip

Don't forget that the user's `guess` should be an **integer**. You will need to use `int` to convert user input from the keyboard to an integer.

Tip

Use `==` to check if two values are equal and `!=` to check if they are different. Do not confuse `==` with `=`, which is used in assignments.



Task 2 Lucky number

Step 2

Extend the program that you created in the previous task so that, regardless of the outcome, this message is displayed at the end of the game:

Nice playing with you



Task 2 Lucky number

Step 3 - Checklist

Perform each of the tests below:

☐ When the user guesses the lucky number, does the program display a message that the guess is correct?

☐ When the user fails to guess the lucky number, does the program display a message that the guess is incorrect?

☐ Does the program display a message that reveals the magic number **only** when the user's guess is incorrect?

☐ Does the program **always** display a goodbye message to the user, regardless of the outcome of the game?

