```
file = None
try:
    file = open('input.txt', 'r')
    # do stuff with file here

except FileNotFoundError as error:
    print("The file that you are trying to open does not exist")
    print(error)
finally:
    if file is not None:
       file.close()
```

When this code executes and the file does not exist, then the following output is generated which gives us some more information about the error that occurred:

```
The file that you are trying to open does not exist
[Errno 2] No such file or directory: 'input.txt'
```

RAISING EXCEPTIONS

There will be occasions when you want your program to raise a custom exception whenever a certain condition is met. In Python we can do this by using the "raise" keyword and adding a custom message to the exception:

In the below example we are asking the user to input a value greater than 10. If the user enters a number that does not meet that condition, an exception is raised with a custom error message:

```
num = int(input("Please enter a value greater than 10"))
if num < 10:
    raise Exception('num was less than 10. The value of num was:
{}'.format(num))
```

Instructions

Read the instructions provided in your compulsory task below. Take your time – you're putting a number of concepts together for this task.

Compulsory Task 1

Follow these steps:

- Create a simple calculator application that asks a user to enter two numbers and the operation (e.g. **+**, **-**, **x**, etc.) that they'd like to perform on the numbers. Display the answer to the equation. Every equation entered by the user should be written to a text file. Use defensive programming to write this program in a manner that is robust and handles **unexpected** events and user inputs.

- Now extend your program to give the user the option to either enter two numbers and an operator, like before, or to read all of the equations from a new txt file (the user should add the name of the txt file as an input) and print out all of the equations together with the results. Use defensive coding to ensure that the program **does not crash** if the file does not exist and that the user is prompted again to enter the name of the file.

Rate us

Share your thoughts

Hyperion strives to provide internationally-excellent course content that helps you achieve your learning outcomes.

Think that the content of this task, or this course as a whole, can be improved, or think we've done a good job?

Click here to share your thoughts anonymously.