Python try...except...finally

Summary: in this tutorial, you'll learn about the Python `try...except...finally` statement.

Introduction to Python try...catch...finally statement

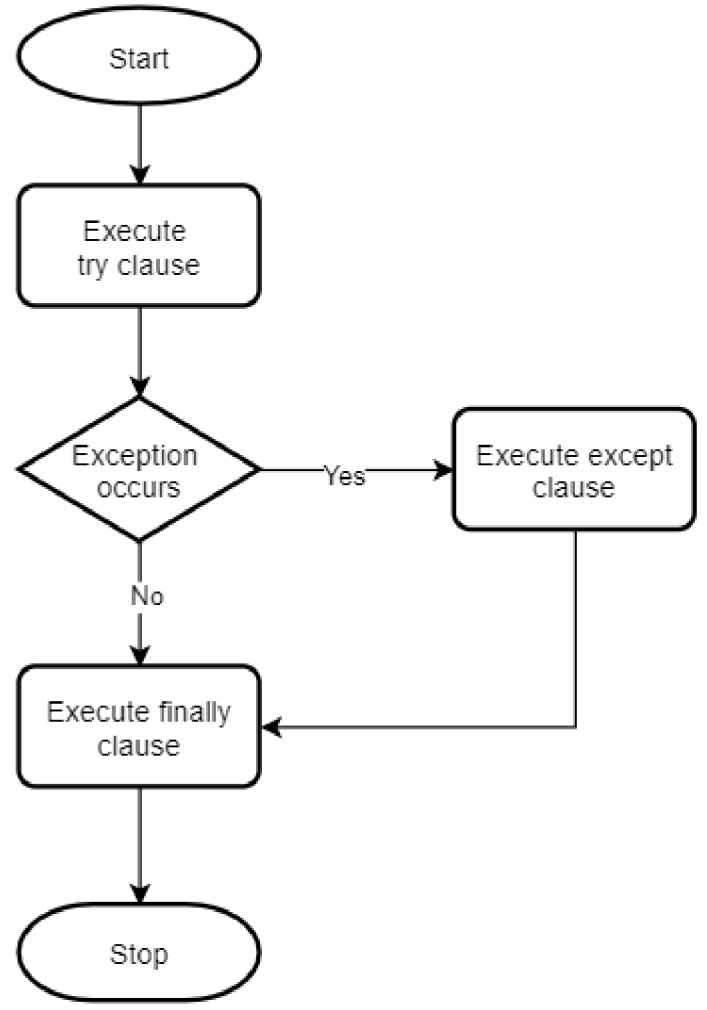
The `try...except` statement allows you to catch one or more exceptions (https://www.pythontutorial.net/python-basics/python-try-except/) in the `try` clause and handle each of them in the `except` clauses.

The `try...except` statement also has an optional clause called `finally` :

```
try:
    # code that may cause exceptions
except:
    # code that handle exceptions
finally:
    # code that clean up
```

The `finally` clause always executes whether an exception occurs or not. And it executes after the `try` clause and any `except` clause.

The following flowchart illustrates the `try...catch...finally` clause:



Python try...catch...finally statement examples

The following example uses the `try...catch...finally` statement:

```
a = 10
b = 0

try:
    c = a / b
    print(c)
except ZeroDivisionError as error:
```

```
    print(error)
finally:
    print('Finishing up.')
```

Output:

```
division by zero
Finishing up.
```

In this example, the `try` clause causes a `ZeroDivisionError` exception both `except` and `finally` clause executes.

The `try` clause in the following example doesn't cause an error. Therefore, all statements in the `try` and `finally` clauses execute:

```
a = 10
b = 2

try:
    c = a / b
    print(c)
except ZeroDivisionError as error:
    print(error)
finally:
    print('Finishing up.')
```

Output:

```
5.0
Finishing up.
```

Python try...finally statement

The `catch` clause in the `try...catch...finally` statement is optional. So you can write it like this:

```
try:
    # the code that may cause an exception
finally:
    # the code that always executes
```

Typically, you use this statement when you cannot handle the exception but you want to clean up resources. For example, you want to close the file that has been opened.

Summary

- Use Python `try...catch...finally` statement to execute a code block whether an exception occurs or not.
- Use the `finally` clause to clean up the resources such as closing files.