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* CHAPTER-12 : ADVANCED PYTHON 1

→ Exception Handling in Python

There are many built-in exceptions which are raised on Python when something goes wrong.
Exceptions in Python can be handled using a try statement. The code that handles the exception is written in the except clause.

```
try:
    # Code                    → Code which might throw exception
except Exception as e:
    print(e)
```

When the exception is handled, the code flow continues without program interruption.

We can also specify the exceptions to catch like this:

```
try:
    # Code
except ZeroDivisionError:
    # Code
except TypeError:
    # Code
except:
    # Code                    → All other exceptions are handled here.
```

→ Raising Exceptions

We can raise custom exceptions using the raise keyword in Python.

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→ try with else clause

Sometimes we want to run a piece of code when try was successful.

```
try:
    #SomeCode
except:
    #SomeCode
else:
    #Code  → This is executed only if the try was successful.
```

→ try with finally

Python offers a finally clause which ensures execution of a piece of code irrespective of the exception

```
try:
    #SomeCode
except:
    #Code
finally:
    #Code  → executed regardless of Error!
```

→ If __name__ == '__main__' in Python

__name__ evaluates to the name of the module in Python from where the program is ran

If the module is being run directly from the command line, the __name__ is set of string "__main__" Thus this behaviour is used to check whether the module is run directly or imported to another file.

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→ The global keyword

global keyword is used to modify the variable outside of the current scope

→ Enumerate function in Python

The enumerate function adds counter to an iterable and returns it

```
for i, item in list1:
    print(i, item)
```

↳ Print the items of list1 with index!

→ List Comprehensions

List Comprehensions is an elegant way to create lists based on existing lists

```
list1 = [1, 7, 12, 11, 22]

list2 = [i for item in list1 if item > 8]
```