

Python Programming Assertions

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Assertions

- We used assertion before to verify some condition
- `assert <condition>, <msg>`
- Easy to check, raise exception if condition is not met
 - The exception type is: `AssertionError`
- What if I want to **disable** all code assertions?
 - E.g. I intended only some validations but no exception handling and code may fail
- From command line you can pass extra **flag**: `-O` (for basic optimization)

Assertions

```
x = int(input())  
assert x <= 10, 'x is greater than 10'  
  
print(2*x)
```

```
(py) moustafa@moustafa-Aspire-VN7-793G:~/00Udemy/Python/private_gitlab_code/python_skills/23_exceptions/code/05_assert$ python 01.py  
20
```

```
Traceback (most recent call last):
```

```
File "01.py", line 5, in <module>
```

```
    assert x <= 10, 'x is greater than 10'
```

```
AssertionError: x is greater than 10
```

```
(py) moustafa@moustafa-Aspire-VN7-793G:~/00Udemy/Python/private_gitlab_code/python_skills/23_exceptions/code/05_assert$ python -o 01.py  
20  
40
```

But I may want to optimize but leave assertions?!

- A more risky scenario is as following
- We have several important and intended assertions
- Later, we want to run python but allows more optimizations from interpreter!
- But the optimizer disabled our Assertions!
- The proper way for the intended assertions is to throw an error
 - Regardless the flag, it will be raised

Raise AssertionError

```
x = int(input())
if x > 10:
    raise AssertionError('x is greater than 10')

print(2*x)
```

```
(py) moustafa@moustafa-Aspire-VN7-793G:~/00Udemy/CPP/private_gitlab_code/python_skills/23_exceptions/code/05_assert$ python 02.py
20
```

```
Traceback (most recent call last):
```

```
File "02.py", line 4, in <module>
```

```
    raise AssertionError('x is greater than 10')
```

```
AssertionError: x is greater than 10
```

```
(py) moustafa@moustafa-Aspire-VN7-793G:~/00Udemy/CPP/private_gitlab_code/python_skills/23_exceptions/code/05_assert$ python -O 02.py
20
```

```
Traceback (most recent call last):
```

```
File "02.py", line 4, in <module>
```

```
    raise AssertionError('x is greater than 10')
```

```
AssertionError: x is greater than 10
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”