# Python
...für Anfänger

# Unit 8

by

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# Menge - 1

```
>>> even = set()
>>> even
set()
>>> len(even)
2
>>> bool(even)
False  # leer!
>>> even.add(0)
{0}
>>> bool(even)
True  # nicht leer!
>>> even.add(2)
>>> even
{0, 2}
```

# Menge - 2

```
>>> 0 in even
True
>>> 1 in even
False
>>> even2 = {2, 0, 2}
>>> even2
{0, 2}
>>> even == even2
True
>>> even2.add(2)
>>> even == even2
True
>>> len(even2)
2
```

# Teilmengen und Übermengen

```
>>> {1, 3, 5} <= {5, 1, 3}
True
>>> {1, 3} <= {2, 5, 1, 3}
True
>>> {1, 3, 7} <= {2, 5, 1, 3}
False
>>> {1, 3, 5} < {5, 1, 3}
False
>>> {1, 3, 5} > {5, 3}
True
```

# Vereinigung und Durchschnitt

```
>>> {1, 2, 3} | {2, 3, 4}
{1, 2, 3, 4}
>>> {1, 2, 3} | set()
{1, 2, 3}
>>> {1, 2, 3} & {2, 3, 4}
{2, 3}
>>> {1, 2, 3} & set()
set()
```

# Differenz, symmetrische Differenz

```
>>> {1, 2, 3} - {2, 3, 4}
{1}
>>> {2, 3, 4} - {1, 2, 3}
{4}
>>> {1, 2, 3} ^ {2, 3, 4}
{1, 4}
>>> {1, 2, 3} - {2, 3, 4} | {2, 3, 4} - {1, 2, 3}
{1, 4}
```

# Mengen in `for` Schleifen

```
>>> for e in {0, 1, 2, 3}:
...     print(e ** 2)
...
0
1
4
9
```

# Modul - 1

```
>>> __name__
'__main__'
>>> import math
>>> math.__name__
'math'
```

# Modul - 2

```
def sum(a, b):
    return a + b

if __name__ = ”__main__”:
    a = input(”a= ”)
    b = input(”b= ”)
    print(sum(a, b))
```

# Exceptions

```
>>> try:
...     1 / 0
... except ZeroDivisionError:
...     print(”Oops”)
...
Oops
```