

CSIT110

# Fundamental Programming with Python

Type Hints – extra info, not tested.

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# In this lecture

- Type Hints

# Recall

`int`    `str`    `float`    `bool`    `List`    `Dict`    ...

# Type Hints

Faster to debug

<https://realpython.com/lessons/pros-and-cons-type-hints/>

Check that your program is parsing or assigning the right type of data into the functions or variables when you are developing

By using the [mypy](#) package

# Syntax

```
var = value # type: annotation
```

```
var: annotation; var = value
```

```
var: annotation = value
```

# Syntax

```
x: int = 123
y: str = "hi"
z: bool = True
```

```
m: list = [1,2,3]
n: dict = {"key1": 123,
           "key2": 456}
```

```
from typing import List, Dict
```

```
m: List[int] = [1,2,3]
n: Dict[str,int] = {"key1": 123,
                   "key2": 456}
```

# Syntax

```
def func(arg: arg_type, optarg: arg_type = default) -> return_type:  
    ...
```

```
def form_equation(num1: int, num2: int, num3:int = None) -> str  
    txt = f"{num1} + {num2}"  
    if num3:  
        txt += f" + {num3}"  
    return txt + " = "
```