Data Type Assignment

Q: What are data types in Python?
A: Data types in Python define the type of value a variable holds, such as integers, strings, floats, etc. They help Python understand how the data should be stored and manipulated.

Q: What is the difference between mutable and immutable data types in Python?
A:

- **Mutable data types can be changed after creation (e.g., list, dict, set).**

- **Immutable data types cannot be changed after creation (e.g., int, float, string, tuple).**

```python
a = 10              # int
b = 3.14            # float
c = "Hello"         # string
d = True            # boolean
e = [1, 2, 3]       # list
f = (4, 5, 6)       # tuple
g = {"x": 1}        # dictionary

print(type(a))   # <class 'int'>
print(type(b))   # <class 'float'>
print(type(c))   # <class 'str'>
print(type(d))   # <class 'bool'>
print(type(e))   # <class 'list'>
print(type(f))   # <class 'tuple'>
print(type(g))   # <class 'dict'>
```
```
<class 'int'>
<class 'float'>
<class 'str'>
<class 'bool'>
<class 'list'>
<class 'tuple'>
<class 'dict'>
```