Type Conversion

String Slicing

Obtaining a part of a string is called string slicing.

Code

variable_name[start_index:end_index]

- Start from the start_index and stops at end_index
- end_index is not included in the slice.

Code

```
message = "Hi Ravi"
part = message[3:7]
print(part)
```

Output

Ravi

Slicing to End

If end index is not specified, slicing stops at the end of the string.

Code

```
message = "Hi Ravi"
part = message[3:]
```

```
print(part)
```

Ravi

Slicing from Start

If start index is not specified, slicing starts from the index 0.

Code

```
message = "Hi Ravi"
part = message[:2]
print(part)
```

Output

Hi

Checking Data Type

Check the datatype of the variable or value using type()

Printing Data Type

Code

```
print(type(10))
print(type(4.2))
print(type("Hi"))
```

Output

```
<class 'int'>
<class 'float'>
<class 'str
```

Type Conversion

Converting the value of one data type to another data type is called *Type Conversion* or *Type Casting*.
We can convert

- String to Integer
- Integer to Float
- Float to String and so on.

String to Integer

int() converts valid data of any type to integer

Code

```
a = "5"
a = int(a)
print(type(a))
print(a)
```

Output

```
<class 'int'>
5
```

Invalid Integer Conversion

Code

```
a = "Five"
a = int(a)
print(type(a))
```

Output

ValueError:
invalid literal for int() with base

Code

```
a = "5.0"
a = int(a)
print(type(a))
```

Output

invalid literal for int() with base

Adding Two Numbers

Code

```
a = input()
a = int(a)
b = input()
b = int(b)
result = a + b
print(result)
```

Input

2
3

Output

5

Integer to String

str() converts data of any type to a string.

Code

```
a = input()
a = int(a)
b = input()
b = int(b)
result = a + b
print("Sum: " + str(result))
```

Input

```
2
3
```

Output

```
Sum: 5
```

Summary

1. int() -> Converts to integer data type

2. float() -> Converts to float data type

3. str() -> Converts to string data type

4. bool() -> Converts to boolean data type