Type Conversion

String Slicing

Obtaining a part of a string is called string slicing.

Code

PYTHON

```
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

PYTHON

```
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

PYTHON

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

Output

```
Ravi
```

Slicing from Start

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

Code

PYTHON

```python
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

PYTHON

```python
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

PYTHON

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

Output

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

Invalid Integer Conversion

Code

PYTHON

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

Output

```
ValueError:
invalid literal for int() with base 10: 'Five'
```

Code

PYTHON

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

Output

```
invalid literal for int() with base 10: '5.0'
```

Adding Two Numbers

Code

PYTHON

```python
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

PYTHON

```python
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

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