Python Function Data Type Handling

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Contents

1 Data Types

Go to the **RMD**, **PDF**, or **HTML** version of this file. Go back to Python Code Examples Repository (bookdown site) or the pyfan Package (API).

1.1 Check Parameter Type

There are parameters of a function, depending on the parameter type, execute the program differently. If integer, behave one way if string behave in another way.

```python
# define the function
def get_speckey_dict(gn_speckey=None):
    if isinstance(gn_speckey, str):
        print(f'{gn_speckey=} is a string')
    elif isinstance(gn_speckey, int):
        print(f'{gn_speckey=} is an integer')
    else:
        raise TypeError(f'{gn_speckey=} was not a string or an integer')
# Call function with integer
get_speckey_dict(1)
# Call function with string
```

```
## gn_speckey=1 is an integer
```

```python
get_speckey_dict('abc')
# Call function with a list
```

```
## gn_speckey='abc' is a string
```

```python
try:
    get_speckey_dict(['abc'])
except TypeError as e:
    print(f'Exception{e=}')
```

```
## Exceptione=TypeError("gn_speckey=['abc'] was not a string or an integer")
```

1.2 Check if Parameter is String or Integer In Interval

There is a function that takes a string or an integer between certain values. Execute if either of these two conditions are satisfied, do not if neither is satisfied. Below, print if string or an int between 1 and 11.

```python
# condition check function
def check_condition(gn_invoke_set):

  bl_is_str = isinstance(gn_invoke_set, str)
  bl_is_int = isinstance(gn_invoke_set, int)
  if bl_is_int:
    bl_between = (gn_invoke_set >= 1 and gn_invoke_set <= 11)
  else:
    bl_between = False

  if bl_between or bl_is_str:
      print(f'{gn_invoke_set=}')
  else:
      print(f'{gn_invoke_set=} is not string or an integer between 1 and 11')

# call with string or integer
check_condition('string')
```

```
## gn_invoke_set='string'
```
```python
check_condition(11)
```

```
## gn_invoke_set=11
```
```python
check_condition(1)
```

```
## gn_invoke_set=1
```
```python
check_condition(199)
```

```
## gn_invoke_set=199 is not string or an integer between 1 and 11
```
```python
check_condition(['abc'])
```

```
## gn_invoke_set=['abc'] is not string or an integer between 1 and 11
```