```python
def input_until_right(message="input a value: ", error_message="ERROR!", casting_type=str):
    """
    Wrapper function for input, repeats the input until the appropriate datatype has been entered (users can exit via a Keyboard Interupt).

    Parameters
    ----------
    * `message_value`: The prompt for the input.
    * `error_message`: The error message which is presented the input raises an error when casting the inputted value to `casting_type`.
    * `casting_type`: The data type which the inputted value is casted.
    """
    while True:
        try:
            value = casting_type(input(message))
            break
        except KeyboardInterrupt: exit()
        except:
            print(error_message)
            continue
    return value
```

## Utility Function

```python
from utils import input_until_right

num1 = input_until_right("First Number: ", "invalid input type, please try again ... ", float)
num2 = input_until_right("Second Number: ", "invalid input type, please try again ... ", float)

total = num1 + num2

print(f"{num1} + {num2} = {total}")
```

## Programming Task 1

```
PS C:\Users\ompan\Compt
ion Work/task3/Q1.py"
First Number: 10
Second Number: 123.4
10.0 + 123.4 = 133.4
```

```python
from utils import input_until_right


def times_tables(tables_of=3):
    until = input_until_right("Final term: ", "invalid type, please try again", int)

    for i in range(until + 1):
        print(f"{i} × {tables_of} = {i * tables_of}")


times_tables()
```

## Programming Task 2

```
Final term: 6
0 × 3 = 0
1 × 3 = 3
2 × 3 = 6
3 × 3 = 9
4 × 3 = 12
5 × 3 = 15
6 × 3 = 18
```

```python
from utils import input_until_right

def times_tables(tables_of=3):
    until = input_until_right("Final term: ", "invalid type, please try again", int)

    for i in range(until + 1):
        print(f"{i} × {tables_of} = {i * tables_of}")


tables_of = input_until_right("Times Tables of: ",
                              "invalid type for the tables, must be either float or int",
                              float)

times_tables(tables_of)
```

## Programming Task 3

```
Times Tables of: 43
Final term: 6
0 × 43.0 = 0.0
1 × 43.0 = 43.0
2 × 43.0 = 86.0
3 × 43.0 = 129.0
4 × 43.0 = 172.0
5 × 43.0 = 215.0
6 × 43.0 = 258.0
```

```python
from utils import input_until_right

fist_name = input_until_right("First name: ", "invalid type for a first name, please try again")
second_name = input_until_right("Second name: ", "invalid type for a second name, please try again")

print(f"Your full name is {fist_name} {second_name}")
```

## Programming Task 4

```
First name: Om
Second name: Panchal
Your full name is Om Panchal
```

```python
WEIGHTS_TO_POUNDS = 2.20462
POUNDS_TO_STONE = 14

Weight_KG = float(input("What is your weight in KG?: "))

Pounds = Weight_KG * WEIGHTS_TO_POUNDS
Stones = Pounds // POUNDS_TO_STONE

Remainder_Pounds = Pounds - (Stones * POUNDS_TO_STONE)

print("STONES:", Stones, "POUNDS:", Remainder_Pounds)
```

## Programming Task 5

```
What is your weight in KG?: 54
STONES: 8.0
POUNDS: 7.049479999999988
```

# St Dominic's Computer Science Transition Work - Task 4

Presenting Programming Work