LU09.L03 - Erweiterte Aufgaben

Mehrere Return-Werte

```
import math


def div(dividend, divisor):
    """
    Calculates the result and the rest of an
integer division
    :param dividend: Dividend of the division
    :param divisor: Divisor of the division
    :return: Result of the divison as whole
number and the rest of the division
    """

    result = math.floor(dividend / divisor)
    rest = dividend % divisor

    return result, rest


def main():
    result, rest = div(34, 6)
    print(f'Result: {result} and Rest:
{rest}')


if __name__ == '__main__':
    main()
```

2. Längenumrechner

1.Code anpassen

```
def convert(length, from_unit = 1, to_unit =
2):
    """
    Converts lengths. The following lengths
can be converted: meters, miles, nautical
miles, yards, inches
```

```
    :length: length to convert
    :from_unit: 1=Meter, 2=Meilen,
3=Seemeilen, 4=Yard, 5=Inches
    :to_unit: 1=Meter, 2=Meilen, 3=Seemeilen,
4=Yard, 5=Inches
    :return: converted length
    """
    if (from_unit == 1):
        result = length
    elif (from_unit == 2):
        result = length * 1609.34
    elif (from_unit == 3):
        result = length * 1852.0
    elif (from_unit == 4):
        result = length * 0.9144
    elif (from_unit == 5):
        result = length * 0.0254

    if (to_unit == 1):
        return result
    if (to_unit == 2):
        result = result / 1609.34
        return result
    if (to_unit == 3):
        result = result / 1852.0
        return result
    if (to_unit == 4):
        result = result / 0.9144
        return result
    if (to_unit == 5):
        result = result / 0.0254
        return result


def main():
    print("1=Meter, 2=Meilen, 3=Seemeilen,
4=Yard, 5=Inches")
    print(convert(1000))


if __name__ == '__main__':
    main()
```

2. Erweiterung

```
def convert(length, from_unit = 1, to_unit =
```

```
2):
    """
    Converts lengths. The following lengths
can be converted: meters, miles, nautical
miles, yards, inches
    :length: length to convert
    :from_unit: 1=Meter, 2=Meilen,
3=Seemeilen, 4=Yard, 5=Inches
    :to_unit: 1=Meter, 2=Meilen, 3=Seemeilen,
4=Yard, 5=Inches
    :return: converted length
    """
    if (from_unit == 1 or
str(from_unit).casefold() ==
'Meter'.casefold() ):
        result = length
    elif (from_unit == 2 or
str(from_unit).casefold() ==
'Meilen'.casefold() ):
        result = length * 1609.34
    elif (from_unit == 3 or
str(from_unit).casefold() ==
'Seemeilen'.casefold()):
        result = length * 1852.0
    elif (from_unit == 4 or
str(from_unit).casefold() ==
'Yard'.casefold()):
        result = length * 0.9144
    elif (from_unit == 5 or
str(from_unit).casefold() ==
'Inches'.casefold()):
        result = length * 0.0254

    if (to_unit == 1 or
str(to_unit).casefold() ==
'Meter'.casefold()):
        return result
    if (to_unit == 2 or
str(to_unit).casefold() ==
'Meilen'.casefold()):
        result = result / 1609.34
        return result
    if (to_unit == 3 or
str(to_unit).casefold() ==
'Seemeilen'.casefold()):
        result = result / 1852.0
        return result
    if (to_unit == 4 or
str(to_unit).casefold() ==
'Yard'.casefold()):
        result = result / 0.9144
```

```
            return result
        if (to_unit == 5 or
str(to_unit).casefold() ==
'Inches'.casefold()):
            result = result / 0.0254
            return result


def main():
    print('1=Meter, 2=Meilen, 3=Seemeilen,
4=Yard, 5=Inches')
    print(convert(1000))
    print(convert(1000,from_unit='Meilen',
to_unit=5))


if __name__ == '__main__':
    main()
```