

ASSIGNMENT 5 - GROUP 1

FINAL PROJECT

Date 04/04/2022

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Converter

Create a program that can be used to convert temperature, length, weight, pressure. Your program should have a menu displayed for the user to choose from, where are listed the conversion options:

temperature

- fahrenheit to celsius
- celsius to fahrenheit

length

- miles to km
- km to miles

weight

- pound to kilograms
- kg to pound

exit

The program should allow user to choose the desired conversion over and over again until user chooses to quit using it.

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In [2]: # Import ipywidgets for Graphical User Interface (GUI)
from ipywidgets import RadioButtons, Button, GridBox, Layout, ButtonStyle, Text, Output

# Define output
output = Output()
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# Create input display screen
input_screen = Text(description = "User Input", layout=Layout(width='300px', height='50px',
display(input_screen)

# Create result display screen
result_screen = Text(description = "Result", disabled=True, layout=Layout(width='300px', h
display(result_screen)

rButton = RadioButtons(
    options=['Km->Mile', 'Mile->Km', 'Kg->Pound', 'Pound->Kg', '°F->°C ', '°C->°F'],
    description='Type:',
    disabled=False
)
display(rButton)

clear = Button(description='Clear',
                layout=Layout(width='300px', height='50px'),
                style=ButtonStyle(button_color='gray'))
display(clear)

convert = Button(description='CONVERSION',
                 layout=Layout(width='300px', height='50px'),
                 style=ButtonStyle(button_color='Darkorange'))

display(convert)

def bclear(b):
    input_screen.value = ""
    result_screen.value = ""

clear.on_click(bclear)

# define convert fomular
def convt(b):
    x = float(input_screen.value)
    if rButton.value == "Km->Mile":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " Km"
        y = x * 0.62137
        result_screen.value = str(round(y, 2)) + " Miles"
    elif rButton.value == "Mile->Km":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " Miles"
        y = x / 0.62137
        result_screen.value = str(round(y, 2)) + " Km"
    elif rButton.value == "Kg->Pound":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " Kg"
        y = x * 2.2
        result_screen.value = str(round(y, 2)) + " Pounds"
    elif rButton.value == "Pound->Kg":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " Pounds"
        y = x / 2.2
        result_screen.value = str(round(y, 2)) + " Kg"
    elif rButton.value == "°F->°C ":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " °F"
        y = 5/9 * (x - 32)
        result_screen.value = str(round(y, 2)) + " °C "
    elif rButton.value == "°C->°F":
        x = float(input_screen.value)
        input_screen.value = input_screen.value + " °F"
        y = (x * 9/5) + 32

```

```
        result_screen.value = str(round(y, 2)) + " °C "  
convert.on_click(convt)
```

In []: