Projectgroup4

October 13, 2022

1 Final Project

2 Introduction to Computer Sciences

2.1 Group 4:

- Nguyen Nguyen Anh Song
- Hoang Le

Github link: https://github.com/JupiterLeo/Pathway-Final-Project

2.2 Project Topic No.3: Convertor

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 convertion options

[13]:
```
print('This is a unit conversion program')
```

```
This is a unit conversion program
```

[14]:
```
# Creat a function of length converter
# basic of calculation: 1 km = 0.621371 mile
def length():
    op = input('''Select unit conversion:
        Miles to Km (1)
        Km to Mile (2)
        ''')
    value = float(input ("Which value do you want to convert ?"))
    if op == "1":
        result = round(value/0.621371,2)
        print ('\033[1m'+'Converted Length',value,'mi = ',result,'km'+␣
 ↪'\033[0m')
    elif op == "2":
        result = round(value*0.621371,2)
        print ('\033[1m'+'Converted Length',value,'km = ',result,'mi'+␣
 ↪'\033[0m')
    else:
        print('Please input proper convention')
```

[15]:
```
# Creat a function of temperature converter
# basic of calculation: Celsius/5 = (Fahrenheit-32)/9
def temperature():
    op = input('''Select unit conversion:
        Celsius to Fahrenheit (1)
        Fahrenheit to Celsius (2)
        ''')
    value = float(input ("Which value do you want to convert ?"))
    if op == "1":
        result = round((value * 9/5)+32,2)
        print ('\033[1m'+'Converted Temperature',value,'Celsius =␣
 ↪',result,'Fahrenheit'+ '\033[0m')
    elif op == "2":
        result = round((value - 32)*5/9,2)
        print ('\033[1m'+'Converted Temperature',value,'Fahrenheit =␣
 ↪',result,'Celsius'+ '\033[0m')
    else:
        print('Please input proper convention')
```

[16]:
```
# Creat a function of weight converter
# basic of calculation: 1 pound = 0.45359237 kg
def weight():
    op = input('''Select unit conversion:
        Pound to Kilograms (1)
        Kilograms to Pound (2)
        ''')
    value = float(input ("Which value do you want to convert ?"))
    if op == "1":
        result = round(value*0.45359237,2)
        print ('\033[1m'+'Converted weight',value,'lbs = ',result,'kg'+␣
 ↪'\033[0m')
    elif op == "2":
        result = round(value/0.45359237,2)
        print('\033[1m'+'Converted weight',value,'kg = ',result,'lbs'+␣
 ↪'\033[0m')
    else:
        print('Please input proper convention')
```

[17]:
```
# Creat a function of pressure converter
# basic of calculation: 1 kPa = 12.35 Psi
def pressure():
    op = input('''Select unit conversion:
        Kilopascals to Pounds per Inch (1)
        Pounds per Inch to Kilopascals (2)
        ''')
    value = float(input ("Which value do you want to convert ?"))
    if op == "1":
```

```
        result = round(value*12.35,2)
        print ('\033[1m'+'Converted pressure',value,'kPa = ',result,'Psi'+␣
 ↪'\033[0m')
    elif op == "2":
        result = round(value/12.35,2)
        print ('\033[1m'+'Converted pressure',value,'Psi = ',result,'kPa'+␣
 ↪'\033[0m')
    else:
        print('Please input proper convention')
```

[18]:
```
# Set up the program
# Set up a boolean value for user's answers
useranswer_yes = True
# Set up iterative structure
while useranswer_yes != False:
    print('')
    answerType = input('''Please select the type of conversion?
                          Temperature (t)
                          Length (l)
                          Weight (w)
                          Pressure (p)
                          ''')
    if answerType =="l":
        length()
    elif answerType =="t":
        temperature()
    elif answerType =="w":
        weight()
    elif answerType =="p":
        pressure()
    else:
        print('Please input proper convention')
    answerexit = input('Do you want to exit (y/n): ')
    if answerexit =="y":
        useranswer_yes = False
print ('''
Thank you''')
```

```
Please select the type of conversion?
                          Temperature (t)
                          Length (l)
                          Weight (w)
                          Pressure (p)
                          t
Select unit conversion:
        Celsius to Fahrenheit (1)
        Fahrenheit to Celsius (2)
```

```
        1
Which value do you want to convert ?25
Converted Temperature 25.0 Celsius =  77.0 Fahrenheit
Do you want to exit (y/n): n

Please select the type of conversion?
                           Temperature (t)
                           Length (l)
                           Weight (w)
                           Pressure (p)
                           w
Select unit conversion:
        Pound to Kilograms (1)
        Kilograms to Pound (2)
        2
Which value do you want to convert ?10
Converted weight 10.0 kg =  22.05 lbs
Do you want to exit (y/n): y

Thank you
```