Introduction to Python Exercises 01 (sample program answers)

Remember that you can come out with a different way to solve the exercises

At the beginning while you are getting acquainted with programming and Python as a language your objective is to produce a suitable result. As you get more experience, you will be able to apply your python knowledge to write elegant code. But for the time being focus on the results.

1) Write a program that prompts the user for two numbers. Then prints the SUM of the numbers and the PRODUCT. Print both results on the same line with a descriptive message. Assume the numbers are integers.

```
number_1 = int(input("Enter an integer: "))
number_2 = int(input("Enter another integer: "))


sum_of_numbers = number_1 + number_2
product_of_numbers = number_1 * number_2


print ("The SUM of:", number_1, "and", number_2, "is",
       sum_of_numbers, "and the PRODUCT is", product_of_numbers)
```

2) Write a program that prompts for a number (assume integer). Depending on whether the number is even or odd, print a message stating the nature of the number (Even or Odd). Hint: how does an even / odd number reacts when divided by 2?

```
number_1 = int(input("Enter an integer: "))

if (number_1 % 2) == 0:

    print ("You entered an even number!")

else:

    print ("You entered an odd number!")
```

3) Write a program that prompts for a string (enter a string with at least 6 characters, no validation). Print characters 3 to 5 inclusive. (The third to the fifth character of the string)

```
myString = input("Enter a string (minimum 6 characters): ")

print("Characters 3 to 5: ", myString[2:5])
```

4) Write a program that prompts the user for a string. Then check the first and last characters of the string. If both characters are equal, then print the string, otherwise print the message "**First and last character do not match**".

```
myString = input("Enter a String: ")

if myString[0] == myString[-1]:
    print ("The string is: ", myString)
else:
    print ("First and last characters do not match")
```

5) Fahrenheit to Celsius conversion and conditional statements (see description in exercise 01_4)

```
Farenheit = float(input("Enter a temperature in Farenheit: "))

Celsius = (Farenheit - 32.0) * 5.0/9.0

if Celsius <= -15.0:
    print ("It's", Celsius, "degrees Celsius, Let's get out of here!")
elif Celsius > -15.0 and Celsius <= 0.0 :
    print ("It's", Celsius, "degrees Celsius, Get your boots and gloves!")
elif Celsius > 0.0 and Celsius <= 15.0 :
    print ("It's", Celsius, "degrees Celsius, I have my sweater!")
else:
    print("It's", Celsius, "degrees Celsius, It is BBQ Time!")
```

6) Write a programs that prompts for an amount in dollars (let's say 23, input int, no decimals) and breaks it down into $5 bills , $2 and $1 coin denominations. If there are bills of a specific denomination, don't print the denomination.

```
amount = int(input("Enter an amount (no decimals): "))

result = amount//5

if (result > 0):
    print (result, '5$ bills')
    amount = amount % 5

result = amount//2

if (result > 0):
    print (result, '2$ coins')
    amount = amount % 2

if (amount > 0):
    print (amount, '1$ coins')
```