Lab: Formatting, Control Statements

1. **Write a Python program that prints a table as shown below** – use the exponentiation operator to compute the square and cube, and the \t to align the columns.

Num	Sq	Cube
1	1	1
2	4	8
3	9	27
4	16	64

2. **Simple Functions – abs, max, min, pow, round**
    a. Ask the user to enter 3 numbers and print the numbers and the maximum of the #s.

    b. Ask the user to enter a number and round the number to the nearest hundredth. (i.e. if the user enters 3.567, the result should be 3.57

3. **Mathematical Functions: NOTE-- import math**
    a. Ask the user to enter an amount and no matter what number they enter, convert it to a non-negative number. (hint – use the fabs function)

    b. Ask the user to enter a taxRate as a decimal and use the FORMAT function to print it as a percent. (for example, if the user enters .015, it should print 15%)

4. **Objects and Methods: id and type functions**

    Enter the following code and be able to explain the results:

```
hrs = input("enter your hours: ")
print ("id is: ", id(hrs))
print ("type is: ", type(hrs))
```

    Enter the following code and be able to explain the results when you enter 40.8 and 35 on two separate runs:

```
strHrs = input("enter your hours: ")
print ("id of strHrs is: ", id(strHrs))
print ("type of strHrs is: ", type(strHrs))
print("==================")
hrs = eval(strHrs)
print ("id of hrs is: ", id(hrs))
print ("type of hrs is: ", type(hrs))
```

5. String functions: Run this, and type the name with 10 leading spaces: John C. Smith

```
name = input("Enter your name: ")
print("You entered ", name, "*")
name =name.lstrip()
name = name.lower()
print("Without Leading Spaces in Lowercase:", name,"*")
```

6. Write a Python program that asks the user to enter their salary and the number of years worked for the company. Those that have worked more than 5 years receive a 2% raise, while those that have worked five years or less receive a 1% raise. The report should look like this – all currency should be printed rounded to 2 places past the decimal:
   Original Salary: $10000.00
   Years Worked: 5
   New Salary: $10100.00

   or
   Original Salary: $10000.00
   Years Worked: 5
   New Salary: $10200.00

7. Exercise 4.11 (page 104)

8. Exercise 4.12 (page 104-105)

9. Exercise 4.13 (page 105)
10. Exercise 4.9 (page 122)