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

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**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

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**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%)

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**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))

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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,"\*")

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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

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7. Exercise 4.11 (page 104)

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8. Exercise 4.12 (page 104-105)

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9. Exercise 4.13 (page 105)

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10. Exercise 4.9 (page 122)

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