**CS 299 Lab #1 (20 points) Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write the following expressions in Python , test it, and then put the result here.
2. **3 < 2 or 2 < 1 and not ( 4 > 5)** result\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. *(initialize x to be 6)* **3 + 5 == 4 \* (x \* 2 / 3)** result\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. *(let pi = 3.1416)* calculate **sin(pi/6)** result\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Let **s = ‘0123456789’**, write Python expressions using string s and the indexing operator that evaluate to:
6. ‘0’ Expression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. ‘9’ Expression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. ‘345’ Expression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. ‘789’ Expression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. Run the following code, if error occurs, explain why there is an error. If no error, give output.
11. **>>> myCat = ‘cymric bat’**

**>>> myCat[7] = ‘c’**

Error or not: \_\_\_\_\_\_\_\_\_

Reason/Ouput: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **>>>myCat = ‘cymric cat’**

**>>>myCat = 2\*myCat**

Error or not: \_\_\_\_\_\_\_\_\_

Reason/Output: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write Python codes to calculate your BMI. BMI = (weight in kilograms) / (height in meters)2 or BMI = ( Weight in Pounds / ( Height in inches)2 x 703
2. Write Python codes to print out three lines in following format.

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Hello! How’s everything?

There are 35 students in 1 session of CS 299 class.

Have a great quarter!

1. (optional) Write Python codes to write the above 4 lines into a text file.
2. Ask the user to input a year and print out True if the year is a leap year and False otherwise. (A year is a leap year if it is divisible by 4 but not by 100, unless it is divisible by 400 in which case it is a leap year.) Test or 1600, 1700, 1800, 1900, 2000, 2016.

**Submission instruction:** Problem 1 – 3: write answer on paper and turn in the paper.Problem 4, 5, 7: Create one file (.py file) with Python for all three programs and upload the file to blackboard along Lab1 link.