**CS 299 Lab #3 (20 points)**

1. Timing the MonteCarlo method (see project #1) and record the result.

Requirements:

1. Write a function MonteCarlo (n)
2. Code each test case as a function call
3. For each test case, your program should show the calculated pi as well as execution time, but you don’t have to show the results in a table format)

|  |  |  |
| --- | --- | --- |
| N | Pi | Execution time (sec) |
| 10000 |  |  |
| 100000 |  |  |
| 1000000 |  |  |

1. Write a sales receipt print function that takes a list of purchase prices and a sales tax rate, then returns the total cost of your purchase. Default sales tax rate is 8%. You must use default arguments as well as variable-length arguments.

def salesReceiptPrint ( … ) #note: … is what you should write

…

return …

Testing (code in each test case as a function call.)

(1) Purchases: 80, 125, 45.5, tax rate 8% Result\_\_\_\_\_\_\_\_\_\_\_\_

(2) Purchases: 95, tax rate 10.5% Result\_\_\_\_\_\_\_\_\_\_\_\_

(3) Purchases: 12, 5.5, 6.5, 7.5, 9.0, tax rate 7% Result\_\_\_\_\_\_\_\_\_\_\_\_

Submission instruction:

Submit three files: (1) MonteCarlo.py, (2) SalesReceipt.py, (3) a script file showing the test runs for both program to blackboard along Lab#3 link.