

COL100: Lab 6

February 13, 2017

Part 1: IO formatting, Command line parsing, Modules

1. Reading from a file
2. Writing to a file
3. Command line parsing, sys.argv
4. Import Modules: sys, math, os

Reference:

FileIO: https://www.tutorialspoint.com/python/python_files_io.htm

Part 2: Questions

1. Write a Python function $\sin(x,n)$ to calculate the value of $\sin(x)$ using its series expansion up to n terms. Compare the values of $\sin(x)$ for different values of n with the correct value, $\text{math.sin}(x)$.
2. Write a Python program to read a file containing marks of student ("EntryNo,Marks"). Each entry is in new line. Then calculate the average, highest and least marks of the class. The file name is given as an argument.
3. Write a Python program which takes as argument the folder path and prints name of all the contents in that folder.
4. Write a Python program to get the count of each word in a file. The file name is given as an argument.

Part2: Practice Questions

1. Write a Python program that reads a file, computes the values and writes the result to another file. The input file contains binary arithmetic expressions (+,-,*,/,%) . ex:
2+3
10-8
14*3
2. Write a Python function $\cos(x,n)$ to calculate the value of $\cos(x)$ using its series expansion up to n terms. Compare the values of $\cos(x)$ for different values of n with the correct value, $\text{math.cos}(x)$.
3. Write a program which takes a string as an argument and checks whether it is a palindrome or not.

4. Write a Python program to read two matrices from different files, compute its product and write the answer to a different file. The first line of the file contains the number of rows, number of columns. The next n lines contain comma separated elements of the n rows. ex:

3,4

1,2,3,4

5,6,7,8

9,1,2,3