Anupam Mahapatra

Student ID: 200062145

CSC/ECE 576 - Simulation Project:

RUNNING INSTRUCTIONS

Objectives

In this project, you will develop a simulation model of the flow of SIP messages as they go through a P-CSCF, an S-CSCF, and an application server (AS), with a view to estimating the 95th percentile of the end-to-end delay.

Operating System

Windows 8.1

Language used:

Python 2.7

Version: Anaconda Python

(A full Python distribution for data management, analysis and visualization of large data sets)

Download reference:

https://www.python.org/download/

About the Python compiler:

The Project has been coded using Eclipse with Python 2.7 (Version Python Anaconda). The feature of this python version is that it includes all the advanced library that the contemporary python do not provide by default for Windows 8.1 (64 Bit system). So there is no need to download the library and install them.

Some of such library used during this project are:

NumPy- Numerical Python. For numerical operations

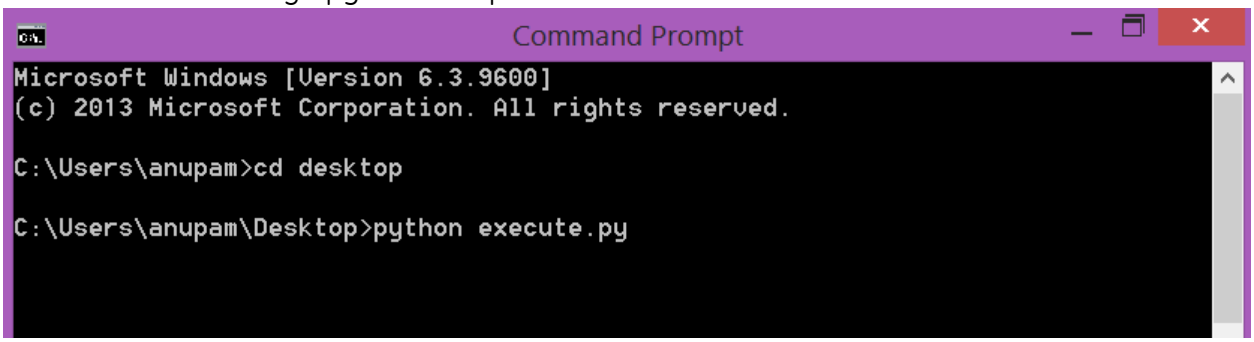
matPlotLib.Pyplot – Python Plotting library for obtaining graphs of observations.

Running Instructions:

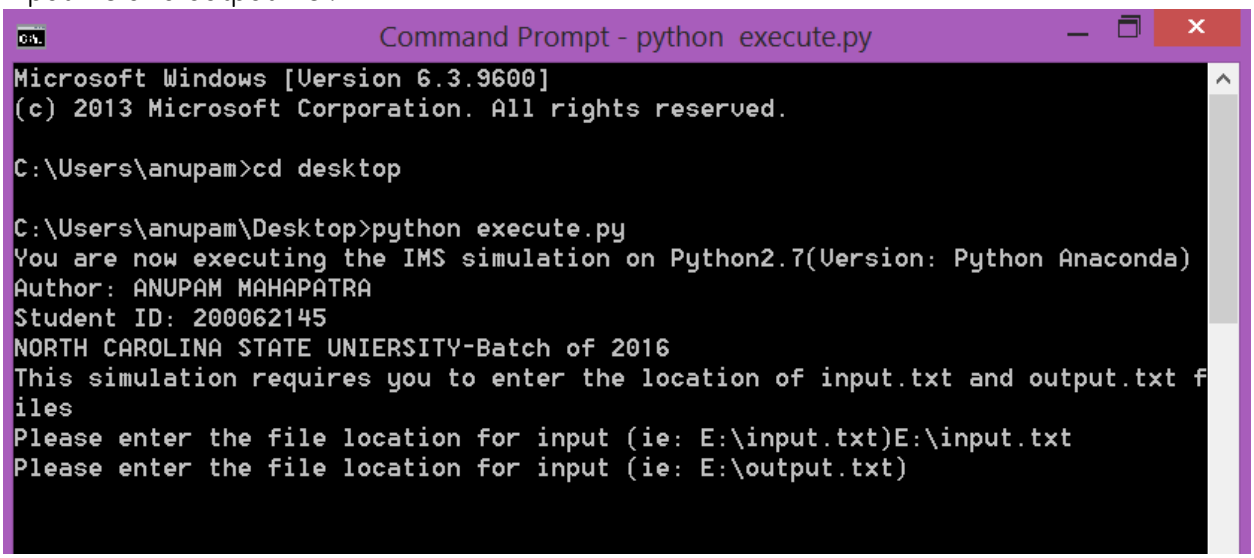
The final Code of the project has been stored as a Python file named: **execute.py**

Let me explain the execution steps:

- First we need to move to the directory of the code file from our command task and then execute it through python compiler.



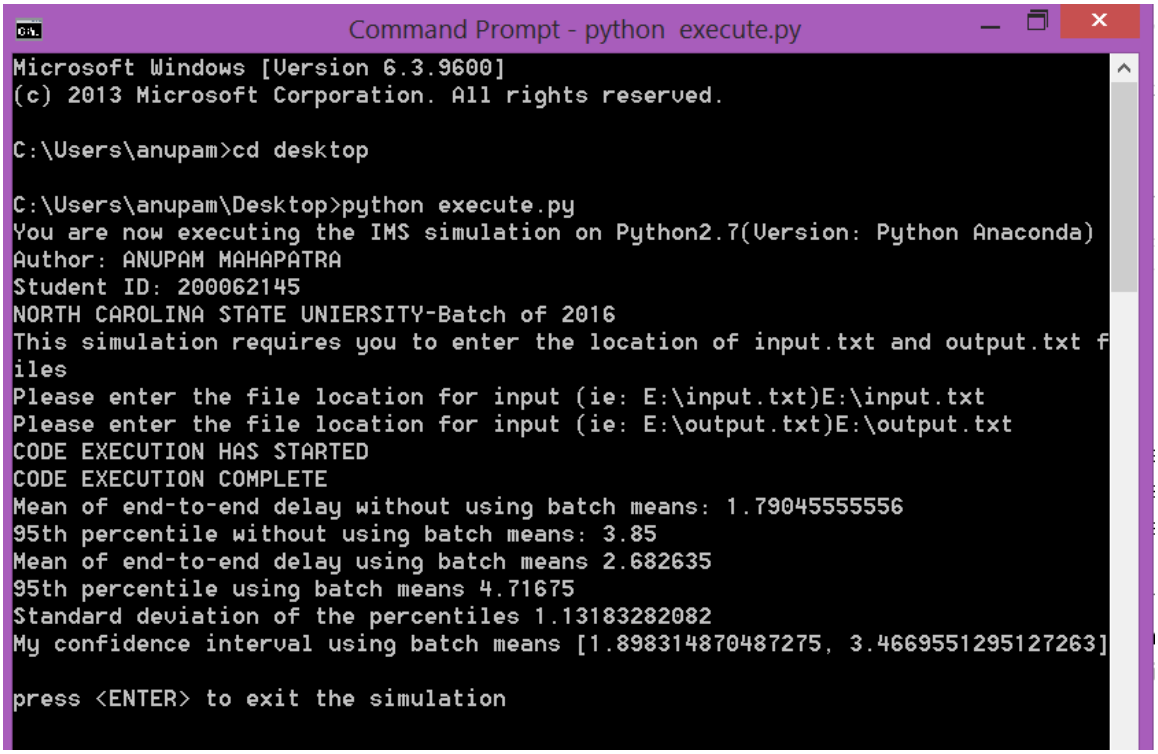
- As we execute the python code, the inputs that the file will ask for are the locations of input file and output file :



- The input location must contain the .txt file with the details that the simulation require.

- The input file MUST be in the particular format as provided in the attachment of this simulation project.

  Ie: Arrival rate (Lambda),1
  Mean service time 1/μP (sec),0.1
  Mean service time 1/μS (sec),0.2
  Mean service time 1/μAS (sec),0.5
  Total number of departures,900
  The number of batches,100
- The Output file location must also be specified along with the output file name. The file asked for must be a .txt file
- Upon successful compilation the code will display the information as shown in the screen shot below



- The same information will be produced in the output file in .txt format on the location specified by the user earlier in the program.
