R·I·T Information Sciences and Technology Department

NSSA-220 Task Automation Using Interpretive Languages
Lab 4: Python Data Visualization

Instructions

The purpose of this lab is to automate the creation of the line plots that were generated as part of the Excel sheet provided in the application performance monitoring project. Your Python script will be creating 5 plots, just as you did for the project, using an example output data set from a past project submission.

The lab should be completed and submitted on an individual basis, but feel free to work with other classmates and ask for help from your instructor and TA as needed. When complete, submit all image files and your script in a zip file called Lab4.zip to the Lab 4 dropbox. The exact due date will be posted on myCourses.

Your Task

Write a Python script called Lab4.py that recreates the visualizations from the first project using an example output data set stored in metrics.zip on myCourses. In it, you will find six APM_metrics.csv files and a system_metrics.csv file. As in the project, you will create two process level metrics line plots; one for CPU utilization and one for memory utilization. You will also create three system metrics line plots; bandwidth utilization, hard disk access rates, and hard disk utilization.

The CPU utilization and memory utilization line plots shall use the following color scheme:

- APM1 – blue
- APM2 – black
- APM3 – red
- APM4 – green
- APM5 – yellow
- APM6 – cyan

You may choose the color scheme for the three system level metrics line plots.

All plots must include: meaningful title, axis labels with correct units, appropriate line color scheme, and legend. The way you write your script is completely up to you.

Name your plot files as follows:

- CPU utilization – cpu.png
- Memory utilization – memory.png
- Bandwidth utilization – bandwidth.png
- Hard disk access rates – disk_access.png
- Hard disk utilization – disk_util.png

Submit all plots and your script to the Lab 4 dropbox in a zip file called Lab4.zip by the specified due date.