NSSA 220
Task Automation with Interpreted Languages

Final Review

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Linux Command Exercises

- Assume you are given a text file: sampledata.txt. Write down a linux command that prints all lines that contain the letter b and do not contain the letter m. You may use pipelining if needed.
- Write down a linux command that prints only the third and fourth lines inside a text file called sampledata.txt. You may use pipelining.
- Write down a linux command that sends a kill signal to a process with ID=93740
- Write down a linux command that prints the process ID for the process currently with the highest memory usage.

Bash Exercise

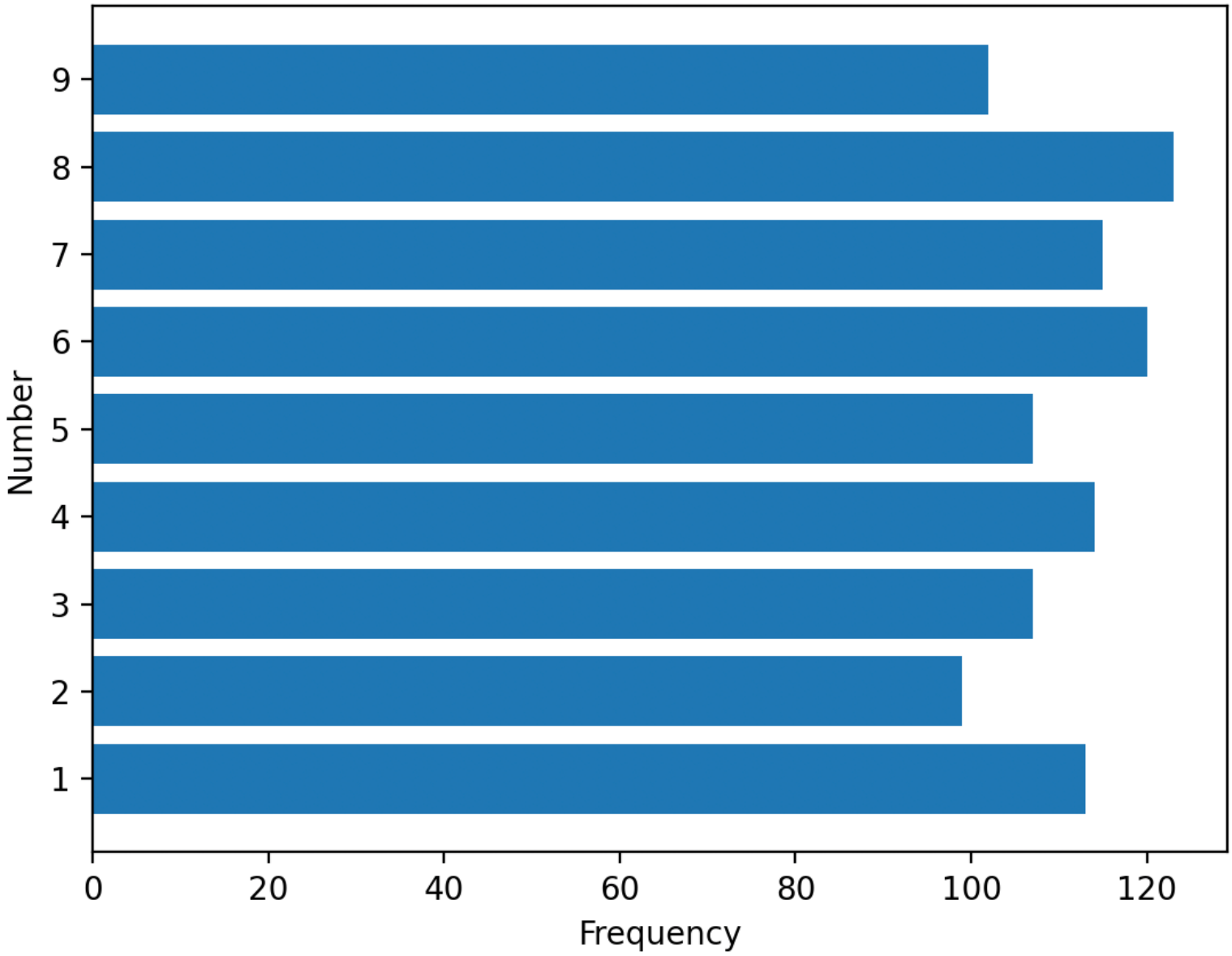
- Using sampledata.txt file, write a bash script that finds calculates the sum of sales (the third column) for all lines starts with letters from A-F. Name your script sum.h.

```
$ bash sum.sh sampledata.txt
41
```

Python Exercise 1

- In below, I wrote Python code to generate one thousand random integers between 1 and 9. Your job is to write the code needed to draw a horizontal bar plot that shows the frequency (i.e., count) of each number between 1 and 9 in the list. You also need to show proper labels for x-axis and y-axis. See my output in the next slide. Use it as a reference. Note that we have random number generation so your output may have different number frequencies from mine.

```
import matplotlib.pyplot as plt
import numpy as np
from random import randrange
lst = [ randrange(1,10) for i in range(1000)]
```



Python Exercise 2

- Write Python script that fetches the web page "https://www.rit.edu/" and stores its html code in a file called page.html

Python Exercise 3

- You are given the following CSV file, marks.csv

Name	Email	Mark
Mark	mark@rit.edu	90
Noora	noora@gmail.com	80
Lara	lara@rit.edu	65
Ahmad	ahmad@gmail.com	74
Terry	terry@rit.edu	62
Fred	fred@rit.edu	91
Susie	susie@gmail.com	64

- Write a python script that uses pandas to

  (1) prints the student names sorted by their marks

  (2) prints the average mark