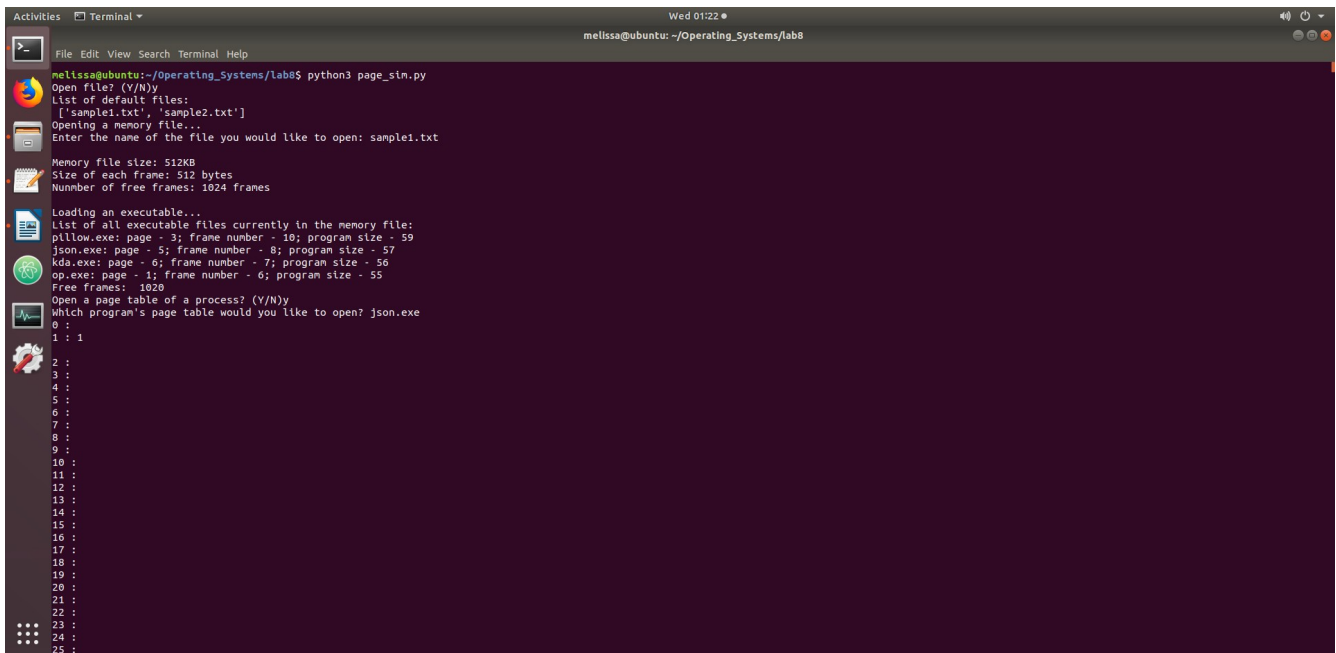


Lab 8 – Paging Simulator

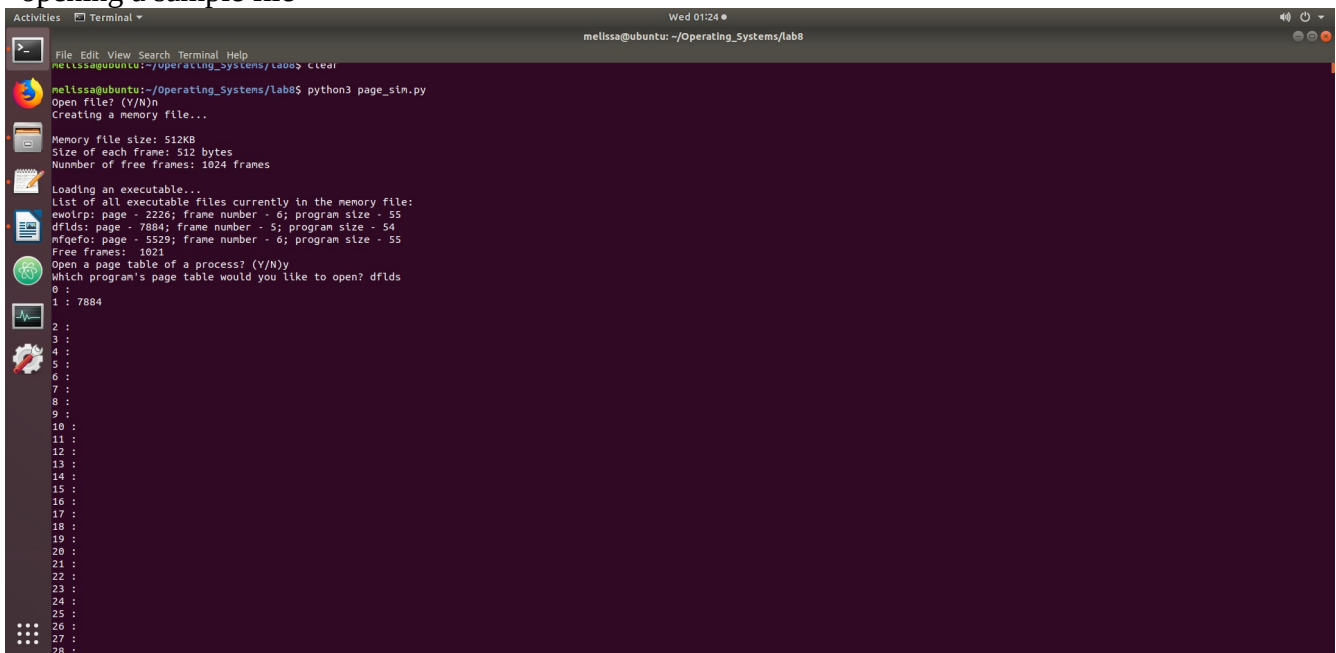


```
Activities Terminal
melissa@ubuntu: ~/Operating_Systems/lab8
File Edit View Search Terminal Help
melissa@ubuntu:~/Operating_Systems/lab8$ python3 page_sim.py
Open file? (Y/N)y
List of default files:
['sample1.txt', 'sample2.txt']
Opening a memory file...
Enter the name of the file you would like to open: sample1.txt

Memory file size: 512KB
Size of each frame: 512 bytes
Number of free frames: 1024 frames

Loading an executable...
List of all executable files currently in the memory file:
pillow.exe: page - 3; frame number - 10; program size - 59
json.exe: page - 5; frame number - 8; program size - 57
kda.exe: page - 6; frame number - 7; program size - 56
op.exe: page - 1; frame number - 6; program size - 55
Free frames: 1020
Open a page table of a process? (Y/N)y
Which program's page table would you like to open? json.exe
0 :
1 : 1
2 :
3 :
4 :
5 :
6 :
7 :
8 :
9 :
10 :
11 :
12 :
13 :
14 :
15 :
16 :
17 :
18 :
19 :
20 :
21 :
22 :
23 :
24 :
25 :
```

^opening a sample file



```
Activities Terminal
melissa@ubuntu: ~/Operating_Systems/lab8
File Edit View Search Terminal Help
melissa@ubuntu:~/Operating_Systems/lab8$ Clear
melissa@ubuntu:~/Operating_Systems/lab8$ python3 page_sim.py
Open file? (Y/N)n
Creating a memory file...

Memory file size: 512KB
Size of each frame: 512 bytes
Number of free frames: 1024 frames

Loading an executable...
List of all executable files currently in the memory file:
ewolrp: page - 2226; frame number - 6; program size - 55
dflds: page - 7884; frame number - 5; program size - 54
mfqefo: page - 5529; frame number - 6; program size - 55
Free frames: 1021
Open a page table of a process? (Y/N)y
Which program's page table would you like to open? dflds
0 :
1 : 7884
2 :
3 :
4 :
5 :
6 :
7 :
8 :
9 :
10 :
11 :
12 :
13 :
14 :
15 :
16 :
17 :
18 :
19 :
20 :
21 :
22 :
23 :
24 :
25 :
26 :
27 :
28 :
```

^creating a file

^screenshots of running program

In order to run and compile my program, first run “python3 page_sim.py” in the terminal. The program will then prompt if the user wants to open a file or not. If the user chooses no, then a file is created that contains a list of executables. If the user chooses yes, then they will be prompted to decide which file they would like to open from a list of files, which will open said file. The total memory file size, size of each frame, and number of free frames will then be displayed, followed by a chart that lists all executables that are in the file, as well as their page number, frame number, and program size. The number of remaining free frames will then be displayed after the programs are loaded in. From here,

the user can choose to look at a page table of a certain process, or not (which just exits the program). If the page table option is chosen, the user is prompted for which process's page table they would like to look at. The user can then make the choice repeatedly until the program is exited.