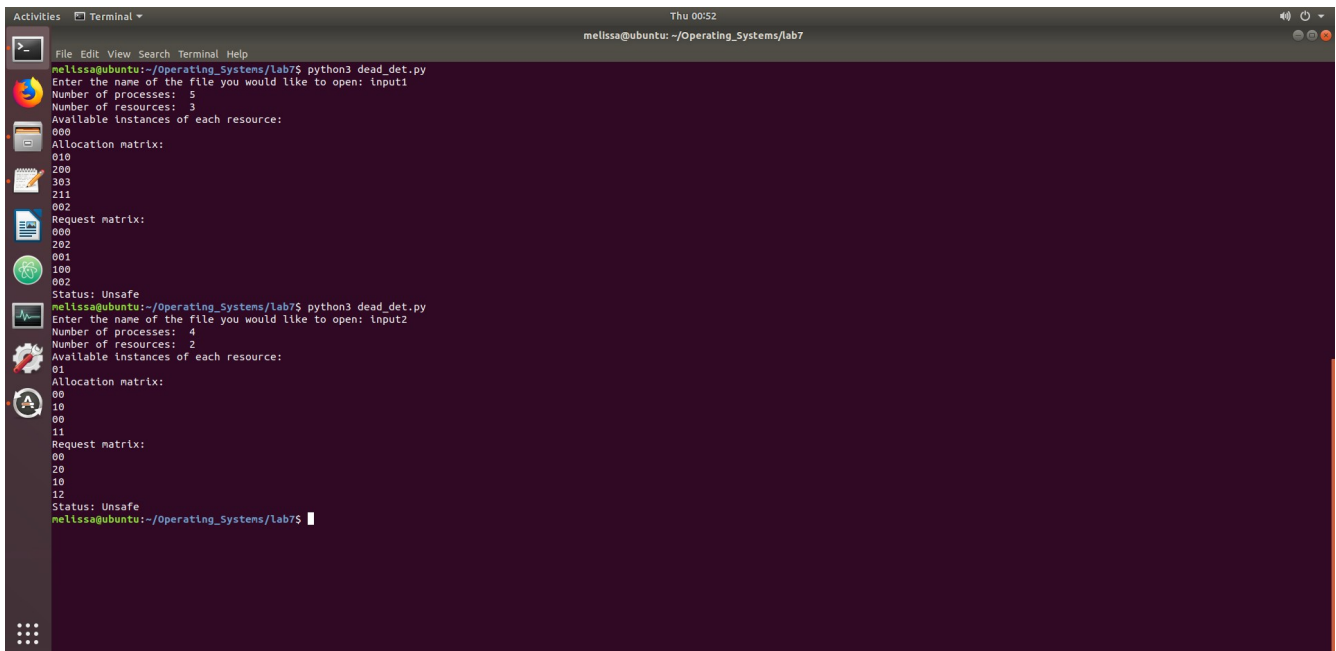


Lab 7 – Deadlock Detection



The screenshot shows a terminal window with a dark background. The user has run the command `python3 dead_det.py` twice. The first run prompts for an input file, and the user enters `input1`. The program then displays the number of processes (5), number of resources (3), and available instances of each resource (000). It shows an allocation matrix and a request matrix, both as 5x3 grids of numbers. The status is reported as "Unsafe". The second run prompts for an input file, and the user enters `input2`. The program displays the number of processes (4), number of resources (2), and available instances of each resource (01). It shows an allocation matrix and a request matrix, both as 4x2 grids of numbers. The status is reported as "Unsafe".

```
melissa@ubuntu:~/Operating_Systems/lab7$ python3 dead_det.py
Enter the name of the file you would like to open: input1
Number of processes: 5
Number of resources: 3
Available instances of each resource:
000
Allocation matrix:
010
200
303
211
002
Request matrix:
000
202
001
100
002
Status: Unsafe
melissa@ubuntu:~/Operating_Systems/lab7$ python3 dead_det.py
Enter the name of the file you would like to open: input2
Number of processes: 4
Number of resources: 2
Available instances of each resource:
01
Allocation matrix:
00
10
00
11
Request matrix:
00
20
10
12
Status: Unsafe
melissa@ubuntu:~/Operating_Systems/lab7$
```

^screenshot of running program

To run and compile my code, type the command “python3 dead_det.py” in the terminal and the program will then execute. It starts by reading in the input file and pulling the number of processes, number of resources, available resources, the initial allocation matrix, and the initial request matrix. These are then used to determine whether or not the provided information will end in a deadlock. If the status returns with “unsafe,” the provided numbers will result in a deadlock.