Government Engineering College Thrissur

CS331 – System Software

LabDocumentation

Exp1 – CPU Scheduling Algorithm

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Submitted By,

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GECT CSE S5

Experiment 4:

4. Implement the banker's algorithm for deadlock avoidance.

Compilation of CodePrerequisite

- The code is provided in the **program.c** along with this documentation. You can open the terminal in Linux (Ubuntu 18.04 tested). Then run the command

gcc program.c

./a.out

There is one **input file in this program**

- **input1.txt:** contains Max resources, Allocated resources and Available resources.

!st line contains **Available resources** from the 4rth point. If you want to change change Enter it in the following format

*0<Tab>0<Tab>0<Tab>Available **A**<Tab>Available **B**<Tab>Available **C***

- The next lines conatins **Maximum resources** and **Allocated resources**

If we want to change the contents of the file. Enter it in the following format

*Maximum **A**<Tab> Maximum **B**<Tab> Maximum **C**<Tab> Allocated **A**<Tab> Allocated **B**<Tab> Allocated **B***

Note that there should not be new line or blank line at the end of file

- Output of the code will be printed on the **console** as well as to a text file named **output.txt**

- **Note: Please see the my_machine_output.txt file for the output I got on my machine.**

Output / Screenshots

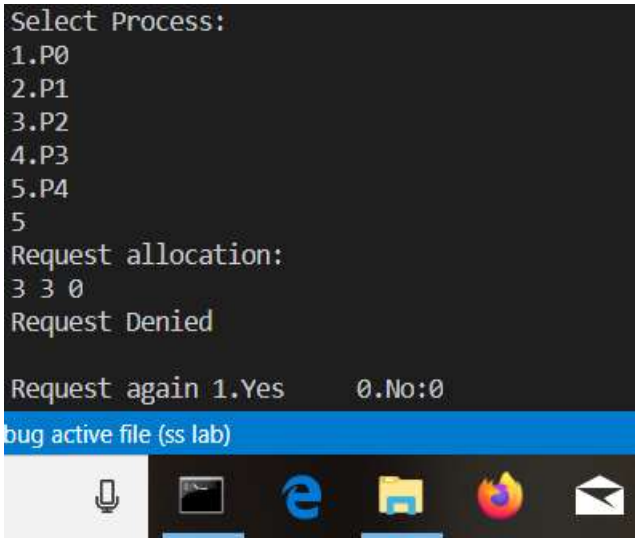
Initial Processes:

```
PS C:\Users\rejat\Desktop\Assignment\ss lab\e4> gcc bankers.c
PS C:\Users\rejat\Desktop\Assignment\ss lab\e4> .\a.exe
----------------------------------------
        Need
A       B       C
7       4       3
1       2       2
6       0       0
0       1       1
4       3       1

Safe sequence:  ->P1->P3->P4->P0->P2
```

Request 1:

```
Select Process:
1.P0
2.P1
3.P2
4.P3
5.P4
2
Request allocation:
1 0 2
        Need
A       B       C
7       4       3
0       2       0
6       0       0
0       1       1
4       3       1

Safe sequence:  ->P1->P3->P4->P0->P2
Request again 1.Yes     0.No:1
```

Request 2:


Select Process:
1.P0
2.P1
3.P2
4.P3
5.P4
5
Request allocation:
3 3 0
Request Denied
Request again 1.Yes 0.No:0
bug active file (ss lab)