



Government Engineering College, Thrissur

CS331 – System Software Lab

Documentation –

Exp4 – Banker's Algorithm for Deadlock Avoidance

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GECT CSE S5

EXPERIMENT 4

Implement the banker's algorithm for deadlock avoidance.

Compilation of Code

- The simulation is run with the help of C programming language.
- There is 1 input text file
 - o input.txt
 - first line contains the number of resources
 - second line contains the
 - all line after that are considered as max and allocated values of
 - max and allocated is given on same line
 - contains additional requests of process
 - first value of each line must be the process number
- Inside text file values are tab separated
- Process number starts from 0
- The code is provided in “program.c”
 - o Code is tested on
 - - Ubuntu 20.04
 - o To compile the program, open a terminal and type
 - gcc program.c
 - o To run the program, open a terminal and type
 - For Linux shells (bash, zsh, etc.)
 - ./a.out
 - “output.txt” is obtained using output redirection
 - For Linux shells (bash, zsh, etc.)
 - o ./a.out | tee output.txt

Output Screenshot

```
shuaib@shuaib-pc:~/Documents/ss/exp5$ gcc program.c
shuaib@shuaib-pc:~/Documents/ss/exp5$ ./a.out
MAX
P0      7      5      3
P1      3      2      2
P2      9      0      2
P3      2      2      2
P4      4      3      3
ALLOC
P0      0      1      0
P1      2      0      0
P2      3      0      2
P3      2      1      1
P4      0      0      2
AVAIL
3      3      2
NEED
7      4      3
1      2      2
6      0      0
0      1      1
4      3      1
SAFE SEQUENCE
P1-P3-P4-P0-P2-

REQUEST1
P1:      1      0      2
NEED
7      4      3
0      2      0
6      0      0
0      1      1
4      3      1
SAFE SEQUENCE
P1-P3-P4-P0-P2-

REQUEST2
P4:      3      3      0
NEED
7      4      3
1      2      2
6      0      0
0      1      1
1      0      1

shuaib@shuaib-pc:~/Documents/ss/exp5$
```