

Date: 08th Oct 2021

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Distributed System Lab

LAB - 4

Aim: Simulate the Distributed Mutual Exclusion

Program:

```
#include<stdio.h>
#include<conio.h>
#include<dos.h>
#include<time.h>
#include<stdlib.h>

void main()
{
    int cs=0,pro=0; double run=5; char key='a'; time_t t1,t2;
    system("cls");
    printf("Press a key(except q) to enter a process into critical
section.");
    printf(" \nPress q at any time to exit.");
    t1 = time(NULL) - 5;
    while(key!='q'){
        while(!kbhit())
            if(cs!=0)
            {
                t2 = time(NULL);
                if(t2-t1 > run)
                {
                    printf("\nProcess%d ",pro-1);
                    printf("Exits Critical Section.\n");
                    cs=0;
                }
            }
        key = getch();
        if(key!='q')
        {
            if(cs!=0)
```

```

        printf("Error: Another process is currently
executing critical section Please wait till its execution is
over.\n");
    else
    {
        printf("\nProcess %d ",pro);
        printf("Entered Critical Section\n"); cs=1;
        pro++;
        t1 = time(NULL);
    }
}
}
}

```

Output:

```

Press a key(except q) to enter a process into critical section.
Press q at any time to exit.
Process 0 Entered Critical Section
Error: Another process is currently executing critical section Please wait till its execution is over.
Error: Another process is currently executing critical section Please wait till its execution is over.

Process0 Exits Critical Section.

Process 1 Entered Critical Section

Process1 Exits Critical Section.

Process 2 Entered Critical Section
Error: Another process is currently executing critical section Please wait till its execution is over.
Error: Another process is currently executing critical section Please wait till its execution is over.

Process2 Exits Critical Section.

```

Date: 22th Oct 2021

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Distributed System Lab
LAB - 5

Aim: WAP to Implement a Distributed Chat Server using TCP Sockets.

Program: