File Edit Selection View Go Run Terminal Help

Lab5

Welcome | q1.c | q1e.c

q1e.c > main()

```c
/*
Menu driven program to simulate:
1) FCFS
2) SRTF
3) Round Robin (Q = 10)
4) Non-preemptive Priority
Calculate WT, TAT and averages.
*/

#include <stdio.h>
#include <limits.h>

#define N 4

int main() {

    int pid[N] = {1,2,3,4};
    int at[N]  = {0,3,4,9};
    int bt[N]  = {60,30,40,10};
    int pr[N]  = {3,2,1,4};

    int ct[N], wt[N], tat[N], rt[N];
    int i, choice;

    printf("1.FCFS\n2.SRTF\n3.Round Robin(Q=10)\n4.Priority\nEnter choice: ");
    scanf("%d",&choice);

    //FCFS
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
1.FCFS
2.SRTF
3.Round Robin(Q=10)
4.Priority
Enter choice: 2

PID     AT      BT      CT      TAT     WT
P1      0       60      140     140     80
P2      3       30      43      40      10
P3      4       40      83      79      39
P4      9       10      19      10      0

Average Waiting Time = 32.25
Average Turnaround Time = 67.25
[1] + Done                       "/usr/bin/gdb" --interpreter=mi --tty=${DbgTerm} 0<"/tmp/Microsoft-MIEngine-In-e3vu4zae.v51" 1>"/tmp/Microsoft-MIEngine-Out-5avw2iky.hyf"
4ITA2@debian:~/krtin_240911550/Lab5$ date
Thu Feb 19 14:41:00 IST 2026
4ITA2@debian:~/krtin_240911550/Lab5$
```

C/C++: ...
cppdbg: q1
cppdbg: q1e

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Lab5

q1e.c | q2.c

q2.c > Process

```c
/* Question: Simulate MFQ scheduling with 3 queues:
Q0 (RR, TQ=8), Q1 (RR, TQ=16), and Q2 (FCFS).
Processes move to lower priority queues if they exceed the quantum.
*/

#include <stdio.h>

struct Process {
    int id, burst, remaining, wait, turnaround;
};

int main() {
    int n, i, time = 0;
    struct Process p[10];
    printf("Enter number of processes: ");
    scanf("%d", &n);

    for(i = 0; i < n; i++) {
        p[i].id = i + 1;
        printf("Enter burst time for P%d: ", p[i].id);
        scanf("%d", &p[i].burst);
        p[i].remaining = p[i].burst;
    }

    printf("\n--- Gantt Chart ---\n0");

    // Queue 0: RR with TQ = 8
    for(i = 0; i < n; i++) {
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
Enter burst time for P4: 10

--- Gantt Chart ---
0 -> [P1] -> 8 -> [P2] -> 16 -> [P3] -> 24 -> [P4] -> 32 -> [P1] -> 48 -> [P2] -> 64 -> [P3] -> 80 -> [P4] -> 82 -> [P1] -> 118 -> [P2] -> 124 -> [P3] -> 140

PID     Burst   Waiting Turnaround
P1      60      58      118
P2      30      94      124
P3      40      100     140
P4      10      130     140

Avg Waiting Time: 95.50
Avg Turnaround Time: 130.50
[1] + Done                       "/usr/bin/gdb" --interpreter=mi --tty=${DbgTerm} 0<"/tmp/Microsoft-MIEngine-In-c5riqfr0.h5u" 1>"/tmp/Microsoft-MIEngine-Out-iqucmz2x.dpb"
4ITA2@debian:~/krtin_240911550/Lab5$ date
Thu Feb 19 14:48:27 IST 2026
4ITA2@debian:~/krtin_240911550/Lab5$
```

C/C++: ...
cppdbg: q1
cppdbg: q1e
cppdbg: q2

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Lab5

C/C++: gcc build an...

q1.c | q2.c | q3.c

q3.c > ...

```c
//3. Write a C program to simulate Earliest-Deadline-First scheduling for real time systems.
#include <stdio.h>

struct Task {
    int id;
    int burst;
    int period;
    int remaining;
    int deadline;
};

int gcd(int a, int b) {
    while (b) { a %= b; int t = a; a = b; b = t; }
    return a;
}

int lcm(int a, int b) {
    return (a * b) / gcd(a, b);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

C/C++: ...
cppdbg: q3
cppdbg: q3

```
Enter number of periodic processes: 2
Enter Burst and Period for P1: 25 50
Enter Burst and Period for P2: 35 80

--- EDF Execution Timeline (Hyperperiod: 400) ---
Time 0 - 25: P1
Time 25 - 60: P2
Time 60 - 85: P1
Time 85 - 100: P2
Time 100 - 125: P1
Time 125 - 145: P2
Time 145 - 150: IDLE
Time 150 - 175: P1
Time 175 - 210: P2
Time 210 - 235: P1
Time 235 - 240: IDLE
Time 240 - 250: P2
Time 250 - 275: P1
Time 275 - 300: P2
Time 300 - 325: P1
Time 325 - 350: P2
Time 350 - 375: P1
Time 375 - 385: P2
[1] + Done                       "/usr/bin/gdb" --interpreter=mi --tty=${DbgTerm} 0<"/tmp/Microsoft-MIEngine-In-phwc43l0.gqh" 1>"/tmp/Microsoft-MIEngine-Out-z0pqxihh.uz1"
4ITA2@debian:~/krtin_240911550/Lab5$ date
Thu Feb 19 15:08:00 IST 2026
4ITA2@debian:~/krtin_240911550/Lab5$
```

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