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#include <stdio.h>
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#define MAX 100
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struct Process {  
    int id, at, bt, rt, wt, tat, ct;  
};
```

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void sjf_preemptive(struct Process p[], int n) {  
    int completed = 0, time = 0, shortest = -1;  
    int min_bt = 9999;
```

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    printf("\n--- SJF Preemptive Scheduling ---\n");
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    while (completed != n) {  
        shortest = -1;  
        min_bt = 9999;
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        for (int i = 0; i < n; i++) {  
            if (p[i].at <= time && p[i].rt > 0 && p[i].rt < min_bt) {  
                min_bt = p[i].rt;  
                shortest = i;  
            }  
        }
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        if (shortest == -1) {  
            time++;  
            continue;
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    }

    p[shortest].rt--;
    time++;

    if (p[shortest].rt == 0) {
        completed++;
        p[shortest].ct = time;
        p[shortest].tat = p[shortest].ct - p[shortest].at;
        p[shortest].wt = p[shortest].tat - p[shortest].bt;
    }
}

printf("ID\tAT\tBT\tCT\tTAT\tWT\n");
for (int i = 0; i < n; i++) {
    printf("%d\t%d\t%d\t%d\t%d\t%d\n", p[i].id, p[i].at, p[i].bt, p[i].ct, p[i].tat, p[i].wt);
}
}

void round_robin(struct Process p[], int n, int tq) {
    int time = 0, completed = 0;
    int done;

    printf("\n--- Round Robin Scheduling (TQ = %d) ---\n", tq);

    while (completed != n) {
        done = 1;

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for (int i = 0; i < n; i++) {
    if (p[i].rt > 0 && p[i].at <= time) {
        done = 0;
        if (p[i].rt > tq) {
            time += tq;
            p[i].rt -= tq;
        } else {
            time += p[i].rt;
            p[i].ct = time;
            p[i].tat = p[i].ct - p[i].at;
            p[i].wt = p[i].tat - p[i].bt;
            p[i].rt = 0;
            completed++;
        }
    } else if (p[i].rt > 0 && p[i].at > time) {
        time++;
    }
}

if (done)
    break;
}

printf("ID\tAT\tBT\tCT\tTAT\tWT\n");
for (int i = 0; i < n; i++) {
    printf("%d\t%d\t%d\t%d\t%d\t%d\n", p[i].id, p[i].at, p[i].bt, p[i].ct, p[i].tat, p[i].wt);
}
}

```

```

int main() {
    struct Process p[MAX];
    int n, choice, tq;

    printf("Enter number of processes: ");
    scanf("%d", &n);

    for (int i = 0; i < n; i++) {
        p[i].id = i + 1;
        printf("Enter AT and BT for process %d: ", i + 1);
        scanf("%d%d", &p[i].at, &p[i].bt);
        p[i].rt = p[i].bt; // Initialize remaining time
    }

    printf("\nChoose Scheduling Algorithm:\n1. SJF (Preemptive)\n2. Round Robin\nEnter choice:");
    scanf("%d", &choice);

    if (choice == 1) {
        sjf_preemptive(p, n);
    } else if (choice == 2) {
        printf("Enter Time Quantum: ");
        scanf("%d", &tq);
        round_robin(p, n, tq);
    } else {
        printf("Invalid choice.\n");
    }
}

```

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    return 0;  
}
```