

# JOB SCHEDULING

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#include <stdio.h>

#include <stdbool.h>

// Function to find the maximum of two integers
int max(int a, int b) {
    return (a > b) ? a : b;
}

// Function to find the maximum profit
int maxProfit(int N, int events[][3]) {
    // Sort events based on end times
    for (int i = 0; i < N - 1; i++) {
        for (int j = 0; j < N - i - 1; j++) {
            if (events[j][1] > events[j + 1][1]) {
                int tempStart = events[j][0];
                int tempEnd = events[j][1];
                int tempProfit = events[j][2];
                events[j][0] = events[j + 1][0];
                events[j][1] = events[j + 1][1];
                events[j][2] = events[j + 1][2];
                events[j + 1][0] = tempStart;
                events[j + 1][1] = tempEnd;
                events[j + 1][2] = tempProfit;
            }
        }
    }
}
```

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// dp[i] will store the maximum profit by including the i-th event
int dp[N];

// Initialize dp array
for (int i = 0; i < N; i++) {
    dp[i] = 0;
}

// Base case
dp[0] = events[0][2]

// Iterate over all events
for (int i = 1; i < N; i++) {
    // Include the current event
    int profit_with_i = events[i][2];
    int lastNonConflict = -1;

    // Find the last non-conflicting event
    for (int j = i - 1; j >= 0; j--) {
        if (events[j][1] <= events[i][0]) {
            lastNonConflict = j;
            break;
        }
    }

    if (lastNonConflict != -1)
        profit_with_i += dp[lastNonConflict];

    // Store the maximum profit either by including or excluding the current
    // event
    dp[i] = max(profit_with_i, dp[i - 1]);
}

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        return dp[N - 1];
    }
int main() {
    int N;
    scanf("%d", &N);

    int events[N][3];

    // Read the start times, end times, and profits of the events
    for (int i = 0; i < N; i++) {
        scanf("%d %d %d", &events[i][0], &events[i][1], &events[i][2]);
    }

    // Find the maximum profit
    int max_profit = maxProfit(N, events);

    printf("%d\n", max_profit);

    return 0;
}
```