100.

Assembly line schedule

Aim: To determine the assembly line schedule.

Program:

```
def assembly_line_schedule(station_times, entry_times, exit_times, transfer_times):
    num_stations = len(station_times[0])
    num_lines = len(station_times)

    T1 = [0] * num_stations
    T2 = [0] * num_stations

    T1[0] = entry_times[0] + station_times[0][0]
    T2[0] = entry_times[1] + station_times[1][0]

    for i in range(1, num_stations):
        T1[i] = min(T1[i - 1] + station_times[0][i], T2[i - 1] + transfer_times[1][i] + station_times[0][i])
        T2[i] = min(T2[i - 1] + station_times[1][i], T1[i - 1] + transfer_times[0][i] + station_times[1][i])

    return min(T1[num_stations - 1] + exit_times[0], T2[num_stations - 1] + exit_times[1])

# Example input data
station_times = [[4, 5, 3, 2], [2, 10, 1, 4]]
entry_times = [10, 12]
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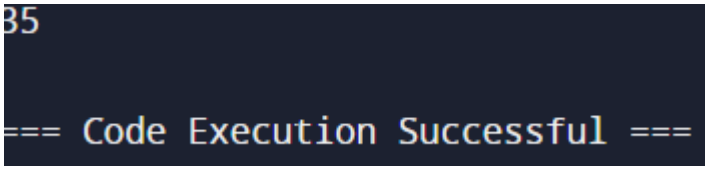
exit_times = [18, 7]

transfer_times = [[0, 7, 4, 5], [0, 9, 2, 8]]

print(assembly_line_schedule(station_times, entry_times, exit_times, transfer_times))

OUTPUT:



Time complexity:O(n)