99. Assembly Line Sechduling

AIM: To solve the assembly line secdhuling

PROGRAM:

```
def assembly_line_scheduling(processing_time, entry_time, exit_time, transfer_time):
    f1 = [0] * len(processing_time)
    f2 = [0] * len(processing_time)
    f1[0] = entry_time[0] + processing_time[0]
    f2[0] = entry_time[1] + processing_time[1]

    for i in range(1, len(processing_time)):
        f1[i] = min(f1[i - 1] + processing_time[i], f2[i - 1] + transfer_time[i - 1] + processing_time[i])
        f2[i] = min(f2[i - 1] + processing_time[i], f1[i - 1] + transfer_time[i - 1] + processing_time[i] )

    f1_exit = f1[-1] + exit_time[0]
    f2_exit = f2[-1] + exit_time[1]

    return min(f1_exit, f2_exit)
processing_time = [7, 9, 3, 4, 8, 4]
entry_time = [2, 3]
exit_time = [3, 2]
transfer_time = [2, 3, 1, 3, 4]

print("Minimum time to exit the assembly line:", assembly_line_scheduling(processing_time,
entry_time, exit_time, transfer_time))
```

OUTPUT:

```
Minimum time to exit the assembly line: 40
```

TIME COMPLEXITY: O(n)