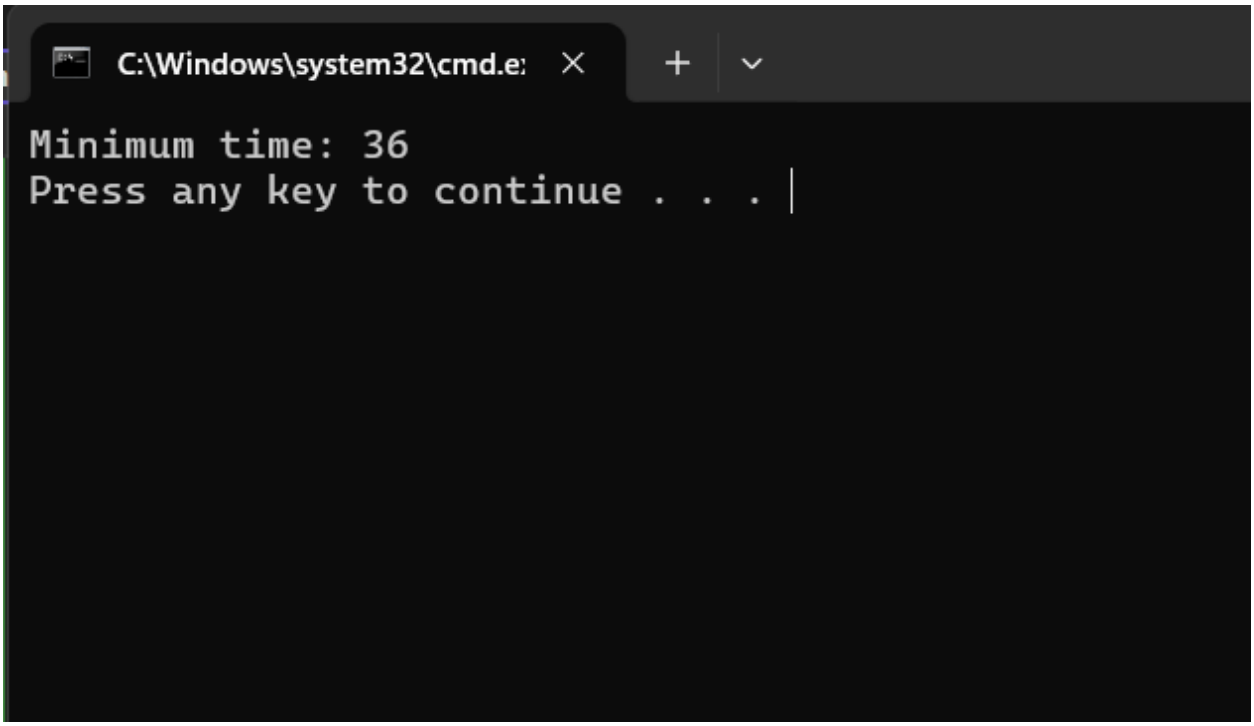
100) Assembly line scheduling

CODE:

```
def assembly_line_scheduling(a, t, e, x, n):
    f = [[0 for _ in range(n)] for _ in range(2)]
    f[0][0] = e[0] + a[0][0]
    f[1][0] = e[1] + a[1][0]

    for i in range(1, n):
        f[0][i] = min(f[0][i-1] + a[0][i], f[1][i-1] + t[1][i-1] + a[0][i])
        f[1][i] = min(f[1][i-1] + a[1][i], f[0][i-1] + t[0][i-1] + a[1][i])

    return min(f[0][n-1] + x[0], f[1][n-1] + x[1])

# Example input
a = [[4, 5, 3, 2], [2, 10, 1, 4]]
t = [[0, 7, 4, 5], [0, 9, 2, 8]]
e = [10, 12]
x = [18, 7]
n = 4

print("Minimum time:", assembly_line_scheduling(a, t, e, x, n))
```

OUTPUT:



TIME COMPLEXITY : O(n)