

## Day 29 – Login Duration

### **Problem Statement:**

Given table provides login and logoff details of one user.  
Generate a report to represents the different periods (in mins) when user was logged in.

### **Input:**

*Table: login\_details*

INPUT	
TIMES	STATUS
10:00:00	on
10:01:00	on
10:02:00	on
10:03:00	off
10:04:00	on
10:05:00	on
10:06:00	off
10:07:00	off
10:08:00	off
10:09:00	on
10:10:00	on
10:11:00	on
10:12:00	on
10:13:00	off
10:14:00	off
10:15:00	on
10:16:00	off
10:17:00	off

### **Expected Output**

OUTPUT		
LOG_ON	LOG_OFF	DURATION
10:00:00	10:03:00	3
10:04:00	10:06:00	2
10:09:00	10:13:00	4
10:15:00	10:16:00	1

## SOLUTION

```
With segmentCte
as (
    select *,rn-ROW_NUMBER() over(order by times) as segment
    from (
        select *,ROW_NUMBER() over(order by times) as rn
        from login_details
    ) sq
where status = 'on'
),
loginCte
as (
    select distinct FIRST_VALUE(ct.times) over(partition by
segment order by segment,rn) as log_on,

    LAST_VALUE(ct.times) over(partition by segment order by
segment,rn range between unbounded preceding and unbounded
following) as last_log_on

    from segmentCte as ct
)
select *, datediff(minute,log_on,log_off) as duration
from (
    select log_on,LEAD(times) over(order by times) as log_off
    from loginCte as ct right join login_details as lg on
    ct.last_log_on=lg.times
) sq
where log_on is not null
```

## OUTPUT

	log_on	log_off	duration
1	10:00:00.0000000	10:03:00.0000000	3
2	10:04:00.0000000	10:06:00.0000000	2
3	10:09:00.0000000	10:13:00.0000000	4
4	10:15:00.0000000	10:16:00.0000000	1