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## MyCQL Examples

### Sliding Windows

#### Simple Time Based Sliding Window

Ex1)

```
window
    queue1 as win1[size=30sec, slide=30sec]
select count(*) from win1
```

#### Complex Time Based Sliding Window

Ex1)

```
window
    queue1 as win1[size=5min slide=5min],
    queue1 as win2[size=1day, slide=1day]
select count(*) from win1, win2
```

Ex2)

```
window
    queue1 as win1[size=5min, slide=10sec],
    queue1 as win2[size=5min, slide=10sec],
    queue2 as win3[size=1hour, slide=5min],
    queue3 as win4[size=1hour, slide=5min]
select * from win1, win2, win3, win4
```

#### Simple Count Based Sliding Window

Ex1)

```
window
    queue1 as win1[size=10, slide=10]
select count(*) from win1
```

#### Complex Count Based Sliding Window

Ex1)

window

```
queue1 as win1[size=5 slide=5],  
queue1 as win2[size=100, slide=100]
```

```
select count(*) from win1, win2
```

Ex2)

window

```
queue1 as win1[size=5, slide=10],  
queue1 as win2[size=5, slide=10],  
queue2 as win3[size=100, slide=5],  
queue3 as win4[size=100, slide=5]
```

```
select * from win1, win2, win3, win4
```

## Time Based Sliding Window

### Normal Sliding Window

Ex1)

window

```
queue1 as win1[size=10sec, slide=10sec]
```

```
select count(*) from win1
```

Ex2)

window

```
queue1 as win1[size=10sec, slide=10sec]  
queue2 as win2[size=10sec, slide=10sec]
```

```
select count(*) from win1, win2
```

### Overlapped Sliding Window

Ex1)

window

```
queue1 as win1[size=10sec, slide=5sec]
```

```
select count(*) from win1
```

Ex2)

window

```
queue1 as win1[size=10sec, slide=5sec]
```

```
queue2 as win2[size=20sec, slide=5sec]
```

```
select count(*) from win1, win2
```

### Jump Sliding Window

Ex1)

window

```
queue1 as win1[size=5sec, slide=10sec]
```

```
select count(*) from win1
```

Ex2)

window

```
queue1 as win1[size=5sec, slide=10sec]
```

```
queue2 as win2[size=5sec, slide=20sec]
```

```
select count(*) from win1, win2
```

### Count Based Sliding Window

#### Normal Sliding Window

Ex1)

window

```
queue1 as win1[size=10, slide=10]
```

```
select count(*) from win1
```

Ex2)

window

```
queue1 as win1[size=10, slide=10]
```

```
queue2 as win2[size=10, slide=10]
```

```
select count(*) from win1, win2
```

## Overlapped Sliding Window

Ex1)

window

```
queue1 as win1[size=10, slide=5]
```

```
select count(*) from win1
```

Ex2)

window

```
queue1 as win1[size=10, slide=5]
```

```
queue2 as win2[size=20, slide=5]
```

```
select count(*) from win1, win2
```

## Jump Sliding Window

Ex1)

window

```
queue1 as win1[size=5, slide=10]
```

```
select count(*) from win1]
```

Ex2)

window

```
queue1 as win1[size=5, slide=10]
```

```
queue2 as win2[size=5, slide=20]
```

```
select count(*) from win1, win2
```

## Continuous Query Examples

### select

window

```
queue1 as window1[size=1sec, slide=1sec]
```

```
select col1 from window1
```

## distinct

```
window
  queue1 as win1[size=10sec, slide=10sec]
select
  distinct col1 from win1
```

## compare

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
  where col1=1000
```

## compare

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
  where string like 'hello%' and (col2=1000 or col3=5000)
```

## compare

```
window
  queue1 as win1[size=5sec, slide=5sec]
select count(*) from win1
  where col1 > 100.01 and col2 < 130
```

## compare

```
window
  queue1 as win1[size=1sec, slide=1sec]
select date from win1
  where date > '2009-01-01'
```

## like

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
  where col1 like 'hello%'
```

## like

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
  where col1 like 'hello%' and col2 like 'hi%'
```



## like

```
window
  queue1 as win1[size=10sec, slide=10sec]
select col1, col2 from win1
where col1 like '%hello%'
```

## not like

```
window
  queue1 as win1[size=10sec, slide=10sec]
select * from win1
where col1 not like '%hello%'
```

## not like

```
window
  queue1 as win1[size=10sec, slide=10sec]
select * from win1
where string not like '%hello_%'
```

## order by

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
order by col1
```

## order by asc

```
window
  queue1 as win1[size=10sec, slide=10sec]
select * from win1
order by int asc
```

## order by desc

```
window
  queue1 as win1[size=10sec, slide=10sec]
select * from win1
order by int desc
```

## where in

```
window
  queue1 as win1[size=5sec, slide=5sec]
select * from win1
where col1 in (1000, 50)
```

## where between

```
window
```

```
queue1 as win1[size=5sec, slide=5sec]
select * from win1
where col1 between 100 and 250
```

## as

```
window
queue1 as win1[size=5sec, slide=5sec]
select A.col1, A.col2 from win1 as A
where A.col1 = 128
```

## inner join

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=5sec, slide=5sec]
select win1.col1, win1.col2 from win1 inner join win2 on win1.col1 = win2.col1
order by win1.col1
```

## left join

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=5sec, slide=5sec]
select win1.col1, win1.col2 from win1 left join win2 on win1.col1 = win2.col2
order by win1.col1
```

## inner join and aggregation

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=5sec, slide=5sec]
select avg(win1.col1), max(win1.col1), min(win1.col1) from win1 inner join win2 on win1.col1 =
win2.col1
order by win1.col1
```

## calculation

```
window
queue1 as win1[size=5sec, slide=5sec]
select (col1*2), (col2+50) from win1
```

## where exists

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=1sec, slide=1sec]
select col1, col2 from win1
where exists
(
select * from win2
```

```
where col1 = 128
)
```

### group by, having

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=1sec, slide=1sec]
select col1, col2 from win1
group by col1
having max(col1) >= (select avg(col1) from win2 where win1.col2 = win2.col2 )
```

### group by

```
window
queue1 as win1[size=5sec, slide=5sec]
select * from win1
group by col1
order by col1
```

### group by, having

```
window
queue1 as win1[size=5sec, slide=5sec]
select * from win1
group by col1
having sum(col1) > 1000 and avg(col1) > 100
order by col1
```

### not in, union

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=5sec, slide=5sec]
select * from win1
where col1 not in(2000,300)
group by col1
union
select * from win2
order by col1
```

### union

```
window
queue1 as win1[size=5sec, slide=5sec],
queue2 as win2[size=5sec, slide=5sec]
select col1, col2 from win1
union
select col1, col2 from win2
```

## union

```
window
  queue1 as win1[size=1sec, slide=1sec],
  queue1 as win2[size=5sec, slide=5sec],
  queue2 as win3[size=5sec, slide=5sec]
select col1, col2 from win1
union
select col1, col2 from win2
union
select col1, col2 from win3
```

## union all

```
window
  queue1 as win1[size=1sec, slide=1sec],
  queue1 as win2[size=5sec, slide=5sec],
  queue2 as win3[size=5sec, slide=5sec]
select col1, col2 from win1
union all
select col1, col2 from win2
union all
select col1, col2 from win3
```

## count()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select count(distinct col1) from win1
```

## avg()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select avg(col1) from win1
```

## max()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select max(col1) from win1
```

## min()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select min(col1) from win1
```

## sum()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select sum(col1) from win1
```

### round()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select round(col1) from win1
```

### date()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select date('now') from win1
```

### time()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select time('now') from win1
```

### datetime()

```
window
  queue1 as win1[size=1sec, slide=1sec]
select datetime('now') from win1
```