

```
CREATE TABLE tbl1
(
  `UserID` UInt64,
  `PageViews` UInt8,
  `Duration` UInt8,
  `Sign` Int8,
  `Version` UInt8
)
ENGINE = VersionedCollapsingMergeTree(Sign, Version)
ORDER BY UserID

Query id: 76678585-4a80-4713-8ac6-6a9de2cc3520

Ok.

0 rows in set. Elapsed: 0.147 sec.

envy :) INSERT INTO tbl1 VALUES (4324182021466249494, 5, 146, -1, 1);
INSERT INTO tbl1 VALUES (4324182021466249494, 5, 146, 1, 1),(4324182021466249494, 6, 185, 1, 2);

INSERT INTO tbl1 FORMAT Values

Query id: 557d0d98-0630-4def-b1fb-3aa72115f052

Ok.
```

```
envy :) INSERT INTO tbl1 VALUES (4324182021466249494, 5, 146, -1, 1);

INSERT INTO tbl1 FORMAT Values

Query id: f240032d-4b6c-4992-816f-9fa865914456

Ok.

1 row in set. Elapsed: 0.007 sec.

envy :) INSERT INTO tbl1 VALUES (4324182021466249494, 5, 146, 1, 1),(4324182021466249494, 6, 185, 1, 2);

INSERT INTO tbl1 FORMAT Values

Query id: 6a93e092-5540-482b-b657-4b632e1a7f3a

Ok.

2 rows in set. Elapsed: 0.007 sec.

envy :) SELECT * FROM tbl1;

SELECT *
FROM tbl1

Query id: 57f685da-9fc9-41fc-bb32-f9e4dd37cc7c
```

	UserID	PageViews	Duration	Sign	Version
1.	4324182021466249494	5	146	-1	1
2.	4324182021466249494	5	146	1	1
3.	4324182021466249494	6	185	1	2

```
3 rows in set. Elapsed: 0.004 sec.
```

```
envy :) SELECT * FROM tbl1;
```

```
SELECT *  
FROM tbl1
```

Query id: 57f685da-9fc9-41fc-bb32-f9e4dd37cc7c

	UserID	PageViews	Duration	Sign	Version
1.	4324182021466249494	5	146	-1	1

	UserID	PageViews	Duration	Sign	Version
2.	4324182021466249494	5	146	1	1
3.	4324182021466249494	6	185	1	2

3 rows in set. Elapsed: 0.004 sec.

```
envy :)  
SELECT * FROM tbl1 final;
```

```
SELECT *  
FROM tbl1  
FINAL
```

Query id: b1174c81-e87b-4349-adab-3bd37d6c5d6d

	UserID	PageViews	Duration	Sign	Version
1.	4324182021466249494	6	185	1	2

1 row in set. Elapsed: 0.007 sec

```
envy :) CREATE TABLE tbl2  
(  
    key UInt32,  
    value UInt32  
)  
ENGINE = SummingMergeTree()  
ORDER BY key;
```

```
CREATE TABLE tbl2  
(  
    `key` UInt32,  
    `value` UInt32  
)  
ENGINE = SummingMergeTree  
ORDER BY key
```

Query id: 7da7104f-1712-4c83-b518-ced946732e8a

Ok.

0 rows in set. Elapsed: 0.115 sec.

```
envy :) INSERT INTO tbl2 Values(1,1),(1,2),(2,1);
```

```
INSERT INTO tbl2 FORMAT Values
```

Query id: d58c07e0-5f78-4d74-9be3-f2644087be8b

Ok.

3 rows in set. Elapsed: 0.029 sec.

```
envy :) select * from tbl2;
```

```
SELECT *  
FROM tbl2
```

Query id: d059c48c-2a6c-4b44-b77b-62a8b458604a

	key	value
1.	1	3
2.	2	1

2 rows in set. Elapsed: 0.003 sec.

```
envy :) █
```

```
CREATE TABLE tbl3
(
  `id` Int32,
  `status` String,
  `price` String,
  `comment` String
)
ENGINE = ReplacingMergeTree
PRIMARY KEY id
ORDER BY (id, status)

Query id: 4fb1bb11-7c92-4568-89f5-c51779f3b84c

Ok.

0 rows in set. Elapsed: 0.144 sec.

envy :) INSERT INTO tbl3 VALUES (23, 'success', '1000', 'Confirmed');

INSERT INTO tbl3 FORMAT Values

Query id: 256aef7d-b724-4f39-bf96-a4ac3d05ce77

Ok.

1 row in set. Elapsed: 0.004 sec.

envy :) INSERT INTO tbl3 VALUES (23, 'success', '2000', 'Cancelled');

INSERT INTO tbl3 FORMAT Values

Query id: c41b6817-6fa1-463b-a123-54fa134a7da1

Ok.

1 row in set. Elapsed: 0.004 sec.

envy :) █
```

Ok.

1 row in set. Elapsed: 0.004 sec.

envy :) `SELECT * from tbl3 WHERE id=23;`

```
SELECT *  
FROM tbl3  
WHERE id = 23
```

Query id: b6d7cefb-3bff-4b70-a63b-b6e898e0492f

1. 

id	status	price	comment
23	success	2000	Cancelled

2. 

id	status	price	comment
23	success	1000	Confirmed

2 rows in set. Elapsed: 0.006 sec.

envy :) `SELECT * from tbl3 FINAL WHERE id=23;`

```
SELECT *  
FROM tbl3  
FINAL  
WHERE id = 23
```

Query id: 9f2636b9-8008-41c4-90bf-c5351b491c1d

1. 

id	status	price	comment
23	success	2000	Cancelled

1 row in set. Elapsed: 0.005 sec.

envy :) █

```
envy :) show create table tbl4;
```

```
SHOW CREATE TABLE tbl4
```

```
Query id: d1de83dc-4947-4186-9494-75d4e72c9630
```

```
└─statement─┘
```

```
CREATE TABLE default.tbl4
(
  `CounterID` UInt8,
  `StartDate` Date,
  `UserID` UInt64
)
ENGINE = ReplacingMergeTree
PARTITION BY toYYYYMM(StartDate)
ORDER BY (CounterID, StartDate)
SETTINGS index_granularity = 8192
```

```
1 row in set. Elapsed: 0.002 sec.
```

```
envy :) 
```

```
envy :) CREATE TABLE tbl5
(
  CounterID UInt8,
  StartDate Date,
  UserID AggregateFunction(uniq, UInt64)
) ENGINE = AggregatingMergeTree()
PARTITION BY toYYYYMM(StartDate)
ORDER BY (CounterID, StartDate);

CREATE TABLE tbl5
(
  `CounterID` UInt8,
  `StartDate` Date,
  `UserID` AggregateFunction(uniq, UInt64)
)
ENGINE = AggregatingMergeTree
PARTITION BY toYYYYMM(StartDate)
ORDER BY (CounterID, StartDate)
```

```
Query id: 89591974-32d0-4384-85be-3f092e41834e
```

```
Ok.
```

```
0 rows in set. Elapsed: 0.146 sec.
```

```
envy :) INSERT INTO tbl5
select CounterID, StartDate, uniqState(UserID)
from tbl4
group by CounterID, StartDate;
```

```
INSERT INTO tbl5 SELECT
  CounterID,
  StartDate,
  uniqState(UserID)
FROM tbl4
GROUP BY
  CounterID,
  StartDate
```

```
Query id: 9b7377f6-e3ad-4351-9c89-18f6fcc0aae7
```

```
Ok.
```

```
0 rows in set. Elapsed: 0.010 sec.
```

```
envy :) INSERT INTO tbl5 VALUES (1,'2019-11-12',1);
```

```
INSERT INTO tbl5 FORMAT Values
```

```
Query id: 2556996a-5b5e-44e9-952f-5372c9a66ff8
```



```

envy :) INSERT INTO tbl5 VALUES (1,'2019-11-12',1);

INSERT INTO tbl5 FORMAT Values

Query id: 2556996a-5b5e-44e9-952f-5372c9a66ff8

Ok.
Exception on client:
Code: 53. DB::Exception: Cannot convert UInt64 to AggregateFunction(uniq, UInt64): While executing ValuesBlockInputFormat: data for INSERT was parsed from query. (TYPE_MISMATCH)

envy :) SELECT uniqMerge(UserID) AS state
FROM tbl5
GROUP BY CounterID, StartDate;

SELECT uniqMerge(UserID) AS state
FROM tbl5
GROUP BY
    CounterID,
    StartDate

Query id: 65d42d21-8068-4abb-aca7-1749239de035

state
1.    1
2.    1

```

tbl 6

```

envy :) CREATE TABLE tbl6
(
    `id` Int32,
    `status` String,
    `price` String,
    `comment` String,
    `sign` Int8
)
ENGINE = CollapsingMergeTree(sign)
PRIMARY KEY (id)
ORDER BY (id, status);

CREATE TABLE tbl6
(
    `id` Int32,
    `status` String,
    `price` String,
    `comment` String,
    `sign` Int8
)
ENGINE = CollapsingMergeTree(sign)
PRIMARY KEY id
ORDER BY (id, status)

Query id: 85862f3f-12bc-4694-982f-f6103e6536ba

Ok.

0 rows in set. Elapsed: 0.078 sec.

envy :) INSERT INTO tbl6 VALUES (23, 'success', '1000', 'Confirmed', 1);

INSERT INTO tbl6 FORMAT Values

Query id: 756600cf-8c71-41d5-8db6-f5afd9359789

Ok.

1 row in set. Elapsed: 0.006 sec.

envy :) INSERT INTO tbl6 VALUES (23, 'success', '1000', 'Confirmed', -1), (23, 'success', '2000', 'Cancelled', 1);

INSERT INTO tbl6 FORMAT Values

Query id: 73fa3512-883d-47b4-9592-9ec2e3ad638b

Ok.

```

```
envy :) INSERT INTO tbl6 VALUES (23, 'success', '1000', 'Confirmed', -1), (23, 'success', '2000', 'Cancelled', 1);
```

```
INSERT INTO tbl6 FORMAT Values
```

```
Query id: 73fa3512-883d-47b4-9592-9ec2e3ad638b
```

```
Ok.
```

```
2 rows in set. Elapsed: 0.006 sec.
```

```
envy :) SELECT * FROM tbl6;
```

```
SELECT *  
FROM tbl6
```

```
Query id: 00ec3f30-ef23-44fe-aac5-21348eae1736
```

	id	status	price	comment	sign
1.	23	success	1000	Confirmed	1
2.	23	success	1000	Confirmed	-1
3.	23	success	2000	Cancelled	1

```
3 rows in set. Elapsed: 0.004 sec.
```

```
envy :) SELECT * FROM tbl6 final;
```

```
SELECT *  
FROM tbl6  
FINAL
```

```
Query id: 1b8aea6b-ed63-4d0b-8ad3-9a2ec7e8f901
```

	id	status	price	comment	sign
1.	23	success	2000	Cancelled	1

```
1 row in set. Elapsed: 0.003 sec.
```

```
envy :) █
```