

Условия ДЗ:

1. По заданным описаниям таблиц и вставки данных определить используемый движок
2. Заполнить пропуски, запустить код
3. Сравнить полученный вывод и результат из условия

```
CREATE TABLE tbl1
```

```
(
```

```
    UserID UInt64,
```

```
    PageViews UInt8,
```

```
    Duration UInt8,
```

```
    Sign Int8,
```

```
    Version UInt8
```

```
)
```

```
ENGINE = <ENGINE>
```

```
ORDER BY UserID;
```

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

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

```
SELECT * FROM tbl1;
```

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

UserID	PageViews	Duration	Sign	Version
4324182021466249494	5	146	-1	1

```
SELECT * FROM tbl1 final;
```

UserID	PageViews	Duration	Sign	Version
4324182021466249494	6	185	1	2

```
CREATE TABLE tbl2
```

```
(
    key UInt32,
    value UInt32
)
```

```
ENGINE = <ENGINE>
```

```
ORDER BY key;
```

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

```
select * from tbl2;
```

key	value
1	3
2	1

```
CREATE TABLE tbl3
```

```
(
    `id` Int32,
    `status` String,
    `price` String,
    `comment` String
)
```

```
ENGINE = <ENGINE>
```

```
PRIMARY KEY (id)
```

```
ORDER BY (id, status);
```

```
INSERT INTO tbl3 VALUES (23, 'success', '1000', 'Confirmed');
INSERT INTO tbl3 VALUES (23, 'success', '2000', 'Cancelled');
```

```
SELECT * from tbl3 WHERE id=23;
```

id	status	price	comment
23	success	2000	Cancelled
id	status	price	comment
23	success	1000	Confirmed

```
SELECT * from tbl3 FINAL WHERE id=23;
```

id	status	price	comment
23	success	2000	Cancelled

```
CREATE TABLE tbl4
(
  CounterID UInt8,
  StartDate Date,
  UserID UInt64
) ENGINE = <ENGINE>
PARTITION BY toYYYYMM(StartDate)
ORDER BY (CounterID, StartDate);

INSERT INTO tbl4 VALUES(0, '2019-11-11', 1);
INSERT INTO tbl4 VALUES(1, '2019-11-12', 1);
```

```
CREATE TABLE tbl5
(
  CounterID UInt8,
  StartDate Date,
```

```

        UserID AggregateFunction(uniq, UInt64)
    ) ENGINE = <ENGINE>
    PARTITION BY toYYYYMM(StartDate)
    ORDER BY (CounterID, StartDate);

```

```

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

```

```

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

```

```

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)

```

```

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

```

state
1
1

```

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

```

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

```
SELECT * FROM tbl6;
```

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

id	status	price	comment	sign
23	success	1000	Confirmed	1

```
SELECT * FROM tbl6 FINAL;
```

id	status	price	comment	sign
23	success	2000	Cancelled	1

Формат сдачи ДЗ:

- Сделать отчет со всеми указанными запросами и результатами их выполнения. Почему в каждом из вариантов выбрали именно этот движок?
- Описать проблемы, с чем столкнулись и как решили

Источники и справочные материалы:

- <https://dev.to/hoptical/clickhouse-basic-tutorial-table-engines-30i1>

- https://www.alibabacloud.com/blog/selecting-a-clickhouse-table-engine_597726
- <https://clickhouse.com/docs/en/engines/table-engines/mergetree-family/summingmergetree>