

1) Проектирование таблиц

```
CREATE TABLE marketplace.product_events (  
    product_id UUID,  
    event_time TIMESTAMP,  
    user_id UUID,  
    event_type TEXT,  
    PRIMARY KEY (product_id, event_time)  
) WITH CLUSTERING ORDER BY (event_time DESC)  
    AND default_time_to_live = 2592000;  
  
CREATE TABLE marketplace.user_events (  
    user_id UUID,  
    event_time TIMESTAMP,  
    product_id UUID,  
    event_type TEXT,  
    PRIMARY KEY (user_id, event_time)  
) WITH CLUSTERING ORDER BY (event_time DESC)  
    AND default_time_to_live = 2592000;  
  
CREATE TABLE marketplace.product_events_by_type (  
    product_id UUID,  
    event_type TEXT,  
    event_time TIMESTAMP,  
    user_id UUID,  
    PRIMARY KEY ((product_id, event_type),  
event_time)  
) WITH CLUSTERING ORDER BY (event_time DESC)  
    AND default_time_to_live = 2592000;
```

2) Заполнение данными

```
INSERT INTO marketplace.product_events (product_id,  
event_time, user_id, event_type)  
VALUES (11111111-1111-1111-1111-111111111111,  
'2025-06-01 11:45:12.123456',  
22222222-2222-2222-2222-222222222222, 'view');  
  
INSERT INTO marketplace.user_events (user_id,  
event_time, product_id, event_type)  
VALUES (22222222-2222-2222-2222-222222222222,  
'2025-06-01 11:45:12.123456',  
11111111-1111-1111-1111-111111111111, 'view');  
  
INSERT INTO marketplace.product_events_by_type  
(product_id, event_type, event_time, user_id)  
VALUES (11111111-1111-1111-1111-111111111111,  
'view', '2025-06-01 11:45:12.123456',  
22222222-2222-2222-2222-222222222222);  
  
INSERT INTO marketplace.product_events (product_id,  
event_time, user_id, event_type)  
VALUES (11111111-1111-1111-1111-111111111111,  
'2025-06-01 10:15:00.000000',  
33333333-3333-3333-3333-333333333333,  
'add_to_cart');  
  
INSERT INTO marketplace.user_events (user_id,  
event_time, product_id, event_type)  
VALUES (33333333-3333-3333-3333-333333333333,  
'2025-06-01 10:15:00.000000',  
11111111-1111-1111-1111-111111111111,  
'add_to_cart');
```

3) 10 последних действий по определенному товару

```
SELECT product_id, event_time, user_id, event_type
FROM marketplace.product_events
WHERE product_id =
11111111-1111-1111-1111-111111111111
LIMIT 10;
```

product_id	event_time	user_id	event_type
11111111-1111-1111-1111-111111111111	2025-06-01 11:45:12.123000+0000	22222222-2222-2222-2222-222222222222	view
11111111-1111-1111-1111-111111111111	2025-06-01 10:15:00.000000+0000	33333333-3333-3333-3333-333333333333	add_to_cart

4) 10 последних действий по определенному клиенту

```
SELECT user_id, event_time, product_id, event_type
FROM marketplace.user_events
WHERE user_id = 22222222-2222-2222-2222-222222222222
LIMIT 10;
```

user_id	event_time	product_id	event_type
22222222-2222-2222-2222-222222222222	2025-06-01 11:45:12.123000+0000	11111111-1111-1111-1111-111111111111	view

5) Количество просмотров определенного товара в промежуток времени с “2025-06-01 10:00:00” по “2025-06-01 13:00:00”

```
SELECT count(*) AS views_count
FROM marketplace.product_events_by_type
WHERE product_id =
11111111-1111-1111-1111-111111111111
AND event_type = 'view'
AND event_time >= '2025-06-01 10:00:00'
AND event_time <= '2025-06-01 13:00:00';
```

views_count
1