Есть две таблицы: “*Requests*”, где фиксируются запросы пользователей на рекламу и “*Events*”, куда записываются факты показа рекламы и кликов пользователя по рекламе. Уникальность клика определяется кликовой ссылкой (*url*). Наличие в базе повторяющихся кликовых ссылок возможно, если пользователь кликнул по рекламному объявлению дважды, при этом время события (*event\_time*) может различаться.

1. Написать SQL-запрос, который покажет выкуп (отношение количества показов к запросам) по сочетанию *country+os* за 01.04.2020
2. Написать SQL-запрос, который покажет процент неуникальных кликов для каждого из источников (*source*) за 01.04.2020

**Табл.1 *Requests***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| event\_time | event\_type | ip | country | os | source |
| 2020-04-01 11:00:03 | message | 85.140.76.32 | RU | ios | 1 |
| 2020-04-01 11:47:29 | message | 88.105.199.109 | GB | android | 1 |
| 2020-04-01 12:14:15 | message | 157.32.188.208 | IN | ios | 3 |
| 2020-04-01 13:00:54 | message | 90.143.171.165 | KZ | windows | 10 |
| 2020-04-01 13:41:43 | message | 149.255.233.10 | IQ | macos | 2 |
| ... |  |  |  |  |  |
| 2020-04-02 00:01:37 | message | 106.198.233.127 | IN | windows | 7 |

**Табл.2 *Events***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| event\_time | event\_type | ip | country | os | source | url |
| 2020-04-01 11:05:29 | show | 85.140.76.32 | RU | ios | 1 |  |
| 2020-04-01 12:19:30 | show | 157.32.188.208 | IN | ios | 3 |  |
| 2020-04-01 13:10:47 | show | 90.143.171.165 | KZ | windows | 10 |  |
| 2020-04-01 13:21:48 | click | 85.140.76.32 | RU | ios | 1 | https://.. |
| 2020-04-0113:28:59 | show | 149.255.233.10 | IQ | macos | 2 |  |
| 2020-04-01 13:43:27 | click | 90.143.171.165 | KZ | windows | 10 | https://.. |
| 2020-04-01 13:54:42 | click | 85.140.76.32 | RU | ios | 1 | https://.. |
| ... |  |  |  |  |  |  |
| 2020-04-01 16:10:07 | click | 85.140.76.32 | RU | ios | 1 | https://.. |

1)

CREATE TABLE requests (  
`event\_time` VARCHAR(25),  
`country` VARCHAR(25),  
`os` VARCHAR(20),  
`source` INT(10));  
  
INSERT INTO requests  
VALUES ('2020-04-01 11:00:03', 'RU','ios',1),  
('2020-04-01 11:47:29', 'GB','android',1),  
('2020-04-01 12:14:15', 'IN','ios',3),  
('2020-04-01 13:00:54','KZ','windows',10),  
('2020-04-01 13:41:43','IQ','macos',2),  
('2020-04-02 00:01:37','IN','windows',7);  
  
CREATE TABLE events (  
`event\_time` VARCHAR(25),  
`country` VARCHAR(25),  
`os` VARCHAR(20),  
`source` INT(10),  
`url` VARCHAR(25));  
  
INSERT INTO events  
VALUES ('2020-04-01 11:05:29', 'RU','ios',1,''),  
('2020-04-01 12:19:30', 'IN','ios',3,''),  
('2020-04-01 13:10:47', 'KZ','windows',10,''),  
('2020-04-01 13:21:48','RU','ios',1,'https://..'),  
('2020-04-0113:28:59','IQ','macos',2,''),  
('2020-04-01 13:43:27','KZ','windows',10,'https://..'),  
('2020-04-01 13:54:42','RU','ios',1,'https://..'),  
(' ','RU','ios',1,'https://..');  
  
CREATE TABLE new\_req AS  
SELECT country, os, COUNT(\*)  
AS count\_r  
FROM Requests  
WHERE event\_time like '2020-04-01%'  
GROUP BY country, os;  
  
CREATE TABLE new\_ev AS  
SELECT country, os, COUNT(\*)  
AS count\_e  
FROM events  
WHERE event\_time like '2020-04-01%'  
GROUP BY country, os;  
  
CREATE TABLE new AS  
SELECT  
[t1.country](https://vk.com/away.php?to=http%3A%2F%2Ft1.country&cc_key=), t1.os, t2.count\_e, t1.count\_r  
FROM new\_req as t1  
LEFT JOIN new\_ev as t2  
ON [t1.country](https://vk.com/away.php?to=http%3A%2F%2Ft1.country&cc_key=) = [t2.country](https://vk.com/away.php?to=http%3A%2F%2Ft2.country&cc_key=) and t1.os = t2.os;  
  
SELECT  
COALESCE(t1.count\_e, 0),COALESCE(t1.count\_r, 0),  
COALESCE(CAST(t1.count\_e as float)/CAST(t1.count\_r as float), 0)  
FROM new as t1;

2)

CREATE TABLE requests (  
`event\_time` VARCHAR(25),  
`country` VARCHAR(25),  
`os` VARCHAR(20),  
`source` INT(10));  
  
INSERT INTO requests  
VALUES ('2020-04-01 11:00:03', 'RU','ios',1),  
('2020-04-01 11:47:29', 'GB','android',1),  
('2020-04-01 12:14:15', 'IN','ios',3),  
('2020-04-01 13:00:54','KZ','windows',10),  
('2020-04-01 13:41:43','IQ','macos',2),  
('2020-04-02 00:01:37','IN','windows',7);  
  
CREATE TABLE events (  
`event\_time` VARCHAR(25),  
`country` VARCHAR(25),  
`os` VARCHAR(20),  
`source` INT(10),  
`url` VARCHAR(25));  
  
INSERT INTO events  
VALUES ('2020-04-01 11:05:29', 'RU','ios',1,''),  
('2020-04-01 12:19:30', 'IN','ios',3,''),  
('2020-04-01 13:10:47', 'KZ','windows',10,''),  
('2020-04-01 13:21:48','RU','ios',1,'https://..'),  
('2020-04-0113:28:59','IQ','macos',2,''),  
('2020-04-01 13:43:27','KZ','windows',10,'https://..'),  
('2020-04-01 13:54:42','RU','ios',1,'https://..'),  
(' ','RU','ios',1,'https://..');  
  
  
CREATE TABLE new AS  
SELECT t1.source, t1.summ, [t2.active](https://vk.com/away.php?to=http%3A%2F%2Ft2.active&cc_key=), 0  
FROM  
(SELECT source, COUNT(\*)  
AS summ  
FROM events  
WHERE event\_time like '2020-04-01%'  
GROUP BY source  
) as t1  
LEFT JOIN (SELECT source, COUNT(\*)  
AS active  
FROM events  
WHERE event\_time like '2020-04-01%' and url like 'https://..'  
GROUP BY source) as t2  
ON t1.source = t2.source;  
  
SELECT  
t1.source, t1.summ, [t1.active](https://vk.com/away.php?to=http%3A%2F%2Ft1.active&cc_key=),  
CAST([t1.active](https://vk.com/away.php?to=http%3A%2F%2Ft1.active&cc_key=) as float)/CAST(t1.summ as float)\*100  
FROM new as t1;