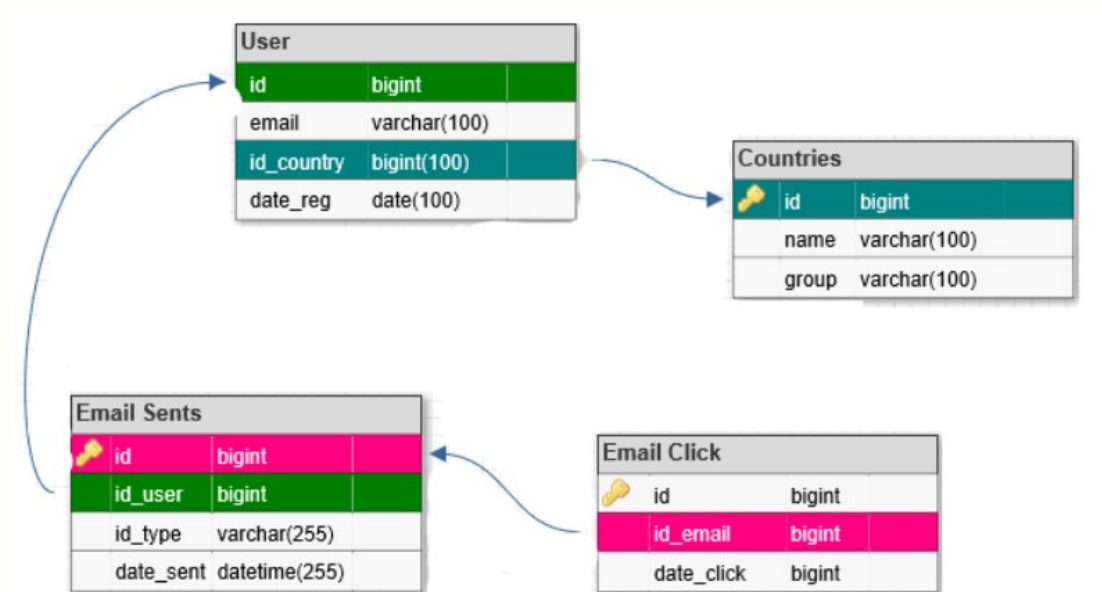# GENESIS

# Task 1: SQL queries



## The number of registered users by day by group of countries:

Data for test:

```
1|Germany|Europe
2|Italy|Europe
3|China|Asia
4|Japan|Asia
```

Table: Countries

```
1|denis@gmail.com|2017-12-03 11:08:25|1
2|antonio@gmail.com|2017-12-03 19:43:07|2
3|bajio@china-email.com|2017-12-03 23:09:22|3
4|hai-mysiu@japan-email|2017-12-03 23:09:25|4
5|petribash@gmail.com|2017-07-09 07:58:15|1
6|talikina@milan-university.com|2017-07-09 13:12:11|2
7|mahish-hainz@laboratory-gm.com|2017-07-09 17:08:44|1
```
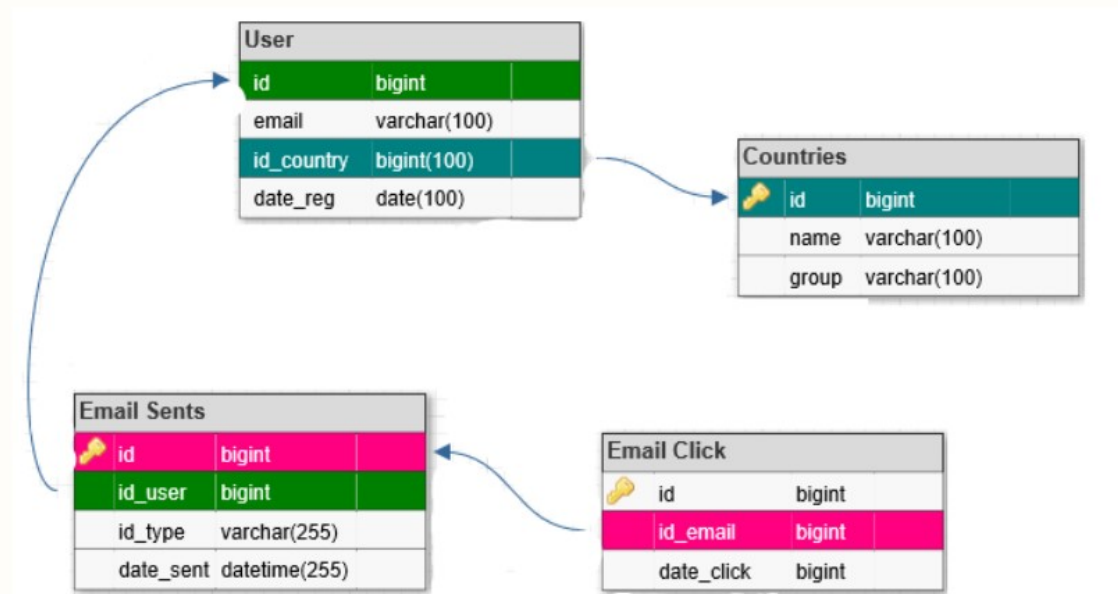
Table: User

```sql
SELECT DATE(date_reg) AS ForDate,
       COUNT(*) AS NumPosts,
       group_concat(group_country) countries
FROM   user
inner join countries on countries.id=user.id_country
GROUP BY group_country, DATE(date_reg)
ORDER BY ForDate
```

Result

CPU Time: 0.00 sec(s), Memory: 4316 kilobyte(s)

```
2017-07-09|3|Europe,Europe,Europe
2017-12-03|2|Asia,Asia
2017-12-03|2|Europe,Europe
```

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# Task 1: SQL queries

**User**

| id | bigint |
| email | varchar(100) |
| id_country | bigint(100) |
| date_reg | date(100) |

**Countries**

| id | bigint |
| name | varchar(100) |
| group | varchar(100) |

**Email Sents**

| id | bigint |
| id_user | bigint |
| id_type | varchar(255) |
| date_sent | datetime(255) |

**Email Click**

| id | bigint |
| id_email | bigint |
| date_click | bigint |

## CTR of different types of letters by day:

| Type email | Count (sent emails) | Count (clicked emails) | CTR |
|---|---|---|---|
| A | 100 | 25 | 25,00% |
| B | 50 | 5 | 10,00% |

Example of calculation CTR

## - Code -

```sql
select id_type, count(*),

    (select count(*)
     from email_sents
     inner join email_click on email_sents.id=email_click.id_email
     group by id_type),

    ( 1.0 * ( select count(*)
              from email_sents
              inner join email_click on email_sents.id=email_click.id_email
              group by id_type)
    / count(*) * 100.0 )

from email_sents
group by id_type;
```

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# Task 1: SQL queries
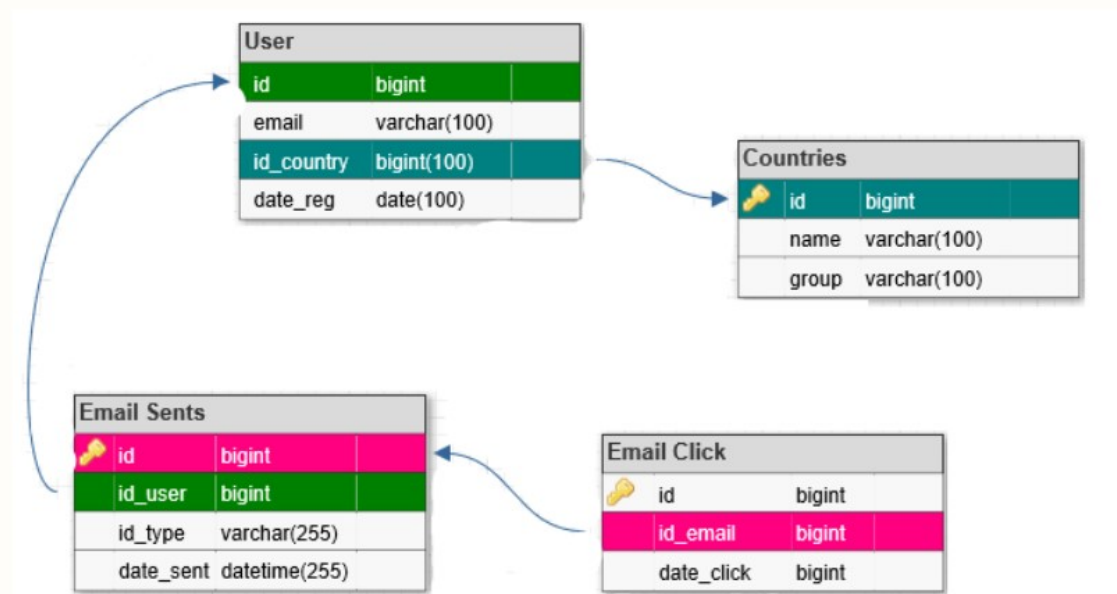


The percentage of letters clicked within 10 minutes after sending,
by type of letters; for the last 7 days;

```sql
SELECT id_type, (SELECT 1.0*count(*)
                FROM email_sents, email_click
                WHERE
                    email_sents.id = email_click.id_email AND
                    date_click > DATE('2016','-7 day') AND
                    date_sent between
                        (date_click - '-00:07:00') AND (date_click)
                GROUP BY id_type)
            / count(*) * 100.0
    FROM email_sents
GROUP BY id_type;
```

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