1) Find the responsiveness rate of each gender
   (The responsiveness rate is the percentage of the users who responded among those contacted)

```
with responsiveness as
(select login_id, user_id, 100*replies/messages_sent as
responsiveness_rate, gender
from fact_logins
join dim_users
using (user_id))
select gender, round(avg(responsiveness_rate),2) as
responsiveness_average
from responsiveness
group by gender;
```

gender	responsiveness_average
Male	50.45
Female	50.74

2) An active user is a user who logins in the current month and has logged in in the previous month. Find the number of active users of each month

```
SELECT
  EXTRACT(MONTH FROM curr_month.login_date) AS mth,
  COUNT(DISTINCT curr_month.user_id) AS monthly_active_users
FROM fact_logins AS curr_month
WHERE EXISTS (
  SELECT last_month.user_id
  FROM fact_logins AS last_month
  WHERE last_month.user_id = curr_month.user_id
    AND EXTRACT(MONTH FROM last_month.login_date) =
    EXTRACT(MONTH FROM curr_month.login_date) - 1)

GROUP BY EXTRACT(MONTH FROM curr_month.login_date);
```

mth	monthly_active_users
2	573
3	538
4	559
5	573
6	548

3) Find the users who have logged in for at least 5 months, and who have a strictly increasing monthly responsiveness rate through the months

```sql
with monthly_responsiveness as
(select user_id, extract(month from login_date) as month,
round(avg(100*replies/messages_sent),2) as monthly_responsiveness_rate
from fact_logins
join dim_users
using (user_id)
group by user_id, extract(month from login_date)),
consecutive_responsiveness as
(select user_id, month, monthly_responsiveness_rate as
current_month_responsiveness,
lag(monthly_responsiveness_rate) over (partition by user_id order by
month) as previous_month_responsiveness
from monthly_responsiveness)
select *
from consecutive_responsiveness t1
where user_id not in
(select user_id from consecutive_responsiveness where
current_month_responsiveness <= previous_month_responsiveness)
and (select count(*) from consecutive_responsiveness t2 where t1.user_id
= t2.user_id) > 4;
```

user_id	month	current_month_responsiveness	previous_month_responsiveness
1243	1	0.00	NULL
1243	2	33.33	0.00
1243	3	41.67	33.33
1243	5	55.56	41.67
1243	6	60.00	55.56
1437	1	17.50	NULL
1437	2	25.00	17.50
1437	3	35.00	25.00
1437	5	50.00	35.00
1437	6	100.00	50.00