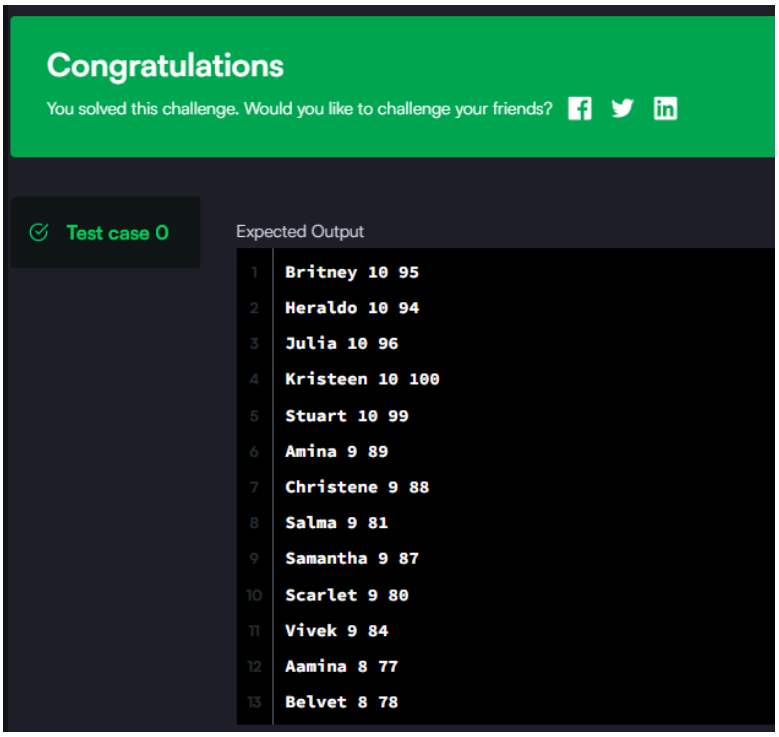
Question 1:

- Screenshot:
- 

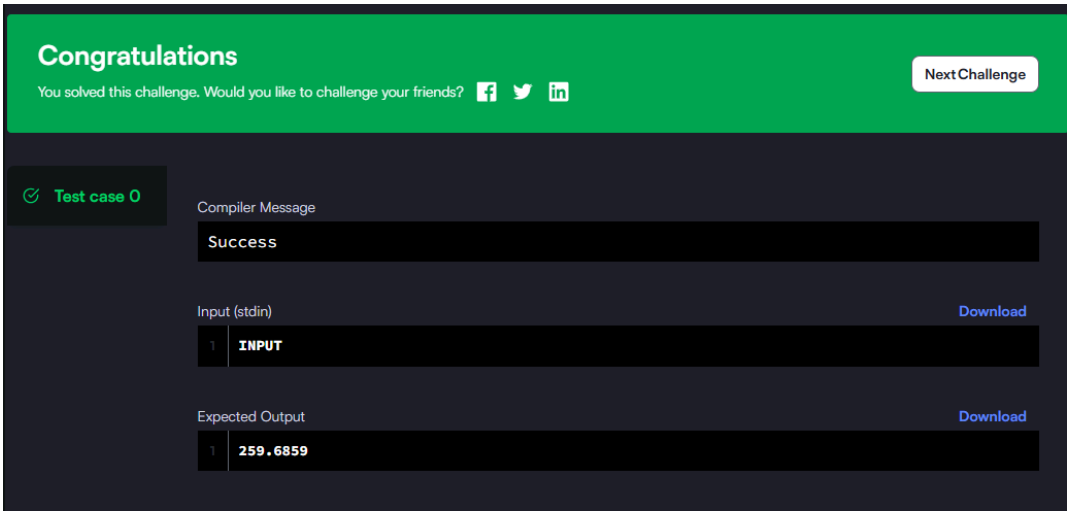
- Query (MySQL)

```
with student_grade as (select name, marks,
    case
        when marks >= 90 then 10
        when marks >=80 then 9
        when marks >=70 then 8
        when marks >=60 then 7
        when marks >=50 then 6
        when marks >=40 then 5
        when marks >=30 then 4
        when marks >=20 then 3
        when marks >=10 then 2
        else 1
    end grade
from students)


select name, grade, marks
```

```
from (
    select name, grade,marks, 1 as sort_group
    from student_grade
    where grade >=8

    union ALL

    select NULL, grade,marks, 2 as sort_group
    from student_grade
    where grade < 8) AS combined

ORDER BY
    sort_group, grade desc,
    case when sort_group = 1 then name end asc,
    case when sort_group = 2 then marks end asc;
```

Question 2

- Screenshot



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- Query (MySQL)

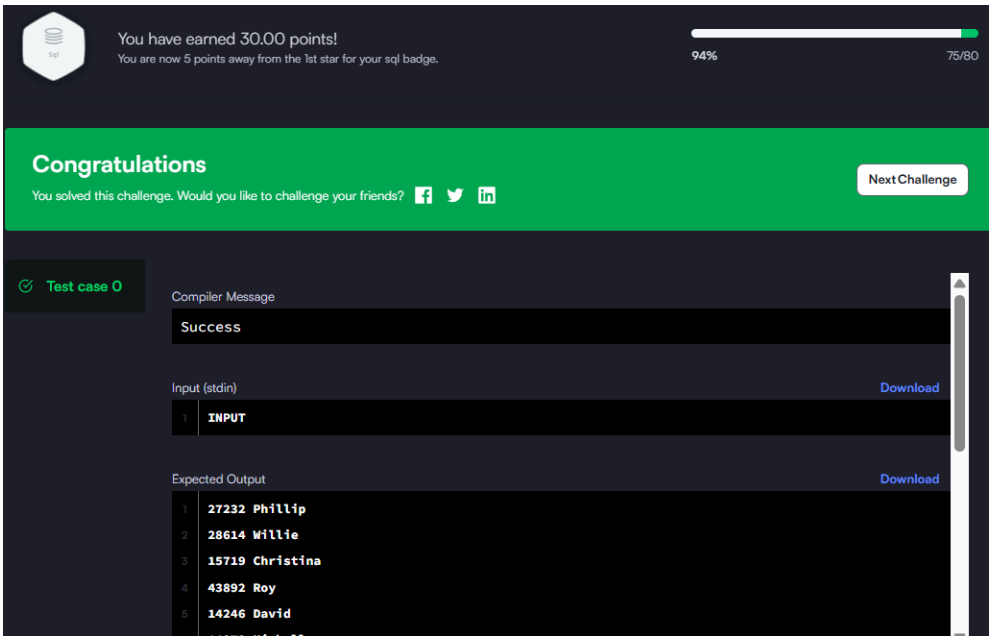
```
with point AS
    (select min(lat_n) as a,
            min(long_w) as b,
            max(lat_n) as c,
```

```
            max(long_w) as d
    from station)

select round(abs(a-c) + abs(b-d), 4)
from point
```

Question 3

- Screenshot
  -



- Query (MS SQL)

```
WITH hackers_challenges AS (
    select
        h.hacker_id as hacker_id,
        h.name as name,
        count(s.submission_id) as challenge_count
    from hackers h
        right join submissions s on h.hacker_id = s.hacker_id
        left join challenges c on s.challenge_id =
c.challenge_id
        left join difficulty d on c.difficulty_level =
d.difficulty_level
    where d.score = s.score
```

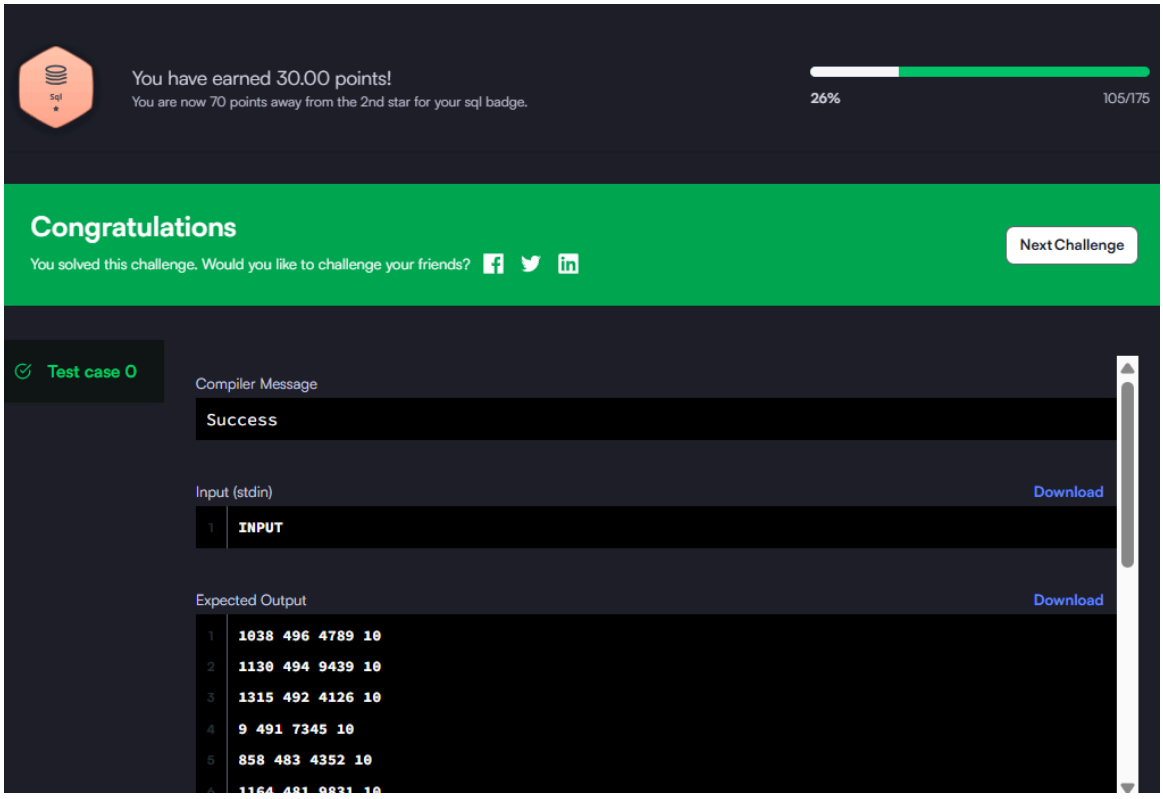
```
    group by h.hacker_id,h.name

    having count(s.submission_id) >1
)

select hacker_id, name
from hackers_challenges
order by challenge_count desc, hacker_id asc;
```

Question 4

- Screenshot



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- Query

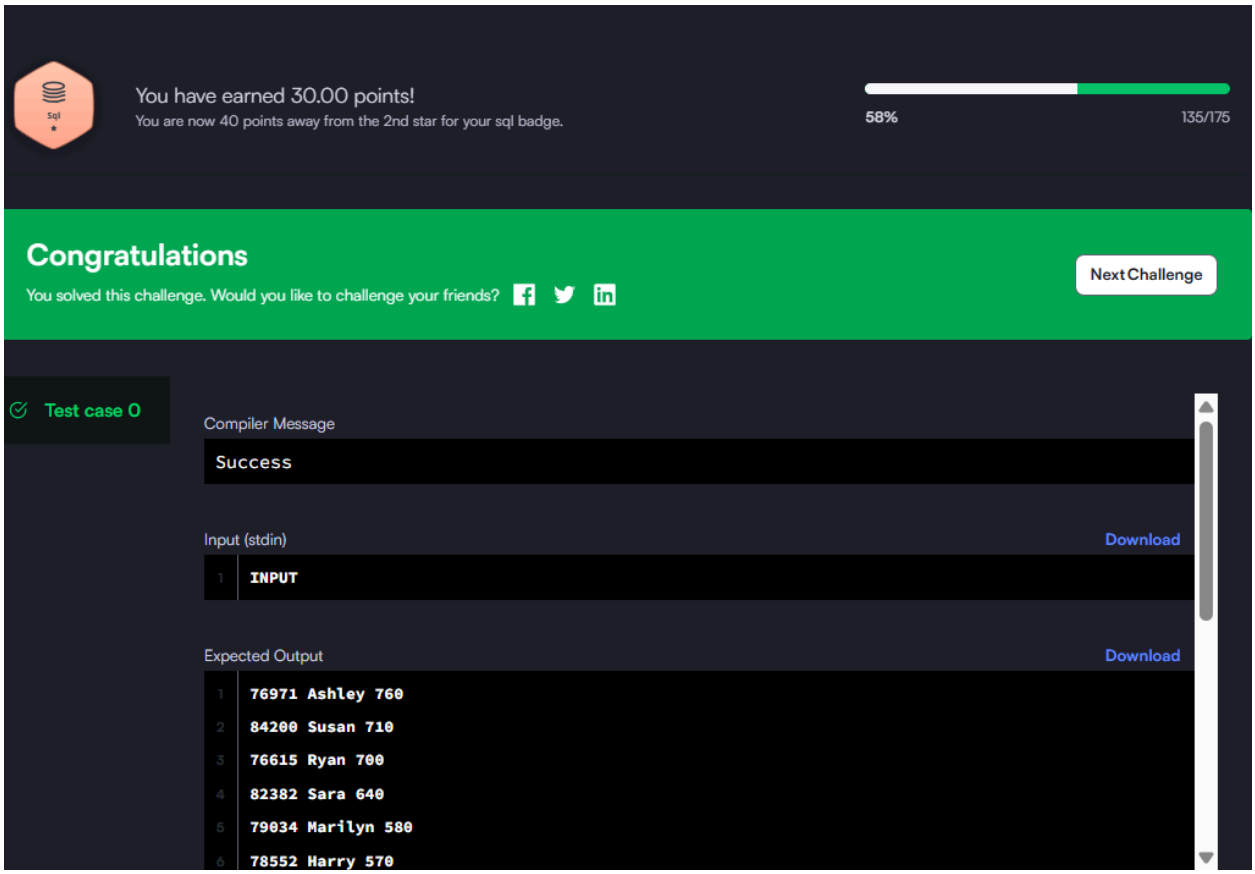
```
with min_coin_wands as (select
    w.id as id,
    wp.age as age,
    w.coins_needed as coins_needed,
    min(w.coins_needed) over (partition by w.power, wp.age )
```

```
as min_coin,
    w.power as powers
from wands w left join wands_property wp on wp.code = w.code
where wp.is_evil = 0)

select id, age, coins_needed, powers
from min_coin_wands
where min_coin = coins_needed
order by powers desc, age desc;
```

Question 5:

- Screenshot



- Query (MS SQL)
-

```
with min_coin_wands as (select
```

```
    w.id as id,
    wp.age as age,
    w.coins_needed as coins_needed,
    min(w.coins_needed) over (partition by w.power, wp.age )
as min_coin,
    w.power as powers
from wands w left join wands_property wp on wp.code = w.code
where wp.is_evil = 0)

select id, age, coins_needed, powers
from min_coin_wands
where min_coin = coins_needed
order by powers desc, age desc;
```

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