CT-23024 FATIMA KHAN

Question 1

Display the highest, lowest, sum, and average salary of all employees. Label the columns Maximum, Minimum , Sum , and Average , respectively. Round your results to the nearest whole number. in sql

Query

```
SELECT
   ROUND(MAX(salary)) AS Maximum,
   ROUND(MIN(salary)) AS Minimum,
   ROUND(SUM(salary)) AS Sum,
   ROUND(AVG(salary)) AS Average
FROM hr.employees;
```

Output

MAXIMUM	MINIMUM	SUM	AVERAGE
24000	2100	692016	6467

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Question 2

Modify the query in Q1 to display the minimum, maximum, sum, and average salary for each job type.

Query

```
SELECT
   job_id,
   ROUND(MIN(salary)) AS Minimum,
   ROUND(MAX(salary)) AS Maximum,
   ROUND(SUM(salary)) AS Sum,
```

```
    ROUND(AVG(salary)) AS Average
FROM hr.employees
GROUP BY job_id;
```

Output

JOB_ID	MINIMUM	MAXIMUM	SUM	AVERAGE
AD_VP	17000	17000	34000	17000
FI_ACCOUNT	6900	9000	39600	7920
PU_CLERK	2500	3100	13900	2780
SH_CLERK	2500	4200	64300	3215
HR_REP	6500	6500	6500	6500
PU_MAN	11000	11000	11000	11000
AC_MGR	12008	12008	12008	12008
ST_CLERK	2100	3600	55700	2785
AD_ASST	4400	4400	4400	4400
IT_PROG	4200	9000	28800	5760
SA_MAN	10500	14000	61000	12200
AC_ACCOUNT	8300	8300	8300	8300
FI_MGR	12008	12008	12008	12008
ST_MAN	5800	8200	36400	7280
AD_PRES	24000	24000	24000	24000
MK_MAN	13000	13000	13000	13000
HR_REP	6500	6500	6500	6500
PU_MAN	11000	11000	11000	11000
AC_MGR	12008	12008	12008	12008
ST_CLERK	2100	3600	55700	2785
AD_ASST	4400	4400	4400	4400
IT_PROG	4200	9000	28800	5760
SA_MAN	10500	14000	61000	12200
AC_ACCOUNT	8300	8300	8300	8300
FI_MGR	12008	12008	12008	12008
ST_MAN	5800	8200	36400	7280
AD_PRES	24000	24000	24000	24000
MK_MAN	13000	13000	13000	13000
MK_REP	6000	6000	6000	6000
PR_REP	10000	10000	10000	10000

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19 rows selected.

Question 3

Write a query to display the number of people with the same job.

Query

```
SELECT
    job_id,
    COUNT(*) AS employee_count
FROM hr.employees
GROUP BY job_id;
```

DBMS – database and management systems

Output

JOB_ID	EMPLOYEE_COUNT
AC_ACCOUNT	1
AC_MGR	1
AD_ASST	1
AD_PRES	1
AD_VP	2
FI_ACCOUNT	5
FI_MGR	1
HR_REP	1
IT_PROG	5
MK_MAN	1
MK_REP	1
PR_REP	1
PU_CLERK	5
PU_MAN	1
SA_MAN	5
SA_REP	30
FI_ACCOUNT	5
FI_MGR	1
HR_REP	1
IT_PROG	5
MK_MAN	1
MK_REP	1
PR_REP	1
PU_CLERK	5
PU_MAN	1
SA_MAN	5
SA_REP	30
SH_CLERK	20
ST_CLERK	20
ST_MAN	5

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19 rows selected.

Question 4

4Write a query to display each department's name, location, number of employees, and the average salary for all employees in that department. Label the columns Name , Location , Number of People , and Salary , respectively. Round the average salary to two decimal places.

```
SELECT
   d.department_name AS "Name",
   l.city AS "Location",
   COUNT(e.employee_id) AS "Number of People",
```

```
    ROUND(AVG(e.salary), 2) AS "Salary"
FROM
    hr.employees e
JOIN
    hr.departments d ON e.department_id = d.department_id
JOIN
    hr.locations l ON d.location_id = l.location_id
GROUP BY
    d.department_name, l.city
ORDER BY
    d.department_name;
```

Output

Name	Location	Number of People	Salary
Accounting	Seattle	2	10154
Administration	Seattle	1	4400
Executive	Seattle	3	19333.33
Finance	Seattle	6	8601.33
Human Resources	London	1	6500
IT	Southlake	5	5760
Marketing	Toronto	2	9500
Public Relations	Munich	1	10000
Purchasing	Seattle	6	4150
Sales	Oxford	34	8973.53
Shipping	South San Francisco	45	3475.56

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11 rows selected.

Question 5

Display the manager number and the salary of the lowest paid employee for that manager.

Exclude anyone whose manager is not known. Exclude any groups where the minimum

salary is less than $6,000. Sort the output in descending order of salary.

Query

```
SELECT
    e.manager_id AS "Manager Number",
    MIN(e.salary) AS "Lowest Salary"
FROM
    hr.employees e
WHERE
    e.manager_id IS NOT NULL
GROUP BY
    e.manager_id
HAVING
    MIN(e.salary) >= 6000
ORDER BY
    "Lowest Salary" DESC;
```

Output

Manager Number	Lowest Salary
102	9000
205	8300
145	7000
146	7000
108	6900
149	6200
147	6200
148	6100
201	6000

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9 rows selected.

Question 6

Create a query that will display the total number of employees and, of that total, the number of employees hired in 2005, 2006, and 2007. Create appropriate column headings.

Query

```
SELECT
   COUNT(*) AS "Total Employees",
   SUM(CASE WHEN EXTRACT(YEAR FROM hire_date) = 2005 THEN 1 ELSE 0 END) AS "Hired in 2005",
   SUM(CASE WHEN EXTRACT(YEAR FROM hire_date) = 2006 THEN 1 ELSE 0 END) AS "Hired in 2006",
   SUM(CASE WHEN EXTRACT(YEAR FROM hire_date) = 2007 THEN 1 ELSE 0 END) AS "Hired in 2007"
FROM
   hr.employees;
```

Output

Total Employees	Hired in 2005	Hired in 2006	Hired in 2007
107	29	24	19

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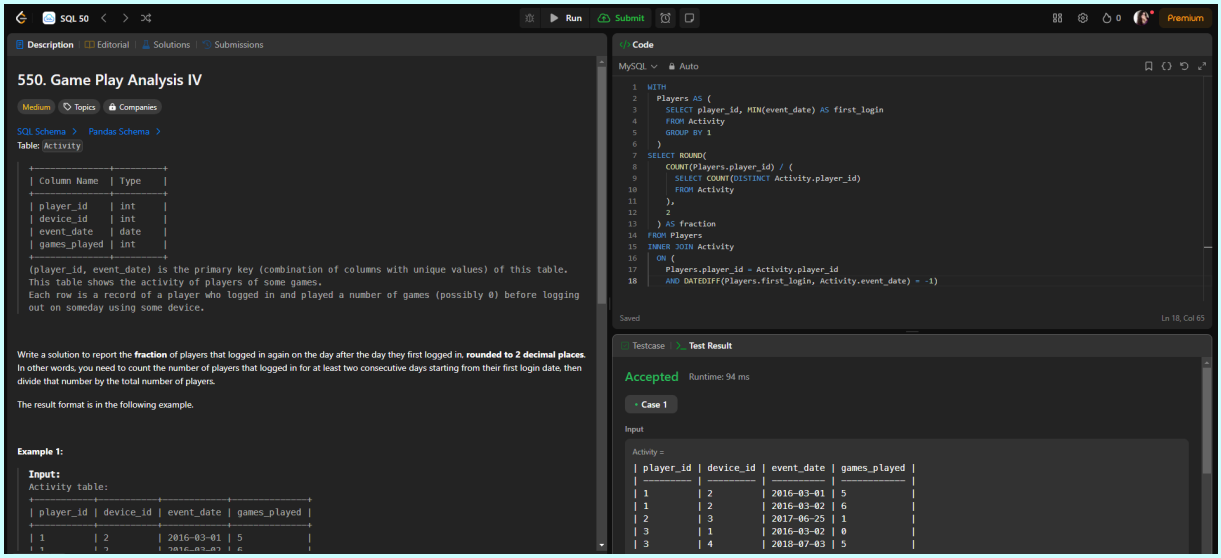
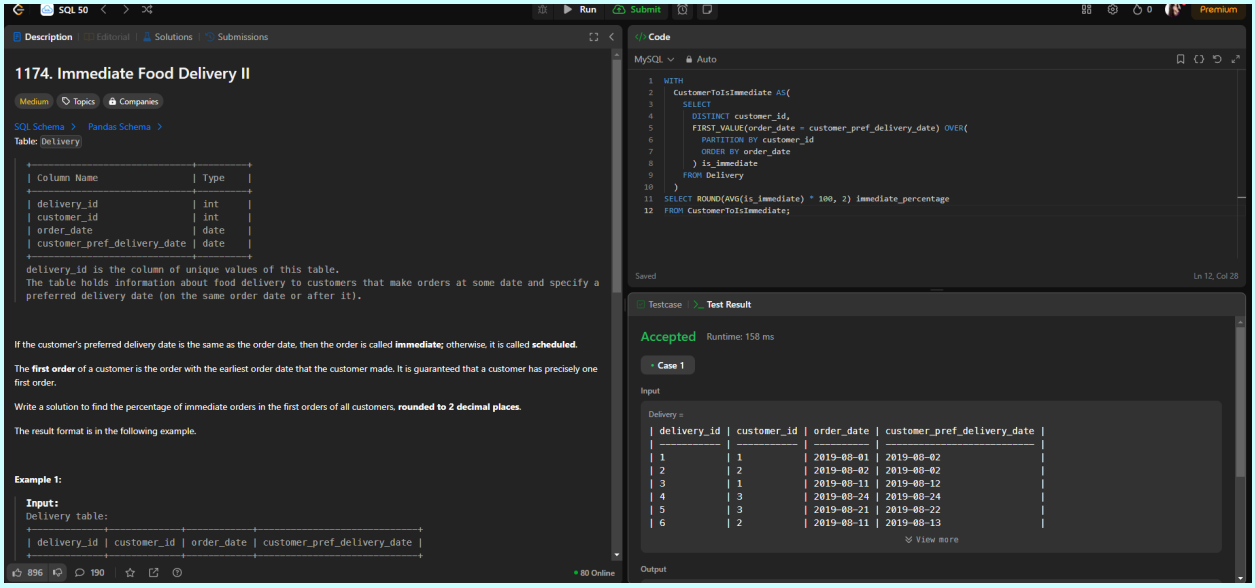
Question 7

Complete the section “Basic Aggregate Functions” of SQL 50 Badge on Leetcode.

550. Game Play Analysis IV

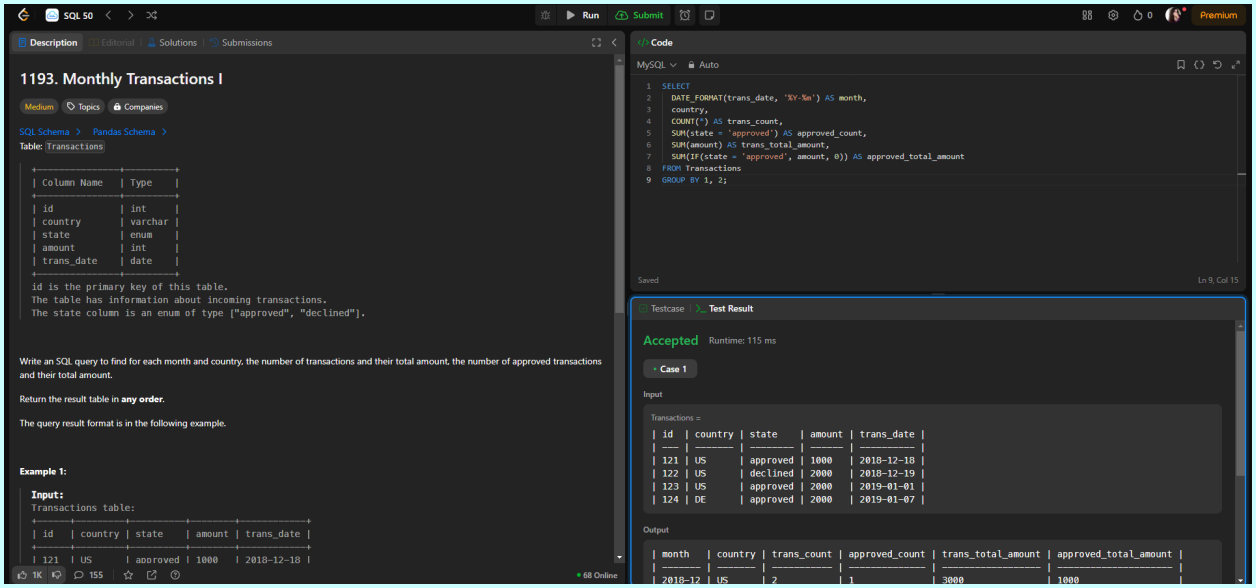


1174. Immediate Food Delivery II

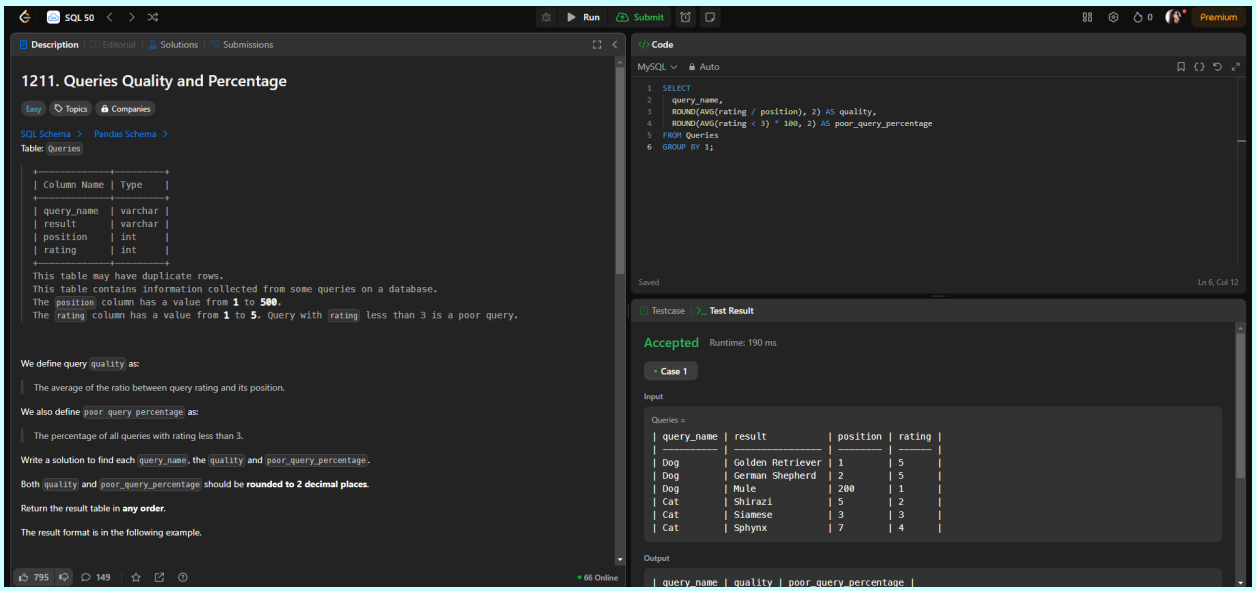


1193. Monthly Transactions I

DBMS – database and management systems

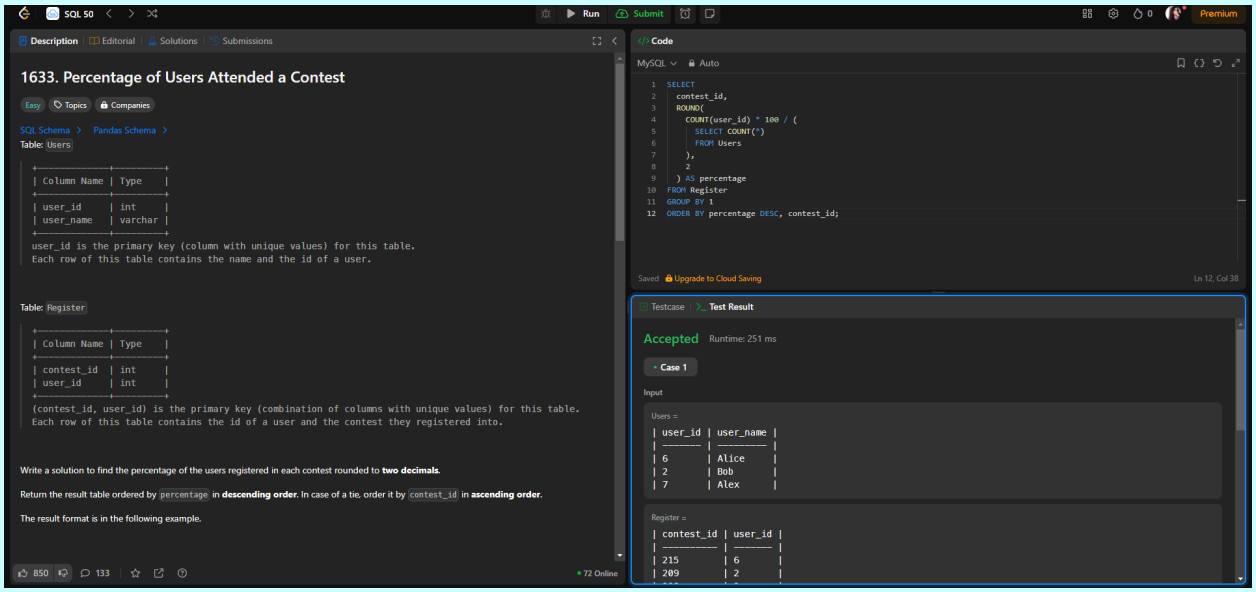


1211. Queries Quality and Percentage

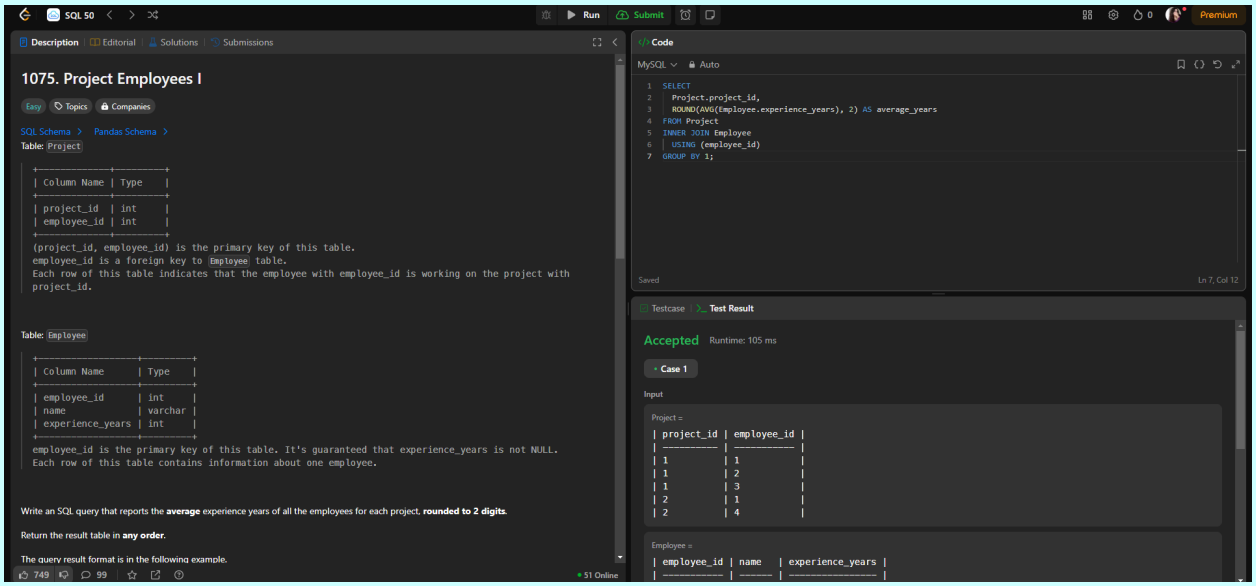


1633. Percentage of Users Attended a Contest

DBMS – database and management systems

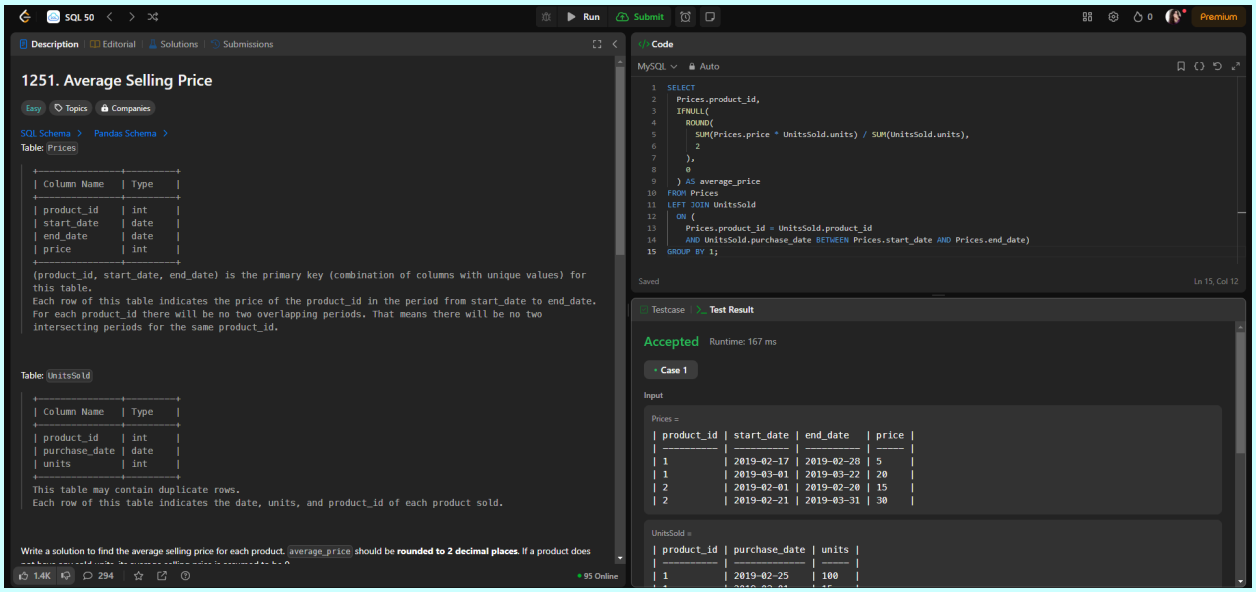


[1075. Project Employees I]

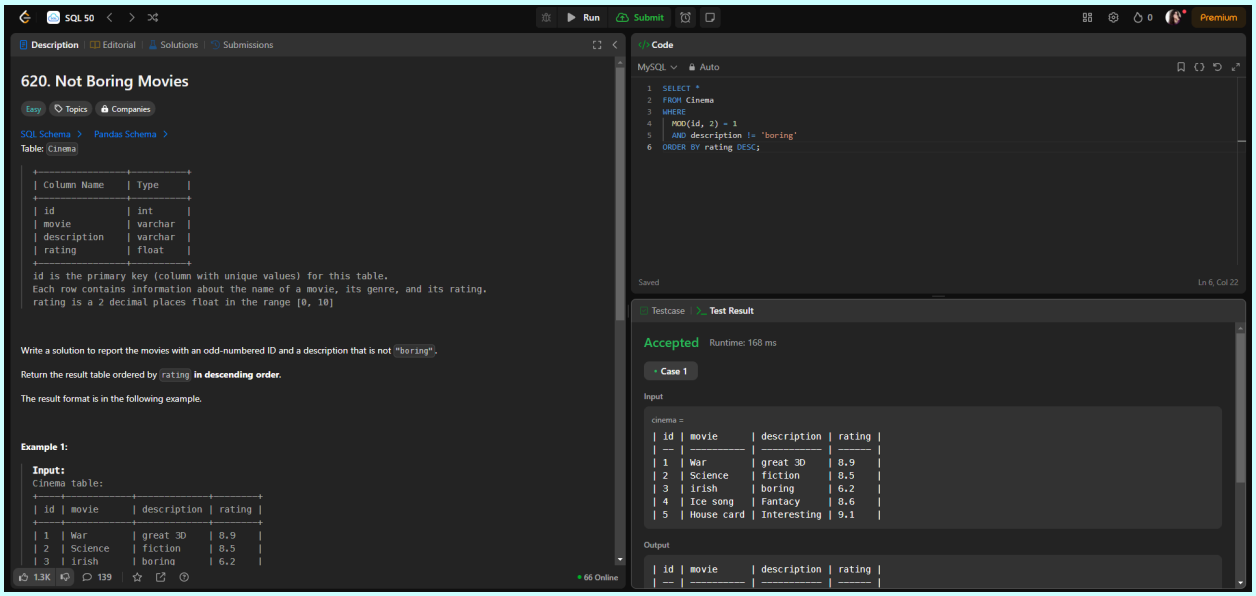


[1251. Average Selling Price]

DBMS – database and management systems



620. Not Boring Movies



DBMS – database and management systems