Gradiance Online Accelerated Learning

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Number of questions: 2
Positive points per question: 3.0
Negative points per question: 1.0
Your score: 6

1. The table

Scores(Team, Day, Opponent, Runs)

Gives the scores in the Japanese Baseball League for two consecutive days. The data in this table is as follows:

Team	Day	Opponent	Runs
Dragons	Sunday	Swallows	4
Tigers	Sunday	Bay Stars	9
Carp	Sunday	Giants	2
Swallows	Sunday	Dragons	7
Bay Stars	Sunday	Tigers	2
Giants	Sunday	Carp	4
Dragons	Monday	Carp	6
Tigers	Monday	Bay Stars	5
Carp	Monday	Dragons	3
Swallows	Monday	Giants	0
Bay Stars	Monday	Tigers	7
Giants	Monday	Swallows	5

Determine the result of the query

```
SELECT Team, Day
FROM Scores S1
WHERE NOT EXISTS
    (SELECT * FROM Scores S2
     WHERE S1.Runs = S2.Runs AND
         (S1.Team <> S2.Team
          OR S1.Day <> S2.Day)
    )
```

Then, identify, in the list below, one of the rows of the result.

Hint: When trying to understand what a query does, it is often easiest to work "inside-out." That is, first understand the subquery. Notice that the subquery in this problem has "inputs" S1.Day, S1.Runs, and S1.Team that are determined outside the subquery and depend on which row of scores the alias variable S1 refers to.

a) | Tigers | Monday |

b)

Tigers	Sunday

c)

Bay Stars	Sunday

d)

Giants	Monday

Answer submitted: **b)**

You have answered the question correctly.

Question Explanation:

The subquery returns a nonempty result if there is a row other than the one S1 refers to that has the same number of runs that S1's row does. That is, the query is asking for Team/Day pairs that have a unique number of runs. Here is the table that is the output of the query.

Team	Day
Tigers	Sunday
Dragons	Monday
Carp	Monday
Swallows	Monday

---

2. The table

Scores(Team, Day, Opponent, Runs)

Gives the scores in the Japanese Baseball League for two consecutive days. The data in this table is as follows:

Team	Day	Opponent	Runs
Dragons	Sunday	Swallows	4
Tigers	Sunday	Bay Stars	9
Carp	Sunday	Giants	2
Swallows	Sunday	Dragons	7
Bay Stars	Sunday	Tigers	2
Giants	Sunday	Carp	4
Dragons	Monday	Carp	6
Tigers	Monday	Bay Stars	5
Carp	Monday	Dragons	3
Swallows	Monday	Giants	0
Bay Stars	Monday	Tigers	7
Giants	Monday	Swallows	5

Determine the result of the query

```
SELECT Team, Day
FROM Scores S1
WHERE Runs <= ALL
    (SELECT Runs FROM Scores S2
     WHERE S1.Day = S2.Day
    )
```

Then, identify, in the list below, one of the rows of the result. one of these queries.

Hint: When trying to understand what a query does, it is often easiest to work "inside-out." That is, first understand the subquery. Notice that the subquery in this problem has an "input," S1.Day, that is determined outside the subquery, and depends on which row of scores the alias variable S1 refers to.

a)

Giants	Monday

b)

Swallows	Monday

c)

Swallows	Sunday

d)

Bay Stars	Monday

Answer submitted: **b)**

You have answered the question correctly.

Question Explanation:

The subquery asks for the set of all numbers of runs scored by any team on the day S1.Day. Note that S1.Day is either Sunday or Monday, depending on whether the row referred to by S1 is one of the first six or last six. Once we understand what the subquery is asking for, we can easily see that the query as a whole asks for those Team/Day pairs such that the team scored the minimum number of runs for that day.

On Sunday, the Carp and Bay Stars each scored the lowest number of runs, and on Monday, the Swallows alone had the lowest number. Thus, the result is:

Team	Day
Carp	Sunday
Bay Stars	Sunday
Swallows	Monday
