

Question 1:

```
SELECT j.Name, j.Id
FROM Judges j
INNER JOIN Evaluations e ON j.Id = e.JudgeId
GROUP BY j.Name, j.Id
HAVING COUNT(DISTINCT e.ProjectId) > 3
      AND MAX(e.Points) < 5;
```

RA:

```
temp1 = Judges ⋈ {j.Id = e.JudgeId} Evaluations
temp2 = γ_{j.Name, j.Id} (temp1)
temp3 = σ_{COUNT(DISTINCT e.ProjectId) > 3 AND MAX(e.Points) < 5} (temp2)
result = π_{j.Name, j.Id} (temp3)
```

Where clause

```
SELECT j.Name, j.Id
FROM Judges j
INNER JOIN (
    SELECT JudgeId
    FROM Evaluations
    GROUP BY JudgeId
    HAVING COUNT(DISTINCT ProjectId) > 3
) e ON j.Id = e.JudgeId
WHERE NOT EXISTS (
    SELECT *
    FROM Evaluations
    WHERE JudgeId = j.Id
    AND Points >= 5
)
```

RA:

temp1 = π JudgeId (σ COUNT(DISTINCT ProjectId) > 3 (Evaluations))

temp2 = Judges \bowtie temp1

temp3 = σ NOT EXISTS (σ Points >= 5 (Evaluations)) (temp2)

result = π Name, Id (temp3)

View:

CREATE VIEW ProjectJudgesCount AS

SELECT p.ProjectId, p.Title, p.TeamId, COUNT(jp.JudgeId) AS JudgesCount

FROM Projects p

LEFT JOIN JudgeProject jp ON p.ProjectId = jp.ProjectId

GROUP BY p.ProjectId, p.Title, p.TeamId;