Example 1

“Find the average age of students taking some course with 3 credits”

Simple solution, but if same student takes multiple 3-credit courses, it may not be what we expect

```sql
SELECT AVG (S.age) FROM Students S, Enrolled E, Courses C WHERE S.sid = E.sid AND E.cid = C.cid AND C.credits = 3
```

Example 2

“Find the average age of enrolled students for each course with at least 10 enrolled students. List the course name(s) as well.”

```sql
SELECT C.cname, AVG(S.age) FROM Students S, Enrolled E, Courses C WHERE S.sid = E.sid AND E.cid = C.cid GROUP BY C.cid, C.cname HAVING COUNT(*)>=10
```

Example 3

“Find the average age over enrolled students that are 25 or younger for each course with at least 10 enrolled students (of any age)”

```sql
SELECT C.cname, AVG(S.age) FROM Students S, Enrolled E, Courses C WHERE S.sid = E.sid AND E.cid = C.cid AND S.age <= 25 GROUP BY C.cid, C.cname HAVING 10 <= (SELECT COUNT(*) FROM Enrolled E1 WHERE E1.cid = C.cid)
```

Example 4

“Find the average age of enrolled students for each course satisfying following two conditions: (1) course has at least 10 enrolled students and (2) average enrolled student age higher than 20”

```sql
SELECT C.cname, AVG(S.age) FROM Students S, Enrolled E, Courses C WHERE S.sid = E.sid AND E.cid = C.cid GROUP BY C.cid, C.cname HAVING AVG(S.age) > 20 AND COUNT(*) >= 10
```
**Example 5**

```
SELECT C.cname, AVG(S.age)
FROM Students S, Enrolled E, Courses C
WHERE S.sid = E.sid AND E.cid = C.cid
GROUP BY C.cid, C.cname
HAVING ANY(S.age) > 20 AND COUNT(*) >= 10
```

"Find the average age of enrolled students for each course satisfying following two conditions: (1) course has at least 10 enrolled students and (2) at least one enrolled student has age higher than 20"

**Example 6**

```
SELECT C.cname, Temp.avg_age
FROM (SELECT C.cname, AVG(S.age) AS avg_age
      FROM Students S, Enrolled E, Courses C
      WHERE S.sid = E.sid AND E.cid = C.cid
      GROUP BY C.cid, C.cname
      HAVING 10 <= (SELECT COUNT(*)
                    FROM Enrolled E1
                    WHERE E1.cid = C.cid)) Temp
WHERE Temp.avg_age = (SELECT MAX(Temp.avg_age) FROM Temp)
```

"Find the courses that have the highest average age computed among students 25 or younger (i.e., highest among all courses) and also have at least 10 students of any age enrolled. Output the course name and the above-mentioned average age value."