Problem 01:Solution

```
CREATE TABLE Students(student_id INT,name VARCHAR(50),department VARCHAR(50));
CREATE  TABLE Courses(course_id INT,course_name VARCHAR(100),credits INT)
CREATE TABLE Enrollments(student_id INT,course_id INT,grade CHAR(1))



SELECT s.name
FROM Students s
JOIN Enrollments e ON s.student_id = e.student_id
GROUP BY s.student_id, s.name
HAVING COUNT(e.course_id) > 2;



SELECT s.department,
    AVG(
        CASE e.grade
            WHEN 'A' THEN 4
            WHEN 'B' THEN 3
            WHEN 'C' THEN 2
            WHEN 'D' THEN 1
            WHEN 'F' THEN 0
        END
    ) AS  avg_grade
FROM Students s
JOIN Enrollments e ON s.student_id = e.student_id
```

```
GROUP BY s.department;
```

```
SELECT course_name
FROM (
   SELECT c.course_name, COUNT(e.student_id) AS student_count,
        RANK() OVER (ORDER BY COUNT(e.student_id) DESC) AS rnk
   FROM Courses c
   JOIN Enrollments e ON c.course_id = e.course_id
   GROUP BY c.course_name
)
WHERE rnk = 1;
```

```
SELECT s.name
FROM Students s
JOIN Enrollments e ON s.student_id = e.student_id
GROUP BY s.student_id, s.name
HAVING COUNT(DISTINCT e.course_id) = (SELECT COUNT(*) FROM Courses);
```