7.2.1. Write Correlated Subqueries

a) Explain what the following correlated subquery accomplishes.

SELECT section\_id, course\_no

FROM section s

WHERE 2 >

(SELECT COUNT(\*)

FROM enrollment

WHERE section\_id = s.section\_id)

SECTION\_ID COURSE\_NO

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79 350

80 10

...

145 100

149 120

27 rows selected.

**Muestra la sección id y el numero de curso de las secciones con menos de 2 estudiantes inscritos**

b) Show the sections and their number of enrollments where the enrollment exceeds the

capacity of the section, using a correlated subquery.

**SELECT section\_id, COUNT(\*)**

**FROM enrollment e**

**GROUP BY section\_id**

**HAVING COUNT(\*) >**

**(SELECT capacity**

**FROM section**

**WHERE e.section\_id = section\_id)**

7.2.2. Write Correlated Subqueries Using the EXISTS and NOT

EXISTS Operators

a) Write a SQL statement to determine the total number of students enrolled using the

EXISTS operator. Count students enrolled in more than one course as one.

**SELECT COUNT(\*)**

**FROM student s**

**WHERE EXISTS**

**(SELECT NULL**

**FROM enrollment**

**WHERE student\_id = s.student\_id)**

b) Show the STUDENT\_ID, last name, and first name of students enrolled in three or more

classes.

**SELECT first\_name, last\_name, student\_id**

**FROM student s**

**WHERE EXISTS**

**(SELECT NULL**

**FROM enrollment**

**WHERE s.student\_id = student\_id**

**GROUP BY student\_id**

**HAVING COUNT(\*) >= 3)**

c) Which courses do not have sections assigned? Use a correlated subquery in the solution.

**SELECT course\_no, description**

**FROM course c**

**WHERE NOT EXISTS**

**(SELECT 'X'**

**FROM section**

**WHERE c.course\_no = course\_no)**

d) Which sections have no students enrolled? Use a correlated subquery in the solution and

order the result by the course number in ascending order.

**SELECT course\_no, section\_id**

**FROM section s**

**WHERE NOT EXISTS**

**(SELECT NULL**

**FROM enrollment**

**WHERE s.section\_id = section\_id)**

**ORDER BY course\_no**