Republic of the Philippines
POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
College of Computer and Information Sciences
Sta. Mesa, Manila

# Database Administration

## Activity 2

**Instructions:** Carefully analyze the given tables. Write down the corresponding commands for each number to accomplish the tasks, and submit your answer in pdf format.

Student Table

| id | name | major |
|---|---|---|
| 1 | Alice | Computer Science |
| 2 | Bob | Math |
| 3 | Carol | English Literature |
| 4 | David | History |
| 5 | Eric | Computer Science |
| 6 | Frank | Biology |
| 7 | George | Chemistry |
| 8 | Henry | Physics |
| 9 | Isaac | Computer Science |
| 10 | Jennifer | Art |
| 11 | Kevin | Psychology |
| 12 | Linda | Math |
| 13 | Mike | Computer Science |
| 14 | Nancy | English |
| 15 | Oliver | Economics |
| 16 | Patricia | Art |
| 17 | Quincy | Political Science |
| 18 | Rachel | Chemistry |
| 19 | Steve | History |
| 20 | Tina | Biology |

Course Table

| id | course_name | instructor |
|---|---|---|
| 1 | Calculus | Prof. Johnson |
| 2 | English Literature | Prof. Davis |
| 3 | History | Prof. Smith |
| 4 | Chemistry | Prof. Lee |
| 5 | Physics | Prof. Brown |

| | | |
|---|---|---|
| 6 | Biology | Prof. Garcia |
| 7 | Art | Prof. Jackson |
| 8 | Computer Science | Prof. Martinez |

**Part I.** Write a query operations based on the commands taught in the lesson "Working with Multiple Tables"

1. Write a query to show all students along with the corresponding courses they are enrolled in.
2. Write a query to show all courses along with the corresponding students enrolled in each course.
3. Write a query to show all students who are enrolled in either Computer Science or Physics.
4. Write a query to show all courses that are taught by either Prof. Davis or Prof. Johnson.
5. Write a query to show all courses and the number of students enrolled in each course.
6. Write a query to show all students who are not enrolled in any courses.
7. Write a query to show all courses that are not being taught by Prof. Davis or Prof. Johnson
8. Write a query to show all courses along with the corresponding students enrolled in each course.
9. Write a query to show all courses that have at least one student enrolled in them, along with the total number of students enrolled in each course.
10. Find all courses that have exactly one student enrolled in them, along with the name of the student.

**Part II.** Write a query operations based on the commands taught in the lesson "Subqueries"

1. Write a query to show the names of all students who are enrolled in courses taught by Prof. Martinez.
2. Write a query to show the names of all students who are enrolled in courses taught by Prof. Martinez or Prof. Johnson.
3. Write a query to show the names of all students who are enrolled in courses not being taught by Prof. Martinez.

4. Write a query to show the names of all students who are enrolled in courses not being taught by Prof. Martinez nor Prof. Johnson.
5. Write a query to show the names of all courses that are not in the student table.
6. Write a query to show the names of all courses that have more than 2 students enrolled:
7. Write a query to show the name and major of all students who are enrolled in a course with 'Co' in the course name
8. Write a query to show the name and instructor of all courses that are currently being taught and have at least one student enrolled.
9. Write a query to show the names of all students who are majoring in the same subject as student with id=7.
10. Write a query to show the names of all courses that have at least one student enrolled and are currently being taught by an instructor whose name starts with 'S' or 'M'.