**File name: Queries**

Description : Queries to run various test on the tables created and populated.

1. **A simple query that pulls all columns and rows from a table**

This query pulls out all the students from the student table:

SELECT \* FROM STUDENT;

1. **A query that displays a subset of columns**

This query shows ID, first name and last name for students:

SELECT student\_id, first\_Name, last\_Name from Student;

1. **A query that displays a subset of columns with a single clause (predicate) WHERE statement**

This query shows information about EXTRAACTIVITY for teacher having the id = 104:

SELECT \* from EXTRAACTIVITY where teacher\_id =104;

1. **A query that displays a subset of columns with a multi-clause (predicate) WHERE statement using AND/OR**

This query shows id, first name and last name for legual guardians with id 301 and 309 :

SELECT lguardian\_id, first\_name, last\_name from Legalguardian

WHERE lguardian\_id = 301 OR lguardian\_id = 309;

1. **A query that performs a single table join. In other words, you are joining 2 tables**

This query shows first name and last name for the student that commited a disciplinary action:

SELECT student.student\_id, student.first\_name, student.last\_name, disciplinaryactions.IncidentID, disciplinaryactions.actionType

FROM Student

JOIN disciplinaryactions ON student.student\_id = disciplinaryactions.student\_id;

1. **A query that performs a multi-table join. In other words, you are joining 3 or more tables**

This query shows the grade of each student enrolled in courses, displaying student’s first and last name, course ID , course name and the grade:

SELECT student.first\_name, student.last\_name, course.courseID, course.courseName, grade.testresult

FROM student

JOIN grade ON student.student\_ID = grade.student\_id

JOIN course ON grade. courseID = course.courseID;

1. **A query that performs an aggregate (count, min, max, sum, avg, etc.)**

Counting how many students are in school:

SELECT count(\*) from Student;

**8**. **A query that performs an aggregate (count, min, max, sum, avg, etc.) with a GROUP BY**

Maximum and minimum result for each test:

SELECT courseID, MAX(testresult)"Max test result", MIN(testresult)"Min test result" FROM grade

GROUP BY courseID;

**9. A query that performs an aggregate (count, min, max, sum, avg, etc.). with a GROUP BY and a HAVING clause**

This query shows the incident of type warning commited by the student with id = 202

SELECT student\_id, ActionType, incidentID from disciplinaryactions

WHERE student\_id = 202

GROUP BY student\_id,disciplinaryactions.actiontype,incidentID

HAVING ActionType like '%Warning%';

**10. A query that performs a subquery either as part of the WHERE clause or as a derived/virtual table**

This query calculates the average grade for all tests taken by student ID 204:

SELECT student\_id, first\_name, last\_name, (SELECT AVG(TestResult)FROM Grade

WHERE student\_id = 204) AS avg\_grade FROM Student WHERE student\_id = 204;

**11. A query that performs an aggregate with a join and a group by**

SELECT course.courseName,

AVG(grade.TestResult) AS avg\_grade

FROM Course

JOIN Grade ON course.courseID = grade.courseID

GROUP BY course.courseName;