**SQL Drills**

1. Describe the different types of join clauses in SQL.

In SQL there are four types of joins. These are inner joins, left, right, and full joins. A left join keeps everything to the left table and adds it to the overlapping columns with the second table. An inner join would keep only the overlapping columns in both tables. A right join does the opposite of a left join, while a full join keeps all columns in both tables. In the images provided, it seems that an inner join was used, keeping the inner columns of both tables.

1. Explain the difference in ‘alter’ and ‘update’ statements.

In SQL there are two commands for changing existing records in a table. These are known as ‘alter’ and ‘update’. Update can change the data within the table, but in order change attributes of the table itself such as a table name, the alter command would need to be used.

To change a column name:

ALTER TABLE alter\_table

Change "department\_id" "dept\_id" ["INT"];

To add a column:

ALTER TABLE alter\_table

ADD annual\_salary INT;

1. What is the difference between DDL and DML?

DDL statements are used for creating databases, schemas, constraints, users, and tables. A DML statement is used for inserting, updating, or deleting records.

Demonstrate the use of DML in the table provided:

INSERT INTO vendor\_table (vendor\_name)

VALUES (Carlton, Cascade Yarns);

1. How do you locate a duplicate record with one field? Demonstrate.

To locate a duplicate record with one field, first a groupby would need to be created, then there would need to be a count function in order to locate duplicate records.

SELECT yarn\_name, COUNT(\*)

FROM duplicated\_yarn

GROUP BY yarn\_type

HAVING COUNT(\*) > 1;

To locate a duplicate record with more than one field, the same steps are followed.

SELECT yarn\_name, yarn\_type, COUNT(\*)

FROM duplicated\_yarn

GROUP BY yarn\_type, id

HAVING COUNT(\*) > 1;

1. What is an equivalent SQL query?

SELECT state

FROM groupby01

GROUP BY state

SELECT AVG(state)

FROM groupby01;