SQL Assignment

Summary:

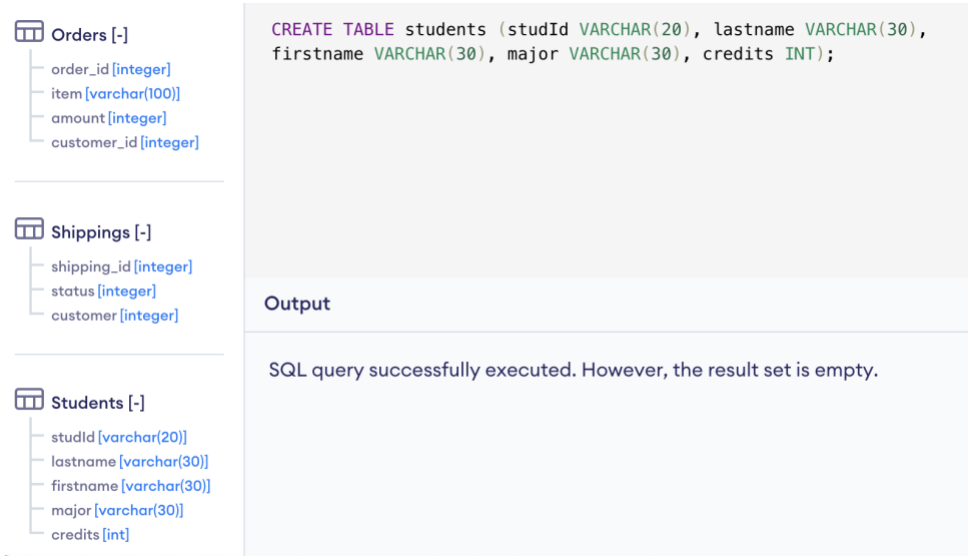
In today's class, the instructor introduced SQL (Structured Query Language) which is used which is used for managing and manipulating relational databases. SQL represents data in the form of rows and columns. The instructor later explained various queries used in SQL:

- CREATE – used to create tables and databases.
- INSERT – used to insert new data into the tables.
- UPDATE – used to update the existing data in the tables.
- SELECT – used to retrieve data from the tables.
- WHERE – used to retrieve specific data from table based on condition.
- DELETE – used to delete specific rows from the table.
- ORDER BY – sorts the table data in ascending or descending order based on specific column.

The instructor provided practical examples for each query. In summary, the instructor covered the basics of SQL, syntax of queries and their usage.

Practice:

(Creating a table)



(Inserting data into table)

```
-- Online SQL Editor to Run SQL Online.
-- Use the editor to create new tables, insert data and all other
SQL operations.

INSERT INTO students VALUES ("S1001", "Smith", "Tom", "History",
90);
INSERT INTO students VALUES ("S1002", "Chin", "Ann", "Math", 36);
INSERT INTO students VALUES ("S1005", "Lee", "Perry", "History",
3);
INSERT INTO students VALUES ("S1010", "Burns", "Edward", "Art",
63);
INSERT INTO students VALUES ("S1013", "McCarthy", "Owen", "Math",
0);
```

Output

SQL query successfully executed. However, the result set is empty.

(Display rows in a table – using SELECT)

```
SELECT * FROM students;
```

Output

studId	lastname	firstname	major	credits
S1001	Smith	Tom	History	90
S1002	Chin	Ann	Math	36
S1005	Lee	Perry	History	3
S1010	Burns	Edward	Art	63
S1013	McCarthy	Owen	Math	0

(Selecting only specific columns)

```
SELECT studId, firstname, credits FROM students;
```

Output

studId	firstname	credits
S1001	Tom	90
S1002	Ann	36
S1005	Perry	3
S1010	Edward	63
S1013	Owen	0

(Using WHERE)

```
SELECT *
FROM students
WHERE major = "Math";
```

Output

studId	lastname	firstname	major	credits
S1002	Chin	Ann	Math	36
S1013	McCarthy	Owen	Math	0

```sql
SELECT *
FROM students
WHERE major = "History" AND credits >= 90;
```

Output

studId	lastname	firstname	major	credits
S1001	Smith	Tom	History	90

(Sorting the rows of table)

```sql
SELECT *
FROM students
ORDER BY credits DESC;
```

Output

studId	lastname	firstname	major	credits
S1001	Smith	Tom	History	90
S1010	Burns	Edward	Art	63
S1002	Chin	Ann	Math	36
S1005	Lee	Perry	History	3
S1013	McCarthy	Owen	Math	0

(Updating the rows in table)

```
UPDATE students
SET credits = 78
WHERE studId = "S1013";

SELECT *
FROM students
WHERE studId = "S1013";
```

Output

studId	lastname	firstname	major	credits
S1013	McCarthy	Owen	Math	78

(Deleting a row in table)

```
DELETE FROM students
WHERE studId = "S1005";

SELECT *
FROM students;
```

Output

studId	lastname	firstname	major	credits
S1001	Smith	Tom	History	90
S1002	Chin	Ann	Math	36
S1010	Burns	Edward	Art	63
S1013	McCarthy	Owen	Math	78