CHIANG MAI UNIVERSITY

Bachelor of Science (Digital Industry Integration)

College of Arts, Media and Technology

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Database System and Database System Design

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0. Preparation

0.1 Comparison operation in SQL

Comparison Operator	**Description**
=	Equal to
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
<>	Not equal to
!=	

0.2 Logical operation in SQL

Logical Operator	**Description**
AND	And operation
OR	Or operation
NOT	Negation operation

1. SELECT statement

The SQL or Structured Query Language is a form of computer programming language which allows you to access and manipulate the data in the database. Today, you will learn about the most common command in the SQL which is SELECT statement. The SELECT statement is a SQL command to retrieve the data from the database. The syntax of the SELECT statement is given as follows :

```
SELECT column_name_1, column_name_2, …
FROM table_name;
```

Or

```
SELECT column_name_1, column_name_2, … FROM table_name;
```

2. Example of SELECT statement.

2.1 Select student ID from the student table. Run the following SQL.

```
SELECT id
FROM student;
```

2.2 Select all information from the table. Run the following SQL.

```
SELECT *
FROM student;
```

2.3 Write down your own SQL statement to get first name from the student table.

2.4 Write down your own SQL statement to get first name, last name, age and height from the student table. Run the SQL.

3. WHERE clause

In the previous lab, you have learned how to use the SELECT statement to get the data from the database. However, you can only select "**ALL**" of the information based on the attribute's name. SQL allows you select some information from the table using WHERE clause. The WHERE clause is a sub-component of the SELECT statement. The formal syntax is given as follows.

```
SELECT column_name_1, column_name_2, …
FROM table_name
WHERE conditions;
```

The condition of the WHERE clause is a simple condition. The simple condition is in the following form.

```
column_name comparison_operator [value or column_name]
```

The comparison operator is given in the section 0.1. Moreover, the condition can be made more complex by using the logical operator, given in section 0.2.

```
Condition_1 logical_operator Condition_2 logical_operator …Condition_n
```

3.0 Try the SELECT statement to retrieve all of the data from the student table. You can see that the MySQL will return all of the data in the student table.

```
SELECT *
FROM student;
```

3.1 Run the following SQL This SELECT statement will retrieve only the tuple which has height equal to 178.

```
SELECT *
FROM student
WHERE height=178;
```

3.2 Run the following SQL This SELECT statement will retrieve only the tuple which has height equal to 178 and is older than 19.

```
SELECT *
FROM student
WHERE height=178 AND
      age>19;
```

3.3 Write down your own SQL statement to get first name of the student who is shorter than 177cm from the student table. Run the SQL

```

```

3.4 Write down your own SQL statement to get student id, first name and last name of the Aj ball's advisee whose age is not 20 years old from the student table. Run the SQL

3.5 Write down your own SQL statement to get student id, first name and last name of the student whose name is "First024" from the student table. Run the SQL

3.6 Write down your own SQL statement to get all information of student which is higher than 175cm and is shorter than 180cm from the student table. Run the SQL You are **not allowed** to use the BETWEEN clause.