

4. BETWEEN operator

From problem 1.6, you can see that the SELECT can be used to select the value within a specific range by using compound condition. SQL provides you with a command to make it easier to get the information between a certain length, BETWEEN clause. The formal definition of the BETWEEN clause is given as follows.

```
SELECT column_name_1, column_name_2, ...  
FROM table_name  
WHERE column_name BETWEEN range1 AND  
           range2;
```

4.1 Run the following SQL This SELECT statement will retrieve only the tuple whose height is between 175 and 178 height.

```
SELECT *  
FROM student  
WHERE height BETWEEN 175 AND  
           178;
```

4.2 Write down your own SQL statement to get student id, first name and last name of the student whose student id is between 582115004 and 582115023 from the student table. Run the SQL

4.3 Write down your own SQL statement to get student id, first name and last name of the student who is older than 20 years old and has height between 150cm and 170cm from the student table. Run the SQL

5. LIKE operator

The WHERE clause can be used to get the value with exact value, such as problem 1.5. However, you might have only partial information to get the information, such as search engine. So, the WHERE clause is not suitable for the task. The SQL command to get the data from the database from a partial information. The command is LIKE clause.

```
SELECT column_name_1, column_name_2, ...  
FROM table_name  
WHERE column_name LIKE search_text;
```

The search text is a string that will be used to get the data. As mentioned earlier, some of the information can be omitted but it is still needed to indicate in the search text. The wildcard is used to indicate the characteristic of the text.

- If you need to indicate that there is a **collection** of character, you use the percent symbol, %.
- If you need to indicate that there is a **single** character, you use the underscore symbol, _.

5.1 Run the following SQL This SELECT statement will retrieve only the tuple whose first name has a sequence of "04" at any point.

```
SELECT *  
FROM student  
WHERE firstName LIKE '%04%';
```

5.2 Run the following SQL This SELECT statement will retrieve only the tuple whose first name has a sequence of "x" at the second place.

```
SELECT *  
FROM student  
WHERE firstName LIKE '_x%';
```

5.3 Write down your own SQL statement to get student id, first name and last name of the student whose first name start with "L" or "I" from student table. Run the SQL

5.4 Write down your own SQL statement to get student id, first name and last name of the student whose last name ends with “N” or “n” from student table. Run the SQL

5.5 Write down your own SQL statement to get student id, first name, last name and telephone number of the student whose telephone number has the sequence of “65” at any point from student table. Run the SQL

5.6 Write down your own SQL statement to get student id, first name, last name and email of the student who use Hotmail from the student table. Run the SQL

5.7 Write down your own SQL statement to get student id, first name, last name and email of the student who use Hotmail and the second letter in the email is “E” or “e” the student table. Run the SQL

5.8 For more information on how to use the wildcard character, you can visit http://www.w3schools.com/sql/sql_wildcards.asp .

6. IN operator

The SQL provides a command to get the tuple whose value is in a collection of value. The command is IN clause.

```
SELECT column_name_1, column_name_2, ...  
FROM table_name  
WHERE column_name IN(list_of_values);
```

6.1 Run the following SQL This SELECT statement will retrieve only the tuple whose age is either 19 or 22.

```
SELECT *  
FROM student  
WHERE age IN (19,22);
```

6.2 Write down your own SQL statement to get student id, first name, last name and height of the student whose height is either 170 or 177. Run the SQL

6.3 Write down your own SQL statement to get student id, first name, last name and age of the student whose height is either 170, 173 or 177 and is an advisee of Aj IT from student table. Run the SQL

6.4 Write down your own SQL statement to get student id, first name, last name and age of the student whose age is either 19 or 22 and the first name contain the letter 'Y' or 'y' from student table. Run the SQL

7. Insert a data tuple into a table

The SQL statement to insert a tuple of data into a certain table in a database is given as follows. There are 2 form of INSERT statement. The first one has no specific column values and the user needs to input every column in the table.

```
INSERT INTO table_name  
VALUES(value1, value2,...);
```

The second one will insert the values into the database according to the order of given column name.

```
INSERT INTO table_name (column_name1, column_name2,...)  
VALUES(value1,value2,...);
```

- 7.1 Write an SQL statement to insert your information into the database. I will check from the student database.
- 7.2 Research on the internet on how to insert multiple records with a single SQL INSERT INTO command.

ANSWER ALL THE QUESTION IN THE GIVEN LINK

https://forms.office.com/Pages/ResponsePage.aspx?id=3_GBz1neKUyR2qLf0EqnUZJy-0xgpxlJhTI0lNzwCCxURDY5TVQ1R1hNTDZTMUdUNTIBQkcwMTFGTC4u