BASIC SQL

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OBJECTIVES:

01

Introduce SQL

1.1: Learners must be able to give an understanding on what SQL is and what it is for.

1.2: Reintroduced to the parts of a table

02

Be Familiaried with Basic SQL Commands

2.1: Finding items in the database

2.2: Deleting items

2.3: Adding new items

2.4: Updating items

1.1 Introduction

WHAT IS SQL?

- Structured Query Language
- For access and manipulation of databases

1.2 Tables

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

name

row

column

BASIC COMMANDS

Please go to https://www.programiz.com/sql/online-compiler/

2.1 SELECT

- To select or query from table [database]
- What is returned is what is being specifically asked for

Syntax: SELECT <range> FROM <table name>;

2.1 SELECT

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Example:

You need to know the ages of the people on your record.

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

2.1 SELECT

Syntax: SELECT <range> FROM <table name>;

Solution:

```
SELECT age FROM Customers;
```

Output:

age
31
22
22
25
28

2.2 DELETE

- To permanently remove rows that fit the stated condition

Syntax: DELETE FROM <table name> WHERE <condition>;

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Syntax: DELETE FROM <table name> WHERE <condition>;

Example:

You want to remove records of people who are 30 and above.

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

2.2 DELETE

Syntax: DELETE FROM <table name> WHERE <condition>;

Solution:

```
DELETE FROM Customers WHERE Age>29;
SELECT * FROM Customers;
```

Output:

customer_id	first_name	last_name	age	country
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

2.3 INSERT INTO

- To add new record in the table stated

Syntax: INSERT INTO <table name> (<column name>) VALUES (<cell value>);

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Example:

You want to add a potential customer to the table named Ana Lynne.

Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

2.3 INSERT INTO

Syntax: INSERT INTO <table name> (<column name>) VALUES (<cell value>);

Solution:

```
INSERT INTO Customers (first_name, last_name) VALUES ("Ana", "Lynne");
SELECT * FROM Customers;
```

Output:

customer_id	first_name	last_name	age	country
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
	Ana	Lynne		

2.4 UPDATE

- To edit records

Syntax: UPDATE <table name> SET <column name> WHERE <condition>

2.4 UPDATE

Syntax: UPDATE <table name> SET <column name> WHERE <condition>

Example:

You want to update Ana Lynne's records as she has finished up filling her survey.

customer_id	first_name	last_name	age	country
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
	Ana	Lynne		

2.4 UPDATE

Syntax: UPDATE <table name> SET <column name> WHERE <condition>

Solution:

```
UPDATE Customers
SET customer_id = 6, age = 29, country = "RP"
WHERE first_name = "Ana";
SELECT * FROM Customers;
```

Output:

customer_id	first_name	last_name	age	country
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE
6	Ana	Lynne	29	RP

Your Turn

It was a mistake! Customer with ID number 1 was supposed to be aged 29 and the recent delete command removed their records from the database. Thankfully, you have a recollection of the rest of their records.

Use the appropriate commands to add the proper customer record back, and show the result when searched.

? Your Turn

1	John	Doe	31	USA

You need to:

a. Add back the record using a command and input the proper values while you're at it.

```
INSERT INTO <table name> (<column name1>, <column name2>)
    VALUES (<cell value for column1>, <cell value for column2>);
```

b. Use the proper command to display the new table output.

```
SELECT <range> FROM <table name>;
```

? Your Turn

1	John	Doe	31	USA

You need to:

a. Add back the record using a command and input the proper values while you're at it.

```
INSERT INTO Customers (customer_id, first_name, last_name, age, country)
VALUES (1, "John", "Doe", 29, "USA");
```

b. Use the proper command to display the new table output.

```
SELECT * FROM Customers;
```


QUESTIONS?

THANK YOU

Resources and Tools:

- https://www.w3schools.com/sql/sql_intro.asp
- https://www.programiz.com/sql/online-compiler/
- https://www.canva.com/