SQL

mySQL:

Components:

* **Main Data types:**
  + **VARCHAR(size) –** string;
  + **BLOB(size) –** binary large objects;
  + **BOOL –** true/false;
  + **INT(size) -** integer**;**
  + **DEC(size, d) –** decimal (units, decimals);
  + **DATE –** date;
  + **DATETIME(fsp) –** date and time combination;
* **Constraints:**
  + **NOT NULL –** column can’t have value of null;
  + **UNIQUE –** ensures all values in column are unique;
  + **PRIMARY KEY –** both NOT NULL and UNIQUE combined;
  + **FOREIGN KEY –** uniquely identifies a row/record in another column;
  + **CHECK –** ensures all values follow certain condition;
  + **DEFAULT –** sets a default value when no value is specified;
  + **INDEX –** to create and retrieve data from a database very quickly;
* **Logic Operators:**
  + **Arithmetic:**
    - + - \* / % ;
  + **Comparison:**
    - = > < >= <= <>(not equals) += -= \*= /= %=;
    - &= (AND equals) ^-=(exclusive equals) |\*=(OR equals);
  + **Bitwise:**
    - &(AND) |(OR) ^(exclusive OR)
  + **Logical:**
    - ALL(all subqueries are true) AND ANY(any subquery true) BETWEEN(operand is within range of comparison)

EXISTS(return 1 or more records) IN LIKE(matches pattern)

NOT OR SOME(any subquery meets condition)

* **CREATE** DATABASE <database\_name>; 🡪 *creates a database*
* **CREATE** TABLE <table\_name> (

<column\_name1 > <data\_type> PRIMARY KEY,

<column\_name2> <data\_type> <constraint> (opt.)

); 🡪 *creates a table and inserts columns into it and defines what kind of data they use*

* **DESCRIBE** <table\_name>; 🡪 shows a table’s data info
* **DROP** TABLE <table\_name>; 🡪 *deletes a table*
* **ALTER** TABLE <table\_name> **ADD** <column\_name3> <datatype>; 🡪 *adds a column*
* **ALTER** TABLE <table\_name> **DROP** <column\_name4> <datatype>; 🡪 *deletes a column*
* **INSERT** **INTO** <table\_name> **VALUES**(<info>); 🡪 *inserts values into a table column by order in values*
* **INSERT INTO** <table\_name>(columns to give values to**) VALUES**(<info>) 🡪 *inserts values into a table columns by order in <table\_name>() parentheses*
* **SELECT** (<column\_name> / \*) **FROM** <table\_name>; 🡪 *shows table values*
* **SELECT** <table\_name>.<column\_table / \*>; 🡪 show table values
* **SELECT** (<column\_name> / \*) **FROM** <table\_name>;

**ORDER BY** <column\_name/value> **ASC/DESC/OTHER;** 🡪 *selects values in a defined order, ex: alphabetically*

**LIMIT** <int> ; 🡪 *limits number of selected values by <int>*

**WHERE** <column\_name> **IN(**record\_name(s)**) …;**

* **UPTADE** <table\_name> 🡪 *modifies existing value in a table*

**SET** <table\_column> = <random\_name> 🡪 *modifies a table record*

**WHERE** <table\_column> = <table\_key>; 🡪 *identifies where to do an action (ex: set)*