SQL Constraints

SQL constraints are used to specify rules for the data in a table.

- Constraints are used to limit the type of data that can go into a table.

- This ensures the accuracy and reliability of the data in the table.

- If there is any violation between the constraint and the data action, the action is aborted.

- Constraints can be column level or table level. Column level constraints apply to a column, and table level constraints apply to the whole table.

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| The following constraints are commonly used in SQL:   * [**NOT NULL**](https://www.w3schools.com/sql/sql_notnull.asp) - Ensures that a column cannot have a NULL value * [**UNIQUE**](https://www.w3schools.com/sql/sql_unique.asp) - Ensures that all values in a column are different * [**PRIMARY KEY**](https://www.w3schools.com/sql/sql_primarykey.asp) - A combination of a NOT NULL and UNIQUE. Uniquely identifies each row in a table * [**FOREIGN KEY**](https://www.w3schools.com/sql/sql_foreignkey.asp) - Uniquely identifies a row/record in another table * [**CHECK**](https://www.w3schools.com/sql/sql_check.asp) - Ensures that all values in a column satisfies a specific condition * [**DEFAULT**](https://www.w3schools.com/sql/sql_default.asp) - Sets a default value for a column when no value is specified * [**INDEX**](https://www.w3schools.com/sql/sql_create_index.asp) - Used to create and retrieve data from the database very quickly |

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| - Query: **show** **create** **table** contentassetconstant;  CREATE TABLE `contentassetconstant` (  `contentSubsetType` char(18) NOT NULL DEFAULT '',  `fileType` varchar(10) NOT NULL DEFAULT '',  `fileTypeName` varchar(20) DEFAULT NULL,  `classification` varchar(20) DEFAULT NULL,  `displayOrder` tinyint(4) DEFAULT NULL,  `useYn` varchar(1) DEFAULT NULL,  `resolution` varchar(10) DEFAULT NULL,  `bitRate` int(11) DEFAULT NULL,  `xResolution` int(11) DEFAULT NULL,  `yResolution` int(11) DEFAULT NULL,  `presetName` varchar(50) DEFAULT NULL,  `drmPresetName` varchar(50) DEFAULT NULL,  `drmApplePresetName` varchar(50) DEFAULT NULL,  `availableServicesTarget` varchar(50) DEFAULT NULL,  `use4kAteme` varchar(1) DEFAULT 'n',  PRIMARY KEY (`contentSubsetType`,`fileType`) => each row in a table is unique and not null  ) ENGINE=InnoDB DEFAULT CHARSET=utf8 |

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| - Query: **show** **create** **table** commoncode;  CREATE TABLE `commoncode` (  `idx` int(11) NOT NULL AUTO\_INCREMENT,  `groupCode` varchar(6) NOT NULL,  `code` varchar(50) NOT NULL,  `fullCode` varchar(56) NOT NULL,  `codeName` varchar(100) NOT NULL,  `description` varchar(255) DEFAULT NULL,  `useYn` varchar(1) DEFAULT NULL,  `displayOrder` smallint(6) DEFAULT NULL,  `classification` varchar(100) DEFAULT NULL,  `extendValue1` varchar(100) DEFAULT NULL,  `extendValue2` varchar(100) DEFAULT NULL,  PRIMARY KEY (`idx`),  UNIQUE KEY `CommonCode\_uq1` (`groupCode`,`code`), => each column in a table is unique  UNIQUE KEY `CommonCode\_uq2` (`fullCode`)  ) ENGINE=InnoDB AUTO\_INCREMENT=1089 DEFAULT CHARSET=utf8 |