

MySQL Appunti

SELECT Syntax

Select di alcune colonne (*column1, column2*)

```
SELECT column1, column2
FROM table_name;
```

Select di tutte le colonne di una tabella

```
SELECT *
FROM table_name;
```

SELECT WHERE Syntax

Select di alcune colonne (*column1, column2*) con una condizione

```
SELECT column1, column2
FROM table_name;
WHERE condition;
```

Select di tutte le colonne di una tabella

```
SELECT *
FROM table_name;
WHERE condition;
```

Le *condition* sono fatte da: - Uguaglianza: column = valore - Maggiore e minore column > valore column < valore - Tra 2 valori column BETWEEN valore1 AND valore2 - Non è nullo IS NOT NULL - Operatori: - AND - OR - NOT per negare

INSERT INTO Syntax

Inserimento specificando le colonne in cui andranno inseriti i valori

```
INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);
```

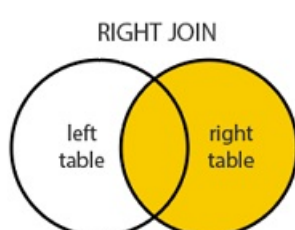
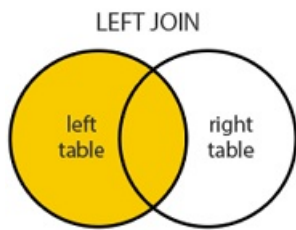
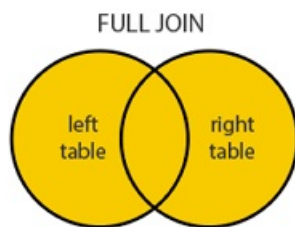
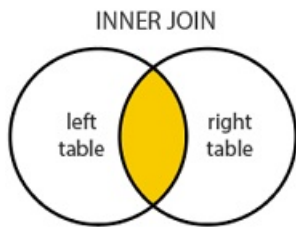
Inserimento di tutti i valori di tutte le colonne della tabella

```
INSERT INTO table_name
VALUES (value1, value2, value3, ...);
```

Inserimento con il primo valore lasciato a default per il db

```
INSERT INTO table_name
VALUES (DEFAULT, value1, value2, value3, ...);
```

JOIN Syntax



INNER JOIN

```
SELECT column_name(s)
FROM table1
INNER JOIN table2
ON table1.column_name = table2.column_name;
```

LEFT JOIN

```
SELECT column_name(s)
FROM table1
LEFT JOIN table2
ON table1.column_name = table2.column_name;
```

RIGHT JOIN

```
SELECT column_name(s)
FROM table1
RIGHT JOIN table2
ON table1.column_name = table2.column_name;
```

FULL JOIN

```
SELECT column_name(s)
FROM table1
CROSS JOIN table2;
```

CREATE Syntax

Creare un DB

```
CREATE DATABASE databasename;
```

Creare una tabella

```
CREATE TABLE table_name (
    column1 datatype constraint,
    column2 datatype constraint,
    column3 datatype constraint,
    CONSTRAINT nomeCostraint UNIQUE (column1, column2)
);
```

Constraint inseribili nella stessa linea: - NOT NULL - Ensures that a column cannot have a NULL value - UNIQUE - Ensures that all values in a column are different - PRIMARY KEY - A combination of a NOT NULL and UNIQUE. Uniquely identifies each row in a table - FOREIGN KEY - Prevents actions that would destroy links between tables - CHECK - Ensures that the values in a column satisfies a specific condition - DEFAULT - Sets a default value for a column if no value is specified - CREATE INDEX - Used to create and retrieve data from the database very quickly

AUTO_INCREMENT

```
CREATE TABLE Persons (  
    Personid int NOT NULL AUTO_INCREMENT,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    PRIMARY KEY (Personid)  
);
```

PRIMARY KEY

Primary key semplice

```
CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    PRIMARY KEY (ID)  
);
```

Primary key composita

```
CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    CONSTRAINT PK_Person PRIMARY KEY (ID,LastName)  
);
```

FOREIGN KEY

Foreign key semplice

```
CREATE TABLE Orders (  
    OrderID int NOT NULL,  
    OrderNumber int NOT NULL,  
    PersonID int,  
    PRIMARY KEY (OrderID),  
    FOREIGN KEY (PersonID) REFERENCES Persons(PersonID)  
);
```

Primary key composita

```
CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    CONSTRAINT PK_Person PRIMARY KEY (ID,LastName)  
);
```

MySQL Types

DATE types

- DATE - format YYYY-MM-DD
- DATETIME - format: YYYY-MM-DD HH:MI:SS
- TIMESTAMP - format: YYYY-MM-DD HH:MI:SS
- YEAR - format YYYY or YY

NORMAL types

- CHAR(size) A FIXED length string (can contain letters, numbers, and special characters). The size parameter specifies the column length in characters - can be from 0 to 255. Default is 1
- VARCHAR(size) A VARIABLE length string (can contain letters, numbers, and special characters). The size parameter specifies the maximum column length in characters - can be from 0 to 65535
- BINARY(size) Equal to CHAR(), but stores binary byte strings. The size parameter specifies the column length in bytes. Default is 1
- VARBINARY(size) Equal to VARCHAR(), but stores binary byte strings. The size parameter specifies the maximum column length in bytes.
- TINYBLOB For BLOBs (Binary Large Objects). Max length: 255 bytes
- TINYTEXT Holds a string with a maximum length of 255 characters
- TEXT(size) Holds a string with a maximum length of 65,535 bytes
- BLOB(size) For BLOBs (Binary Large Objects). Holds up to 65,535 bytes of data
- MEDIUMTEXT Holds a string with a maximum length of 16,777,215 characters
- MEDIUMBLOB For BLOBs (Binary Large Objects). Holds up to 16,777,215 bytes of data
- LONGTEXT Holds a string with a maximum length of 4,294,967,295 characters
- LONGBLOB For BLOBs (Binary Large Objects). Holds up to 4,294,967,295 bytes of data
- ENUM(val1, val2, val3, ...) A string object that can have only one value, chosen from a list of possible values. You can list up to 65535 values in an ENUM list. If a value is inserted that is not in the list, a blank value will be inserted. The values are sorted in the order you enter them
- SET(val1, val2, val3, ...) A string object that can have 0 or more values, chosen from a list of possible values. You can list up to 64 values in a SET list