SQLite IN

Summary: in this tutorial, you will learn how to use the SQLite `IN` operator to determine whether a value matches any value in a list of values or a result of a subquery.

Introduction to the SQLite IN operator

The SQLite `IN` operator determines whether a value matches any value in a list or a subquery (https://www.sqlitetutorial.net/sqlite-subquery/) . The syntax of the `IN` operator is as follows:

```
expression [NOT] IN (value_list|subquery);
```

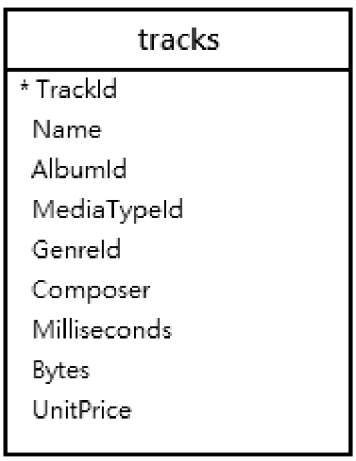
The `expression` can be any valid expression or a column of a table.

A list of values is a fixed value list or a result set of a single column returned by a subquery. The returned type (https://www.sqlitetutorial.net/sqlite-data-types/) of expression and values in the list must be the same.

The `IN` operator returns true or false depending on whether the expression matches any value in a list of values or not. To negate the list of values, you use the `NOT IN` operator.

SQLite IN operator examples

We will use the `Tracks` table from the sample database (https://www.sqlitetutorial.net/sqlite-sample-database/) for the demonstration.



The following statement uses the `IN` operator to query the tracks whose media type id is 1 or 2.

```
SELECT
        TrackId,
        Name,
        Mediatypeid
FROM
        Tracks
WHERE
        MediaTypeId IN (1, 2)
ORDER BY
        Name ASC;
```

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TrackId	Name	MediaTypeId
3027	"40"	1
3412	"Eine Kleine Nachtmusik" Serenade In G, K. 525: I. Allegro	2
109	#1 Zero	1
3254	#9 Dream	2
602	'Round Midnight	1
1833	(Anesthesia) Pulling Teeth	1
570	(Da Le) Yaleo	1
3045	(I Can't Help) Falling In Love With You	1

This query uses the `OR` operator instead of the `IN` operator to return the same result set as the above query:

```
SELECT
        TrackId,
        Name,
        MediaTypeId
FROM
        Tracks
WHERE
        MediaTypeId = 1 OR MediaTypeId = 2
ORDER BY
        Name ASC;
```

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As you can see from the queries, using the `IN` operator is much shorter.

If you have a query that uses many `OR` operators, you can consider using the `IN` operator instead to make the query more readable.

SQLite IN operator with a subquery example

The following query returns a list of album id of the artist id 12:

```
SELECT albumid
FROM albums
WHERE artistid = 12;
```

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AlbumId
16
17

To get the tracks that belong to the artist id 12, you can combine the `IN` operator with a subquery (https://www.sqlitetutorial.net/sqlite-subquery/) as follows:

```
SELECT
        TrackId,
        Name,
        AlbumId
FROM
        Tracks
WHERE
        AlbumId IN (
                SELECT
                        AlbumId
                FROM
                        Albums
                WHERE
                        ArtistId = 12
        );
```

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In this example:

- First, the subquery returns a list of album ids that belong to the artist id 12.
- Then, the outer query return all tracks whose album id matches with the album id list returned by the subquery.

SQLite NOT IN examples

The following statement returns a list of tracks whose genre id is not in a list of (1,2,3).

```
SELECT
        trackid,
        name,
        genreid
FROM
        tracks
WHERE
        genreid NOT IN (1, 2,3);
```

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In this tutorial, you have learned how to use the SQLite `IN` operator to match a value with a list of values or a subquery.