

```
mysql> -- Selecting database
mysql> use sets;
Database changed
mysql> -- Table 1 imdb_backup
mysql> select * from imdb_backup
-> ;
```

Sr_No	Name	Year	Certificate	Rating	Votes
1	Spider-Man	2018	T	9.2	20759
2	Red Dead Redemption II	2018	M	9.7	35703
3	Grand Theft Auto V	2013	M	9.5	59986
4	God of War	2018	M	9.9	26118
5	Injustice 2	2016	T	9.5	28722
6	The Last of Us: Part II	2020	M	8.5	30460
7	Horizon Forbidden West	2022	T	9.2	2979
8	The Last of Us	2013	M	9.7	60590
9	Detroit: Become Human	2018	M	9.2	16907
10	Death Standing	2019	M	8.8	8136

```
10 rows in set (0.00 sec)
```

```
mysql> select * from genres;
```

Sr_No	Action	Adventure	Comedy	Crime	Family	Fantasy	Mystery	Sci_Fi	Thriller
1	1	1	0	0	0	1	0	0	0
2	1	1	0	1	0	0	0	0	0
3	1	0	0	1	0	0	0	0	0
4	1	1	0	0	0	0	0	0	0
5	1	1	0	0	0	0	0	0	0
6	1	1	0	0	0	0	0	0	0
7	1	1	0	0	0	0	1	0	0
8	1	1	0	0	0	0	0	0	0
9	1	1	0	0	0	0	0	0	0
10	1	1	0	0	0	0	0	0	0

```
10 rows in set (0.00 sec)
```

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mysql> -- NOTE: 1= TRUE AND 0= FALES IN THE ABOVE TABLE GENRES
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```
mysql> -- INNER JOIN
mysql> -- This query performs an INNER JOIN between the 'imdb' and 'genres' tables using 'Sr_No' as the key.
mysql> -- The goal is to get clean, readable output where each game has its genre tags combined into a single string column.
mysql> SELECT
    -> imdb_backup.Sr_No,
    -> imdb_backup.Name,
    -> imdb_backup.Year,
    -> imdb_backup.Certificate,
    -> imdb_backup.Rating,
    -> imdb_backup.Votes,
    -> -- Merging genre categories into a single comma-separated string using CONCAT_WS
    -> -- Each genre column is checked: if it is 'TRUE', we include that genre name; if not, we ignore it.
    -> -- This helps keep the output clean and avoids having 9 separate TRUE/FALSE columns
    -> CONCAT_WS(',',
    -> CASE WHEN gen.Action = 'TRUE' THEN 'Action' ELSE NULL END,
    -> CASE WHEN gen.Adventure = 'TRUE' THEN 'Adventure' ELSE NULL END,
    -> CASE WHEN gen.Comedy = 'TRUE' THEN 'Comedy' ELSE NULL END,
    -> CASE WHEN gen.Crime = 'TRUE' THEN 'Crime' ELSE NULL END,
    -> CASE WHEN gen.Family = 'TRUE' THEN 'Family' ELSE NULL END,
    -> CASE WHEN gen.Fantasy = 'TRUE' THEN 'Fantasy' ELSE NULL END,
    -> CASE WHEN gen.Mystery = 'TRUE' THEN 'Mystery' ELSE NULL END,
    -> CASE WHEN gen.Sci_Fi = 'TRUE' THEN 'Sci-Fi' ELSE NULL END,
    -> CASE WHEN gen.Thriller = 'TRUE' THEN 'Thriller' ELSE NULL END
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-> CASE WHEN gen.Thriller = 'TRUE' THEN 'Thriller' ELSE NULL END
-> ) AS Genres
-> FROM imdb_backup
-> INNER JOIN genres gen ON imdb_backup.Sr_No = gen.Sr_No;

```

Sr_No	Name	Year	Certificate	Rating	Votes	Genres
1	Spider-Man	2018	T	9.2	20759	Comedy, Crime, Family, Mystery, Sci-Fi, Thriller
2	Red Dead Redemption II	2018	M	9.7	35703	Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
3	Grand Theft Auto V	2013	M	9.5	59986	Adventure, Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
4	God of War	2018	M	9.9	26118	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
5	Injustice 2	2016	T	9.5	28722	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
6	The Last of Us: Part II	2020	M	8.5	30460	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
7	Horizon Forbidden West	2022	T	9.2	2979	Comedy, Crime, Family, Fantasy, Sci-Fi, Thriller
8	The Last of Us	2013	M	9.7	60590	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
9	Detroit: Become Human	2018	M	9.2	16907	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
10	Death Standing	2019	M	8.8	8136	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller

```

mysql> -- LEFT JOIN
mysql> -- This will return all records from the 'imdb' table (left side) along with matching genre info from the 'genres' table (right side).
mysql> -- If a game has no corresponding genre entry, the genre columns will be NULL.
mysql> SELECT
->     imdb_backup.Sr_No,
->     imdb_backup.Name,
->     imdb_backup.Year,
->     imdb_backup.Certificate,
->     imdb_backup.Rating,
->     imdb_backup.Votes,
->     CONCAT_WS(' ',
->         CASE WHEN gen.Action      = 'TRUE' THEN 'Action' ELSE NULL END,
->         CASE WHEN gen.Adventure   = 'TRUE' THEN 'Adventure' ELSE NULL END,
->         CASE WHEN gen.Comedy      = 'TRUE' THEN 'Comedy' ELSE NULL END,
->         CASE WHEN gen.Crime       = 'TRUE' THEN 'Crime' ELSE NULL END,
->         CASE WHEN gen.Family      = 'TRUE' THEN 'Family' ELSE NULL END,
->         CASE WHEN gen.Fantasy     = 'TRUE' THEN 'Fantasy' ELSE NULL END,
->         CASE WHEN gen.Mystery     = 'TRUE' THEN 'Mystery' ELSE NULL END,
->         CASE WHEN gen.Sci_Fi      = 'TRUE' THEN 'Sci-Fi' ELSE NULL END,
->         CASE WHEN gen.Thriller    = 'TRUE' THEN 'Thriller' ELSE NULL END
->     ) AS Genres
-> FROM imdb_backup
-> LEFT JOIN genres AS gen
-> ON imdb_backup.Sr_No = gen.Sr_No;

```

Sr_No	Name	Year	Certificate	Rating	Votes	Genres
1	Spider-Man	2018	T	9.2	20759	Comedy, Crime, Family, Mystery, Sci-Fi, Thriller
2	Red Dead Redemption II	2018	M	9.7	35703	Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
3	Grand Theft Auto V	2013	M	9.5	59986	Adventure, Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
4	God of War	2018	M	9.9	26118	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
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9	Detroit: Become Human	2018	M	9.2	16907	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller
10	Death Standing	2019	M	8.8	8136	Comedy, Crime, Family, Fantasy, Mystery, Sci-Fi, Thriller

```
mysql> -- RIGHT JOIN
mysql> -- This will return all records from the 'genres' table (right side) along with matching game info from the 'imdb' table (left side)
mysql> -- If a genre row exists without a matching game, game details will appear as NULL
mysql> SELECT
->     imdb_backup.Sr_No,
->     imdb_backup.Name,
->     imdb_backup.Year,
->     imdb_backup.Certificate,
->     imdb_backup.Rating,
->     imdb_backup.Votes,
->     CONCAT_WS(' ',
->         CASE WHEN gen.Action = 'TRUE' THEN 'Action' ELSE NULL END,
->         CASE WHEN gen.Adventure = 'TRUE' THEN 'Adventure' ELSE NULL END,
->         CASE WHEN gen.Comedy = 'TRUE' THEN 'Comedy' ELSE NULL END,
->         CASE WHEN gen.Crime = 'TRUE' THEN 'Crime' ELSE NULL END,
->         CASE WHEN gen.Family = 'TRUE' THEN 'Family' ELSE NULL END,
->         CASE WHEN gen.Fantasy = 'TRUE' THEN 'Fantasy' ELSE NULL END,
->         CASE WHEN gen.Mystery = 'TRUE' THEN 'Mystery' ELSE NULL END,
->         CASE WHEN gen.Sci_Fi = 'TRUE' THEN 'Sci-Fi' ELSE NULL END,
->         CASE WHEN gen.Thriller = 'TRUE' THEN 'Thriller' ELSE NULL END
->     ) AS Genres
-> FROM imdb_backup
-> RIGHT JOIN genres gen ON imdb_backup.Sr_No = gen.Sr_No;
```

Sr_No	Name	Year	Certificate	Rating	Votes	Genres
1	Spider-Man	2018	T	9.2	20759	Comedy, Crime, Family, Mystery, Sci-Fi, Thriller
2	Red Dead Redemption II	2018	M	9.7	35703	Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
3	Grand Theft Auto V	2013	M	9.5	59986	Adventure, Comedy, Family, Fantasy, Mystery, Sci-Fi, Thriller
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mysql> -- FULL OUTER JOIN
mysql> -- Combines the result of both LEFT and RIGHT joins.
mysql> -- All records from both 'imdb_backup' and 'genres' tables are returned.
mysql> -- If there's no match in one table, the columns from that table will be NULL.
mysql> -- *JOIN* WILL BE USED IN THE CODING
mysql> SELECT
    -> imdb_backup.Sr_No,
    -> imdb_backup.Name,
    -> imdb_backup.Year,
    -> imdb_backup.Certificate,
    -> imdb_backup.Rating,
    -> imdb_backup.Votes,
    -> -- Combine genres into one column for cleaner results
    -> CONCAT_WS(', ',
    -> CASE WHEN gen.Action = 'TRUE' THEN 'Action' ELSE NULL END,
    -> CASE WHEN gen.Adventure = 'TRUE' THEN 'Adventure' ELSE NULL END,
    -> CASE WHEN gen.Comedy = 'TRUE' THEN 'Comedy' ELSE NULL END,
    -> CASE WHEN gen.Crime = 'TRUE' THEN 'Crime' ELSE NULL END,
    -> CASE WHEN gen.Family = 'TRUE' THEN 'Family' ELSE NULL END,
    -> CASE WHEN gen.Fantasy = 'TRUE' THEN 'Fantasy' ELSE NULL END,
    -> CASE WHEN gen.Mystery = 'TRUE' THEN 'Mystery' ELSE NULL END,
    -> CASE WHEN gen.Mystery = 'TRUE' THEN 'Mystery' ELSE NULL END,
    -> CASE WHEN gen.Thriller = 'TRUE' THEN 'Thriller' ELSE NULL END
    -> ) AS Genres
    -> FROM imdb_backup
    -> JOIN genres gen ON imdb_backup.Sr_No = gen.Sr_No;

```

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