

OUTER JOIN

EXACTLY LIKE A LEFT OUTER JOIN, EXCEPT -

EACH ROW FROM THE TABLE ON THE RIGHT OF THE JOIN IS DEFINITELY IN THE OUTPUT (EVEN IF WITH NULLS)

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SIMPLY THE MIRROR IMAGE OF THE LEFT OUTER JOIN

SELECT M.MOVIEID,

R.REVIEW

FROM MOVIES M

RIGHT OUTER JOIN

REVIEWS R

ON

M.MOVIEID = R.MOVIEID;

WORK OUT THE OUTPUT?

SELECT

M.MOVIEID,

R.REVIEW

RIGHT OUTER JOIN

FROM

MOVIES M

RIGHT OUTER JOIN

REVIEWS R

ON

M.MOVIEID = R.MOVIEID;

MOVIES

MovielD	vielD MovieName Year		Country
1	The Godfather	1972	USA
2	The Departed	2006	USA
3	Infernal Affairs 2002		Hong Kong
4	Parinda	1989	India
5	Gunda 1998		India
6	6 Little Caesar		USA

REVIEWS

MovielD	Review	RatingStars
1	Amazing	5
1	Genre-Defining	5
1	Classic	5
1	Overrated	1
1	OK, Not Great	3
1	Two Thumbs Up	5
3	Crossover Hit	5
3	Love It	4
3	Nailbiting!	5
1	Cinematic Masterpiece	5
5	So Bad Its Good	0
2	Not As Good As Original	3
2	Overrated	2
2	Too Morbid	3
4	Sad, Thought-Provoking	4
4	Cinema At Its Best	5

WORK OUT THE OUTPUT?

MovielD	MovieName	Year	Country
1	The Godfather	1972	USA
2	The Departed	2006	USA
3	Infernal Affairs	fernal Affairs 2002	
4	4 Parinda		India
5	5 Gunda		India
6	6 Little Caesar		USA

MOVIES M RIGHT OUTER JOIN

REVIEWS R

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M.MOVIEID =

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MovielD	MovieName	Year	Country	MovielD	Review	RatingStars
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1	The Godfather	1972	USA	1	Genre-	5
1	The Godfather	1972	USA	1	Classic	5
1	The Godfather	1972	USA	1	Overrated	1
1	The Godfather	1972	USA	1	OK. Not Great	3
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3	Infernal Affairs	2002	Hong Kong	3	Crossover Hit	5
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1	The Godfather	1972	USA	1	Cinematic	5
5	Gunda	1998	India	5	So Bad Its	0
2	The Departed	2006	USA	2	Not As Good	3
2	The Departed	2006	USA	2	Overrated	2
2	The Departed	2006	USA	2	Too Morbid	3
4	Parinda	1989	India	4	Sad, Thought-	4
4	Parinda	1989	India	4	Cinema At Its	5

MovielD	MovieName Year		Country	
1	The Godfather	1972	USA	
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3	Infernal Affairs	2002	Hong Kong	
4	4 Parinda		India	
	C. unda		- dedia	
	Carpo		THE TOTAL	
6	Little Caesar	1931	USA	

MOVIES M

RIGHT OUTER

JOIN

REVIEWS R

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M.MOVIEID =

R.MOVIEID;

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RE	V	W	
			V

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_	On Dod Ha Onnal	0

3

4

NOTICE THERE IS NO ROW IN THE OUTPUT FOR LITTLE CAESAR NOW!

						5
1	The Gouranier	1972	USA	l	Genre-	5
1	The Godfather	1972	USA	1	Classic	5
1	The Godfather	1972	USA	1	Overrated	1
1	The Godfather	1972	USA	1	OK. Not Great	3
1	The Godfather	1972	USA	1	Two Thumbs	5
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		Teal	Country	
1	The Godfather	1972	USA	
2	2 The Departed 2006		USA	
3 Infernal Affairs		2002	Hong Kong	
A lotter was produced to the second	Parinda	1000	adadia	
5	Gunda	1998	India	
Ó	Lillie Caesar	1931	USA	
	3	2 The Departed 3 Infernal Affairs 4 Parinda 5 Gunda	2 The Departed 2006 3 Infernal Affairs 2002 4 Parinda 1999 5 Gunda 1998	

MOVIES M

RIGHT OUTER

JOIN

REVIEWS R

ON

M.MOVIEID =

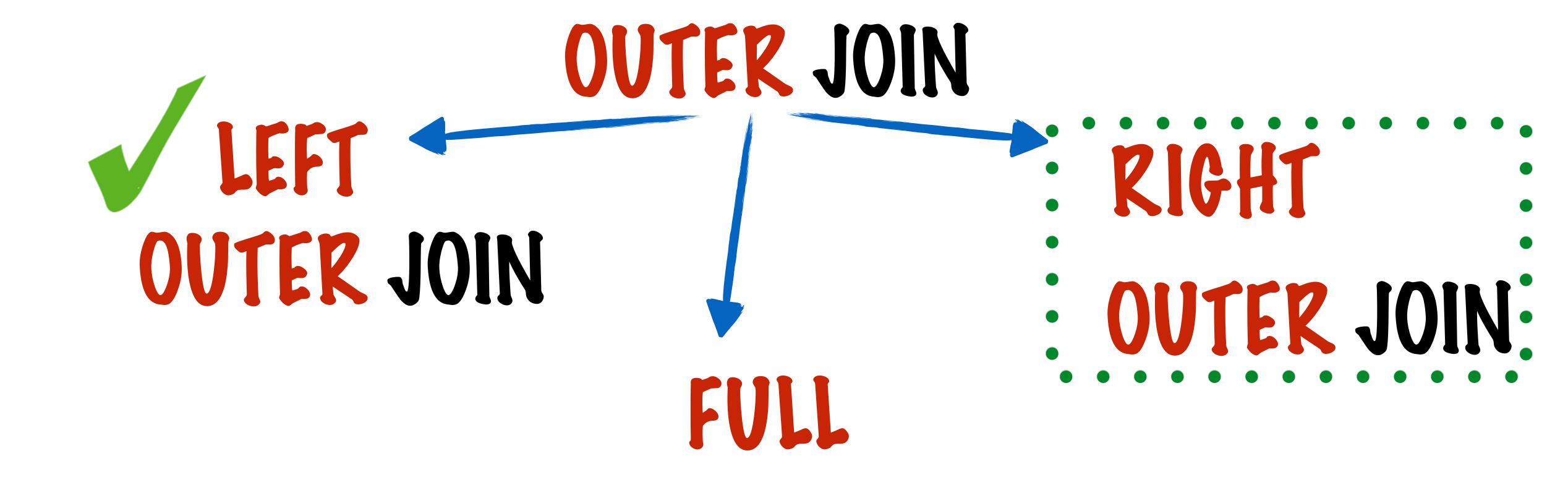
R.MOVIEID;

REVIEWS

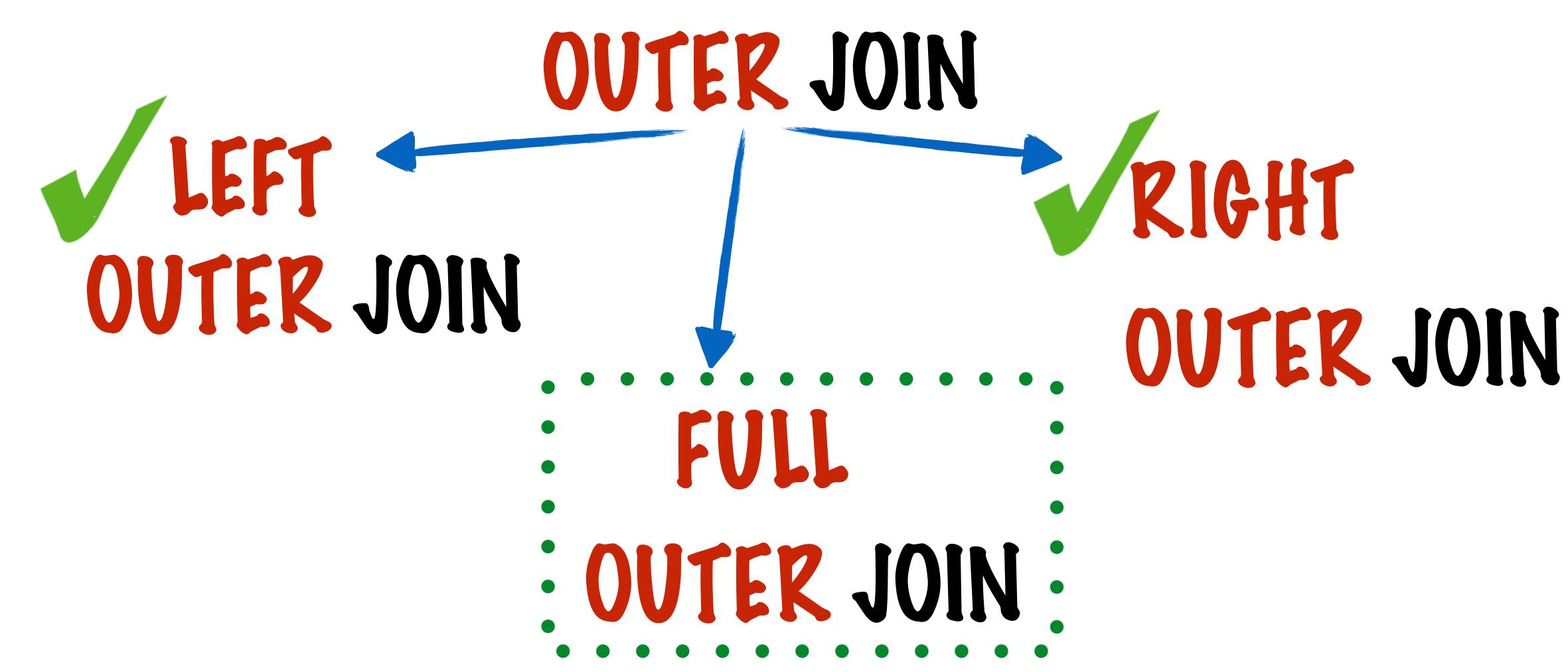
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	On Dod Ha Oned	0

NOTICE THAT THE REVIEW CORRESPONDING TO GUNDA' IS PADDED WITH NULLS IN THE COLUMNS 4 5

	Mov						ngStars
	1	AAIIIAI	IVVIAIP	1 VAIA1	Itte MUVIE	177Vbb	5
	1	The Godianiei	1912	USA	I	Оеше-	5
	1	The Godfather	1972	USA	1	Classic	5
	1	The Godfather	1972	USA	1	Overrated	1
	1	The Godfather	1972	USA	1	OK, Not Great	3
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	3	Infernal Affairs	2002	Hong Kong	3	Nailbiting!	5
A Secretaria de la Compaña	<u> </u>	The Godfather	1972	USA	tion si fi sur a marine di mandi mandi T	Cinematic	5
	NULL	NULL	NULL	NULL	5	So Bad Its	0
		The Departed	2006	USA		Not As Good	and the second s
	2	The Departed	2006	USA	2	Overrated	2
	2	The Departed	2006	USA	2	Too Morbid	3
	4	Parinda	1989	India	4	Sad, Thought-	4
	4	Parinda	1989	India	4	Cinema At Its	5



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SELECT

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		2

NOTICE THERE IS INPEED A ROW IN 2 THE OHTOHE FOR HELE A ROW IN 3 4 5 THE OHTOHE FOR HELE A ROW IN 5 IngStars

MC						tingStars
	E UVIJY					5
						5
		. 			<u> </u>	5
1	The Godfather	1972	USA	1	Overrated	1
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1	The Godfather	1972	USA	1	Two Thumbs Up	5
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MOVIES M
FULL OUTER JOIN
REVIEWS R

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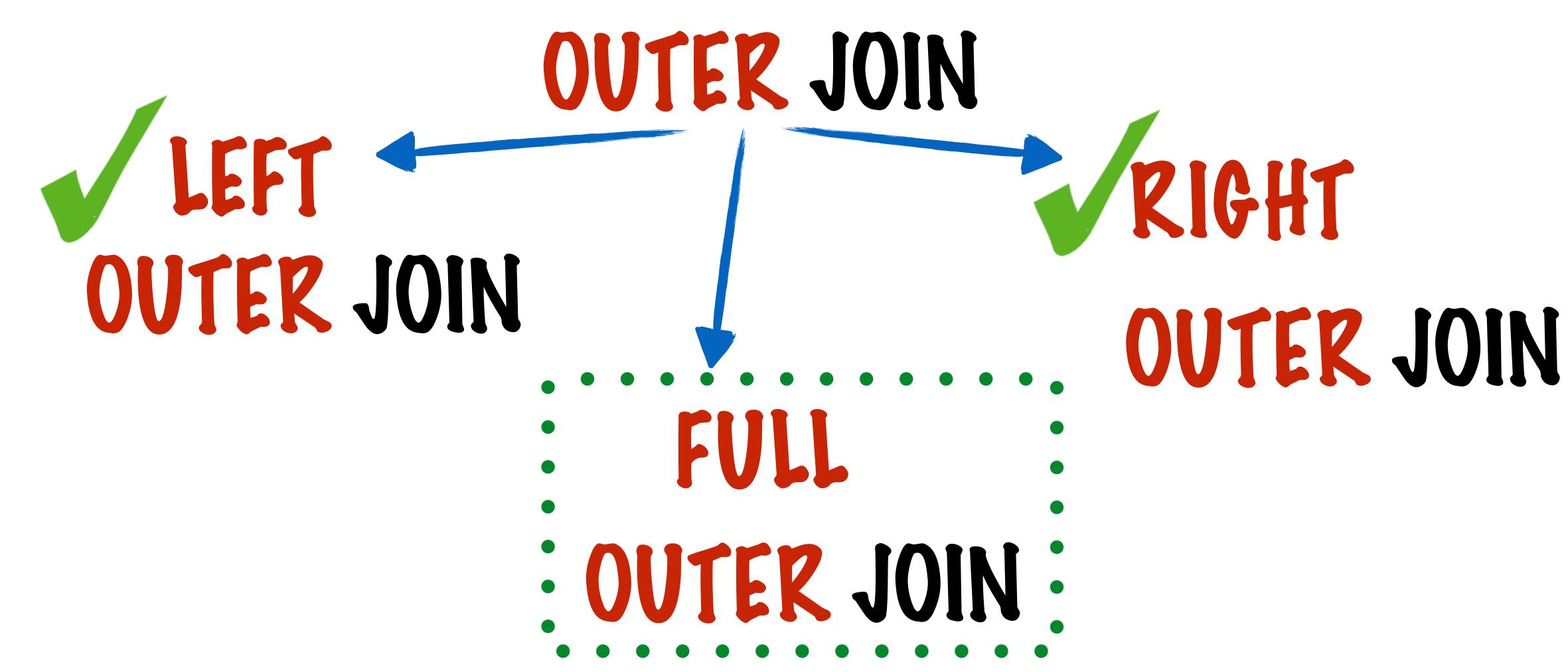
M.MOVIEID =

R.MOVIEID;

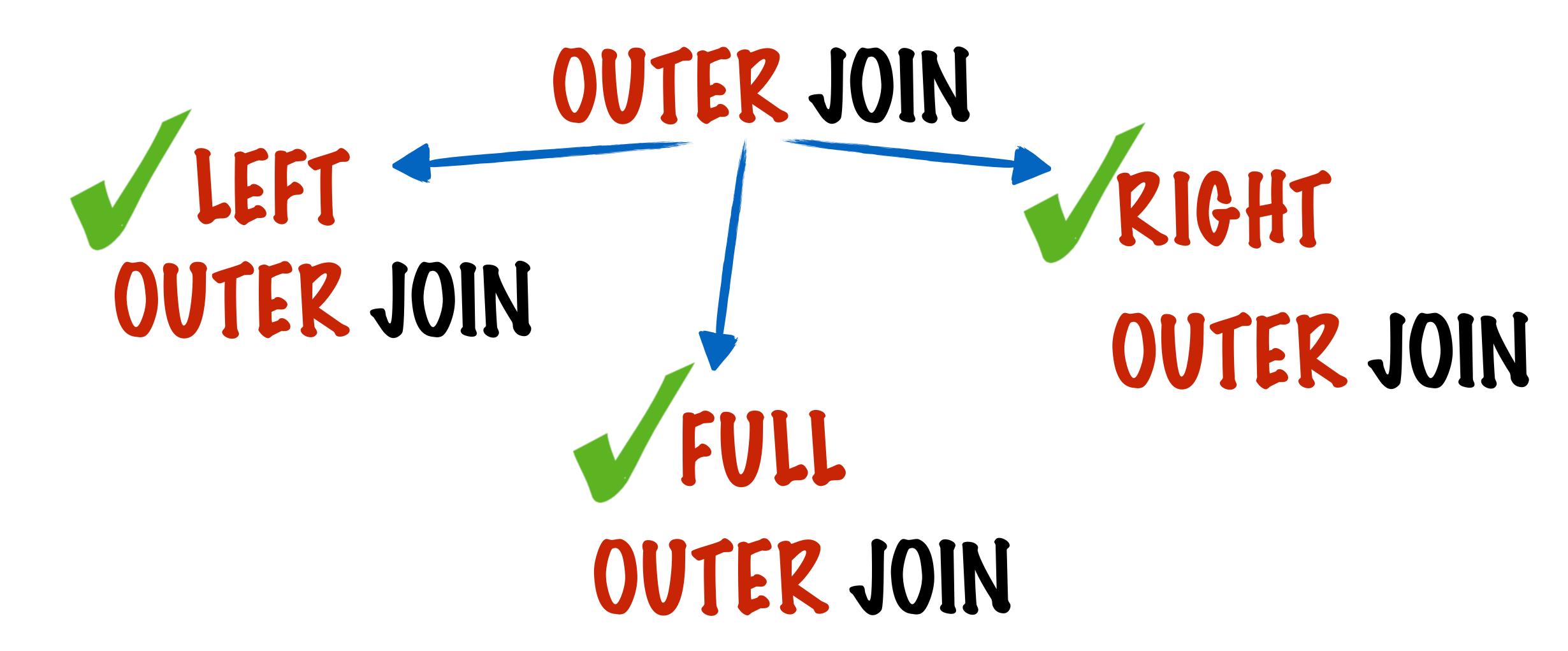
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3	Crossover Hit	5
3	Love It	4
3	Nailbiting!	5
1	Cinematic Masterpiece	5
5	So Bad Its Good	0
_		3

NOW THERE IS AN ENTRY FOR THE GUNDA' ENTRY LITTLE CAESER' INCISERS

	VP 4 1P 4 A	RU II	I LLL MU		VALVEN	5
						5
	THE CHARACTE	1114			Classic	5
1	The Godfather	1972	USA	1	Overrated	1
1	The Godfather	1972	USA	1	OK. Not Great	3
1	The Godfather	1972	USA	1	Two Thumbs	5
3	Infernal Affairs	2002	Hong Kong	3	Crossover Hit	5
3	Infernal Affairs	2002	Hong Kong	3	Love It	4
3	Infernal Affairs	2002	Hong Kong	3	Nailbiting!	5
1	The Codfether	1072	LICA	The state of the s	<u> Cinomation</u>	
NULL	NULL	NULL	NULL	5	So Bad Its	0
English and the second of the	The Departed	2006	TJG A	200000000000000000000000000000000000000	Vol. As Crowle	
2	The Denarted	2006	USA	2	Overrated	2
2	The Denarted	2006	USA	2	Too Morbid	3
4	Parinda	1989	India	4	Sad. Thought-	4
4	Parinda	1989	India	and the second s	Cinema At Its	n ki
6	Little Caesar	1931	USA	NULL	NULL	NULL



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OUTERJOIN

VLEFT OUTER JOIN

/RIGHT
OUTER JOIN

FULL
OUTER JOIN

CROSS
JOIN
"CARTESIAN JOIN"

JOIN

OUTER

NATURAL NATURAL JOIN

LEFT RIGHT

FULL

NATURAL OIN

CROSS

JOIN
"CARTESIAN JOIN"

INTER JOIN JOIN RIGHT FULL

NATURAL JOIN

IS SIMPLY AN INNER OR OUTER JOIN WHERE 2 APPITIONAL CONDITIONS ARE SATISFIED

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• THE TWO JOINED TABLES HAVE A COLUMN WITH THE SAME NAME

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- THE JOIN CONDITION IS AN EQUALITY CHECK ON THOSE 2 COLUMNS

A NATURAL JOIN IS SYNTACTIC SUGAR - I.E. A SHORTHAND

LEFT OUTER JOIN

SELECT

M.MOVIEID,

R.REVIEW

FROM

MOVIES M

LEFT OUTER JOIN

REVIEWS R

ON

M.MOVIEID = R.MOVIEID;

RE-EXPRESS AS A NATURAL JOIN

LEFT OUTER JOIN

SELECT

M.MOVIEID,

R.REVIEW

FROM

MOVIES M

NATURAL LEFT OUTER JOIN

REVIEWS R;

SELECT

M.MOVIEID,

R. REVIEW

FROM

MOVIES M

RIGHT OUTER JOIN

REVIEWS R

ON

M.MOVIEID = R.MOVIEID;

RE-EXPRESS AS A NATURAL JOIN

SELECT

M.MOVIEID,

R.REVIEW

FROM

MOVIES M

NATURAL RIGHT OUTER JOIN

REVIEWS R;

NATURAL JOIN

A NATURAL JOIN IS SYNTACTIC SUGAR - I.E. A SHORTHAND

IT SAVES US THE EFFORT OF SPECIFYING THE MATCH CONDITION

NATURAL OIN

CROSS

JOIN
"CARTESIAN JOIN"

INTER JOIN JOIN RIGHT FULL

NATURAL VOIN

CROSS
JOIN
"CARTESIAN JOIN"

JOIN JOIN JOIN RIGHT FULL

NATURAL VOIN

CROSS

JOIN

"CARTESIAN JOIN"

JOIN TO STATE OF THE PROPERTY OF THE PROPERTY

JOIN RIGHT FULL

SELF-JOIN?

SELF-JOIN?

ANY JOIN WHERE THE SAME TABLE IS ON THE LEFT AND THE RIGHT OF THE JOIN OPERATOR IS A SELF-JOIN.

NATURAL VOIN

CROSS

JOIN

"CARTESIAN JOIN"

JOIN TO STATE OF THE PROPERTY OF THE PROPERTY

JOIN RIGHT FULL

SELF-JOIN?

NATURAL VOIN

CROSS

JOIN
"CARTESIAN JOIN"

JOIN JOIN JOIN RIGHT FULL

JOINS V