



Web Technology (KCS-602)

Unit 4

Merging Data from Multiple Tables: Joining, Manipulating

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SQL JOIN

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

Different Types of SQL JOINS

Here are the different types of the JOINS in SQL:

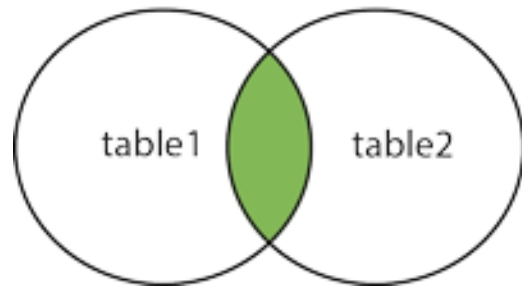
(INNER) JOIN: Returns records that have matching values in both tables

LEFT (OUTER) JOIN: Returns all records from the left table, and the matched records from the right table

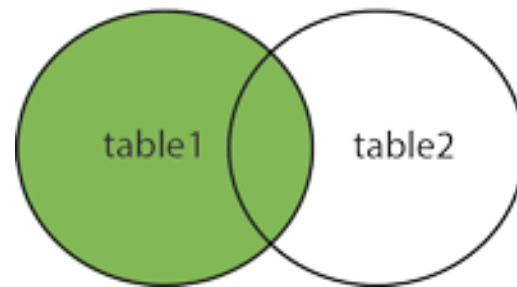
RIGHT (OUTER) JOIN: Returns all records from the right table, and the matched records from the left table

FULL (OUTER) JOIN: Returns all records when there is a match in either left or right table

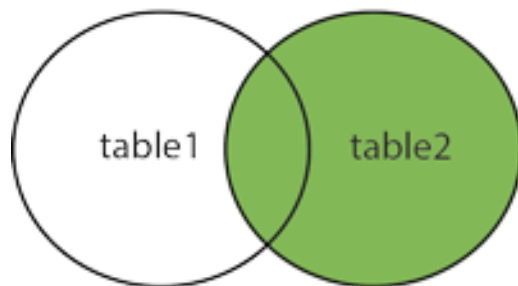
INNER JOIN



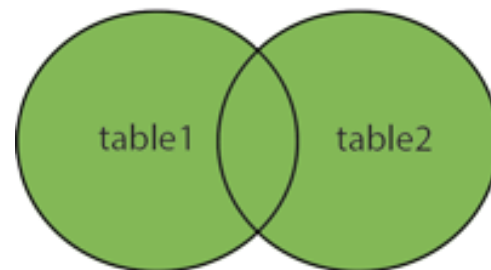
LEFT JOIN



RIGHT JOIN



FULL OUTER JOIN



Create Database and Tables

- `mysql> create database united;`
- Query OK, 1 row affected (0.13 sec)
- `mysql> use united;`
- Database changed

- `mysql> create table student (sname varchar(40),id int,mob varchar(10));`
- Query OK, 0 rows affected (0.19 sec)
- `mysql> create table student_info (fname varchar(40),id int,address varchar(80));`
- Query OK, 0 rows affected (0.16 sec)

Inserting Values in Tables

- `mysql> insert into student_info values('fname2',2,"Lucknow");`
- Query OK, 1 row affected (0.04 sec)
- `mysql> insert into student_info values('fname3',3,"Varanasi");`
- Query OK, 1 row affected (0.06 sec)
- `mysql> insert into student_info values('fname1',1,"Prayagraj");`
- Query OK, 1 row affected (0.27 sec)

- `mysql> insert into student values('stud1',1,"7765628932");`
- Query OK, 1 row affected (0.05 sec)
- `mysql> insert into student values('stud2',2,"5865628932");`
- Query OK, 1 row affected (0.05 sec)
- `mysql> insert into student values('stud3',3,"5865628932");`
- Query OK, 1 row affected (0.05 sec)
- `mysql> insert into student values('stud4',4,"65628932");`
- Query OK, 1 row affected (0.06 sec)
- `mysql> insert into student values('stud5',5,"2365628932");`
- Query OK, 1 row affected (0.05 sec)

Display Data from Table

- `mysql> select * from student;`

- `+-----+-----+-----+`

- `| sname | id | mob |`

- `+-----+-----+-----+`

- `| stud1 | 1 | 7765628932 |`

- `| stud2 | 2 | 5865628932 |`

- `| stud3 | 3 | 5865628932 |`

- `| stud4 | 4 | 65628932 |`

- `| stud5 | 5 | 2365628932 |`

- `+-----+-----+-----+`

- `mysql> select * from student_info;`

- `+-----+-----+-----+`

- `| fname | id | address |`

- `+-----+-----+-----+`

- `| fname2 | 2 | Lucknow |`

- `| fname3 | 3 | Varanasi |`

- `| fname1 | 1 | Prayagraj |`

- `| fname5 | 9 | 8744628932 |`

- `+-----+-----+-----+`

join

- `mysql> select
student.sname,student_info.fname,student_info.a
ddress from student inner join student_info on
student.id=student_info.id;`

- `+-----+-----+-----+`
- `| sname | fname | address |`
- `+-----+-----+-----+`
- `| stud1 | fname1 | Prayagraj |`
- `| stud2 | fname2 | Lucknow |`
- `| stud3 | fname3 | Varanasi |`
- `+-----+-----+-----+`

- `mysql> select
student.sname,student_info.fname,student_info.address from
student left join student_info on student.id=student_info.id;`
- `+-----+-----+-----+`
- `| sname | fname | address |`
- `+-----+-----+-----+`
- `| stud1 | fname1 | Prayagraj |`
- `| stud2 | fname2 | Lucknow |`
- `| stud3 | fname3 | Varanasi |`
- `| stud4 | NULL | NULL |`
- `| stud5 | NULL | NULL |`
- `+-----+-----+-----+`
- 5 rows in set (0.03 sec)

- mysql> select
student.sname,student_info.fname,student_info.address from student right join student_info
on student.id=student_info.id;

- +-----+-----+-----+
- | sname | fname | address |
- +-----+-----+-----+
- | stud2 | fname2 | Lucknow |
- | stud3 | fname3 | Varanasi |
- | stud1 | fname1 | Prayagraj |
- | NULL | fname5 | 8744628932 |
- +-----+-----+-----+

- mysql> select * from student full join student_info;

- +-----+-----+-----+-----+-----+-----+

- | sname | id | mob | fname | id | address |

- +-----+-----+-----+-----+-----+-----+

- | stud1 | 1 | 7765628932 | fname2 | 2 | Lucknow |

- | stud1 | 1 | 7765628932 | fname3 | 3 | Varanasi |

- | stud1 | 1 | 7765628932 | fname1 | 1 | Prayagraj |

- | stud1 | 1 | 7765628932 | fname5 | 9 | 8744628932 |

- | stud2 | 2 | 5865628932 | fname2 | 2 | Lucknow |

- | stud2 | 2 | 5865628932 | fname3 | 3 | Varanasi |

- | stud2 | 2 | 5865628932 | fname1 | 1 | Prayagraj |

- | stud2 | 2 | 5865628932 | fname5 | 9 | 8744628932 |

- | stud3 | 3 | 5865628932 | fname2 | 2 | Lucknow |

- | stud3 | 3 | 5865628932 | fname3 | 3 | Varanasi |

- | stud3 | 3 | 5865628932 | fname1 | 1 | Prayagraj |

- | stud3 | 3 | 5865628932 | fname5 | 9 | 8744628932 |

- | stud4 | 4 | 65628932 | fname2 | 2 | Lucknow |
- | stud4 | 4 | 65628932 | fname3 | 3 | Varanasi |
- | stud4 | 4 | 65628932 | fname1 | 1 | Prayagraj |
- | stud4 | 4 | 65628932 | fname5 | 9 | 8744628932 |
- | stud5 | 5 | 2365628932 | fname2 | 2 | Lucknow |
- | stud5 | 5 | 2365628932 | fname3 | 3 | Varanasi |
- | stud5 | 5 | 2365628932 | fname1 | 1 | Prayagraj |
- | stud5 | 5 | 2365628932 | fname5 | 9 | 8744628932 |
- +-----+-----+-----+-----+-----+-----+