

# INNER JOIN

## 1. Create table STUDENT with attributes ,SID,SNAME,course ,sem

The screenshot shows the PaizaCloud MySQL Online interface. The code editor contains the following SQL commands:

```
1 create table student(sid int primary key,sname varchar(50),course varchar(50),sem int);
2 insert into student(sid,sname,course,sem)values(1,"Sree","Electrical",4);
3 insert into student(sid,sname,course,sem)values(2,"Anee","MBA",3);
4 insert into student(sid,sname,course,sem)values(3,"Anila","Mca",2);
5 insert into student(sid,sname,course,sem)values(4,"Aami","Btec",4);
6 insert into student(sid,sname,course,sem)values(5,"Reepa","Mca",1);
7 insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);
8 select *from student;
```

The output window displays the following table:

sid	sname	course	sem
1	Sree	Electrical	4
2	Anee	MBA	3
3	Anila	Mca	2
4	Aami	Btec	4
5	Reepa	Mca	1
6	Anu	Btec	2

## 2. Crete another table book with attributes BID,BNAME,AUTHOR

The screenshot shows the PaizaCloud MySQL Online interface. The code editor contains the following SQL commands:

```
1 -- create table student(sid int primary key,sname varchar(50),course varchar(50),sem int);
2 -- insert into student(sid,sname,course,sem)values(1,"Sree","Electrical",4);
3 -- insert into student(sid,sname,course,sem)values(2,"Anee","MBA",3);
4 -- insert into student(sid,sname,course,sem)values(3,"Anila","Mca",2);
5 -- insert into student(sid,sname,course,sem)values(4,"Aami","Btec",4);
6 -- insert into student(sid,sname,course,sem)values(5,"Reepa","Mca",1);
7 -- insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);
8
9
10
11 create table Book(bid int primary key,bname varchar(50),Author varchar(50));
12 insert into Book(bid,bname,Author)values(100,"Maths","Peter");
13 insert into Book(bid,bname,Author)values(101,"Bussiness","john");
14 insert into Book(bid,bname,Author)values(102,"Data structure","James");
15 insert into Book(bid,bname,Author)values(103,"C","George T S");
16 insert into Book(bid,bname,Author)values(104,"cpp","Dennis");
17 insert into Book(bid,bname,Author)values(105,"Java","Devid peter");
18 select * from Book ;
19
20
21 -- create table Issue(bid int references Book(bid),sid int references student(sid), issue_date date);
22 -- insert into Issue(bid,sid,issue_date)values(100,"1","20-2-11");
23 -- insert into Issue(bid,sid,issue_date)values(102,"3","19-4-17");
24 -- insert into Issue(bid,sid,issue_date)values(103,"2","18-5-19");
25 -- insert into Issue(bid,sid,issue_date)values(105,"5","17-7-12");
26 -- insert into Issue(bid,sid,issue_date)values(104,"4","14-10-10");
27 -- insert into Issue(bid,sid,issue_date)values(107,"6","15-2-11");
28 -- insert into Issue(bid,sid,issue_date)values(108,"7","16-3-19");
29
```

The output window displays the following table:

bid	bname	Author
100	Maths	Peter
101	Bussiness	john
102	Data structure	James
103	C	George T S
104	cpp	Dennis
105	Java	Devid peter

## 3. Create table Issue BID,SID,ISSUEDATE

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MySQL Enter a title here

Main.sql

```

1 create table student(sid int primary key,sname varchar(40),course varchar(40),sem int);
2 insert into student(sid,sname,course,sem)values(1,"Sree","Electrical",3);
3 insert into student(sid,sname,course,sem)values(2,"Aneel","MBA",3);
4 insert into student(sid,sname,course,sem)values(3,"Anila","MCA",3);
5 insert into student(sid,sname,course,sem)values(4,"Amit","Btec",3);
6 insert into student(sid,sname,course,sem)values(5,"Arya","MCA",1);
7 insert into student(sid,sname,course,sem)values(6,"Anu","Btec",2);
8
9
10
11 create table Book(bid int primary key,bname varchar(50),Author varchar(50));
12 insert into Book(bid,bname,Author)values(100,"Maths","John");
13 insert into Book(bid,bname,Author)values(101,"Business","Peter");
14 insert into Book(bid,bname,Author)values(102,"Data structure","James");
15 insert into Book(bid,bname,Author)values(103,"C","George T S");
16 insert into Book(bid,bname,Author)values(104,"cpp","Dennis");
17 insert into Book(bid,bname,Author)values(105,"Java","David peter");
18
19
20
21 create table Issue(bid int references Book(bid),sid int references student(sid), issue_date date);
22 insert into Issue(bid,sid,issue_date)values(100,1,"20-2-11");
23 insert into Issue(bid,sid,issue_date)values(102,3,"19-4-17");
24 insert into Issue(bid,sid,issue_date)values(103,2,"18-5-19");
25 insert into Issue(bid,sid,issue_date)values(105,5,"17-7-12");
26 insert into Issue(bid,sid,issue_date)values(104,4,"14-10-10");
27 insert into Issue(bid,sid,issue_date)values(107,6,"15-2-11");
28 insert into Issue(bid,sid,issue_date)values(108,7,"10-3-19");
29 select * from Issue;

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

bid	sid	issue_date
100	1	2020-02-11
102	3	2019-04-17
103	2	2018-05-19
105	5	2017-07-12
104	4	2014-10-10
107	6	2015-02-11

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#### 4. Display the name of the book issued on 31-oct-15

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MySQL Enter a title here

Main.sql

```

9
10
11 create table Book(bid int primary key,bname varchar(50),Author varchar(50));
12 insert into Book(bid,bname,Author)values(100,"Maths","Peter");
13 insert into Book(bid,bname,Author)values(101,"Business","John");
14 insert into Book(bid,bname,Author)values(102,"Data structure","James");
15 insert into Book(bid,bname,Author)values(103,"C","George T S");
16 insert into Book(bid,bname,Author)values(104,"cpp","Dennis");
17 insert into Book(bid,bname,Author)values(105,"Java","David peter");
18 -- select * from Book;
19
20
21
22 create table Issue(bid int references Book(bid),sid int references student(sid), issue_date date);
23 insert into Issue(bid,sid,issue_date)values(100,1,"20-2-11");
24 insert into Issue(bid,sid,issue_date)values(102,3,"19-4-17");
25 insert into Issue(bid,sid,issue_date)values(103,2,"18-5-19");
26 insert into Issue(bid,sid,issue_date)values(105,5,"17-7-12");
27 insert into Issue(bid,sid,issue_date)values(107,6,"15-2-11");
28 insert into Issue(bid,sid,issue_date)values(108,7,"16-3-19");
29
30
31
32 select Book.bname, issue_date
33 from Book
34 inner join Issue
35 on Book.bid=Issue.bid where Issue.issue_date="15-10-31";
36
37 -- select student * from student

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

bname	issue_date
cpp	2015-10-31

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#### 5. Find the details of student who took the book ' java '

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MySQL Main.sql

```

23 insert into Issue(bid,sid,issue_date)values(103,3,"19-4-17");
24 insert into Issue(bid,sid,issue_date)values(103,2,"18-5-19");
25 insert into Issue(bid,sid,issue_date)values(105,5,"17-7-12");
26 insert into Issue(bid,sid,issue_date)values(104,4,"15-10-31");
27 insert into Issue(bid,sid,issue_date)values(107,6,"15-2-11");
28 insert into Issue(bid,sid,issue_date)values(108,7,"16-3-19");
29
30
31
32 -- select Book.bname, issue_date
33 -- from Book
34 -- inner join Issue
35 -- on Book.bid=Issue.bid where Issue.issue_date="15-10-31";
36
37 select student.* from student
38 inner join Issue
39 on student.sid=Issue.sid where Issue.bid=(select Book.bid from Book
40 inner join Issue
41 on Book.bid=Issue.bid where Book.bname="java" group by Book.bid);
42
43 -- select student.sname as Fourth_sem_students from student
44 -- inner join Issue
45 -- on student.sid=Issue.sid where student.sem=4 group by student.sname;
46
47
48
49
50
51 -- select Book.bname as BOOK_NAME from Book

```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

sid	sname	course	sem
5	Reepa	Mca	1

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## 6. Find out the name of 4<sup>th</sup> sem student who took atleast one book

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MySQL Main.sql

```

17 insert into Book(bid,bname,Author)values(105,"java",David peter.);
18
19
20
21 create table Issue(bid int references Book(bid),sid int references student(sid), issue_date date);
22 insert into Issue(bid,sid,issue_date)values(106,1,"20-2-11");
23 insert into Issue(bid,sid,issue_date)values(102,3,"19-4-17");
24 insert into Issue(bid,sid,issue_date)values(103,2,"18-5-19");
25 insert into Issue(bid,sid,issue_date)values(105,5,"17-7-12");
26 insert into Issue(bid,sid,issue_date)values(104,4,"15-10-31");
27 insert into Issue(bid,sid,issue_date)values(107,6,"15-2-11");
28 insert into Issue(bid,sid,issue_date)values(108,7,"16-3-19");
29
30
31
32 -- select Book.bname, issue_date
33 -- from Book
34 -- inner join Issue
35 -- on Book.bid=Issue.bid where Issue.issue_date="20-2-11";
36
37 -- select student.* from student
38 -- inner join Issue
39 -- on student.sid=Issue.sid where Issue.bid=(select Book.bid from Book
40 -- inner join Issue
41 -- on Book.bid=Issue.bid where Book.bname="cpp" group by Book.bid);
42
43 select student.sname as Fourth_sem_students from student
44 inner join Issue
45 on student.sid=Issue.sid where student.sem=4 group by student.sname;

```

Run (Ctrl-Enter) MySQL books

Output Input Comments 0

Fourth_sem_students
Sree
Aami

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## 7. Display the name of book issued id 'Reepa'

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MySQL

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Main.sql

```

31
32 -- select Book.bname, issue_date
33 -- from Book
34 -- inner join Issue
35 -- on Book.bid=Issue.bid where Issue.issue_date='15-10-31';
36
37 -- select student.* from student
38 -- inner join Issue
39 -- on student.sid=Issue.sid where Issue.bid=(select Book.bid from Book
40 -- inner join Issue
41 -- on Book.bid=Issue.bid where Book.bname='java' group by Book.bid);
42
43 -- select student.sname as Fourth_sem_students from student
44 -- inner join Issue
45 -- on student.sid=Issue.sid where student.sem=4 group by student.sname;
46
47
48
49
50
51 select Book.bname as BOOK_NAME from Book
52 inner join Issue
53 on Book.bid=Issue.bid where Issue.sid=(select student.sid from student
54 inner join Issue
55 on student.sid=Issue.sid where student.sname='Reepa');
56
57
58
59 -- select student.sname from student

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

BOOK\_NAME  
Java

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## 8. Display the name of student who took the book written by 'Peter'

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MySQL

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Main.sql

```

38 -- inner join Issue
39 -- on student.sid=Issue.sid where Issue.bid=(select Book.bid from Book
40 -- inner join Issue
41 -- on Book.bid=Issue.bid where Book.bname='java' group by Book.bid);
42
43 -- select student.sname as Fourth_sem_students from student
44 -- inner join Issue
45 -- on student.sid=Issue.sid where student.sem=4 group by student.sname;
46
47
48
49
50
51 -- select Book.bname as BOOK_NAME from Book
52 -- inner join Issue
53 -- on Book.bid=Issue.bid where Issue.sid=(select student.sid from student
54 -- inner join Issue
55 -- on student.sid=Issue.sid where student.sname='Reepa');
56
57
58
59 select student.sname from student
60 inner join Issue
61 on student.sid=Issue.sid where Issue.bid=(select Book.bid from Book
62 inner join Issue
63 on Book.bid=Issue.bid where Book.Author='peter' group by Book.bid)
64
65
66

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

sname  
Sree

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<https://paiza.io/#>

# OUTER JOIN

1.create a table instructor(ID,NAME,dept\_name,salary)and other table teachers(ID,course\_ID)and perform the following outer join functions

The screenshot shows the Paiza Online MySQL environment. The SQL editor contains the following code:

```
1 create table Instructor(id int primary key, Name varchar(20),Dept_name varchar(20),salary int);
2 insert into Instructor(id,Name,Dept_name,salary)values(101,"Anu","IT",25000);
3 insert into Instructor(id,Name,Dept_name,salary)values(102,"Manu","Computer",45000);
4 insert into Instructor(id,Name,Dept_name,salary)values(103,"Anju","Management",40000);
5 insert into Instructor(id,Name,Dept_name,salary)values(104,"sree","Computer",45000);
6 insert into Instructor(id,Name,Dept_name,salary)values(105,"Aami","commerce",50000);
7 select * from Instructor;
```

The output window displays the result of the SELECT query:

id	Name	Dept_name	salary
101	Anu	IT	25000
102	Manu	Computer	45000
103	Anju	Management	40000
104	sree	Computer	45000
105	Aami	commerce	50000

The screenshot shows the Paiza Online MySQL environment. The SQL editor contains the following code:

```
1 create table Teacher(Tid int,course_id int references Instructor(id));
2 insert into Teacher(Tid,course_id)values(10,101);
3 insert into Teacher(Tid,course_id)values(11,101);
4 insert into Teacher(Tid,course_id)values(11,103);
5 insert into Teacher(Tid,course_id)values(12,102);
6 insert into Teacher(Tid,course_id)values(13,103);
7 select * from Teacher;
```

The output window displays the result of the SELECT query:

Tid	course_id
10	101
11	101
11	103
12	102
13	103

A.Left outer join

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MySQL

Enter a title here

Main.sql

```

1 create table Instructor(id int primary key, Name varchar(20),Dept_name varchar(20),salary int);
2 insert into Instructor(id,Name,Dept_name,salary)values(101,"Anu","IT",25000);
3 insert into Instructor(id,Name,Dept_name,salary)values(102,"Manu","Computer",45000);
4 insert into Instructor(id,Name,Dept_name,salary)values(103,"Anju","Management",40000);
5 insert into Instructor(id,Name,Dept_name,salary)values(104,"sree","Computer",45000);
6 insert into Instructor(id,Name,Dept_name,salary)values(105,"Aam","commerce",50000);
7
8
9
10
11
12
13 create table Teacher(Tid int,course_id int references Instructor(id));
14 insert into Teacher(Tid,course_id)values(11,101);
15 insert into Teacher(Tid,course_id)values(12,101);
16 insert into Teacher(Tid,course_id)values(13,103);
17 insert into Teacher(Tid,course_id)values(12,102);
18 insert into Teacher(Tid,course_id)values(13,103);
19
20 SELECT id,Tid,Name,Dept_name
21 FROM Instructor
22 LEFT OUTER JOIN Teacher
23 ON Instructor.id=Teacher.course_id;

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

id	Tid	Name	Dept_name
101	11	Anu	IT
101	10	Anu	IT
102	12	Manu	Computer
103	13	Anju	Management
103	11	Anju	Management
104	NULL	sree	Computer

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## B.Right outer join

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MySQL

Enter a title here

Main.sql

```

1 create table Instructor(id int primary key, Name varchar(20),Dept_name varchar(20),salary int);
2 insert into Instructor(id,Name,Dept_name,salary)values(101,"Anu","IT",25000);
3 insert into Instructor(id,Name,Dept_name,salary)values(102,"Manu","Computer",45000);
4 insert into Instructor(id,Name,Dept_name,salary)values(103,"Anju","Management",40000);
5 insert into Instructor(id,Name,Dept_name,salary)values(104,"sree","Computer",45000);
6 insert into Instructor(id,Name,Dept_name,salary)values(105,"Aam","commerce",50000);
7
8
9
10
11
12
13 create table Teacher(Tid int,course_id int references Instructor(id));
14 insert into Teacher(Tid,course_id)values(10,101);
15 insert into Teacher(Tid,course_id)values(11,101);
16 insert into Teacher(Tid,course_id)values(11,103);
17 insert into Teacher(Tid,course_id)values(12,102);
18 insert into Teacher(Tid,course_id)values(13,103);
19
20 -- SELECT id,Tid,Name,Dept_name
21 -- FROM Instructor
22 -- LEFT OUTER JOIN Teacher
23 -- ON Instructor.id=Teacher.course_id;
24
25 SELECT id,Tid,Name,salary
26 FROM Instructor
27 RIGHT OUTER JOIN Teacher
28 ON Instructor.id=Teacher.course_id;
29

```

Run (Ctrl-Enter) MySQL books

Output Input Comments

id	Tid	Name	salary
101	10	Anu	25000
101	11	Anu	25000
103	11	Anju	40000
102	12	Manu	45000
103	13	Anju	40000

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## c.Full outer join

Beta

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EnglishSign UpSign In

MySQL

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Main.sql

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```
8
9
10
11
12
13 create table Teacher(Tid int,course_id int references Instructor(id));
14 insert into Teacher(Tid,course_id)values(10,101);
15 insert into Teacher(Tid,course_id)values(11,101);
16 insert into Teacher(Tid,course_id)values(11,103);
17 insert into Teacher(Tid,course_id)values(12,102);
18 insert into Teacher(Tid,course_id)values(13,103);
19
20 -- SELECT id,Tid,Name,Dept_name
21 -- FROM Instructor
22 -- LEFT OUTER JOIN Teacher
23 -- ON Instructor.id=Teacher.course_id;
24
25
26 -- SELECT id,Tid,Name,salary
27 -- FROM Instructor
28 -- RIGHT OUTER JOIN Teacher
29 -- ON Instructor.id=Teacher.course_id;
30
31
32
33 SELECT *
34 FROM Instructor
35 JOIN Teacher
36 ON Instructor.id=Teacher.course_id;
```

Run (Ctrl-Enter)

MySQL books

Output

Input

Comments 0

id	Name	Dept_name	salary	Tid	course_id
101	Anu	IT	25000	10	101
101	Anu	IT	25000	11	101
103	Anju	Management	40000	11	103
102	Manu	Computer	45000	12	102
103	Anju	Management	40000	13	103

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