

- **First task: Combine two tables in one (Vertically)**

We have two tables, student table and books table. We want to combine them in one table called joined_table, so after we create joined table we do this Query:

```
INSERT INTO joined_table
```

```
SELECT id, name FROM books
```

```
UNION
```

```
SELECT id, name FROM student
```

make sure that the new table has exactly the same column numbers as the combined two

books table:

	id	name
<input type="checkbox"/>	100100100	SQL For Dummies
<input type="checkbox"/>	100100200	PHP For Dummies

student table:

	id	name
<input type="checkbox"/>	200100100	Ahmad Muhssen
<input type="checkbox"/>	200100200	Khalid Fahad

joined table:

```
SELECT * FROM `joined_table`
```

	id	name
<input type="checkbox"/>	100100100	SQL For Dummies
<input type="checkbox"/>	100100200	PHP For Dummies
<input type="checkbox"/>	200100100	Ahmad Muhssen
<input type="checkbox"/>	200100200	Khalid Fahad

There is also UNION ALL that make it with duplicates but since we don't have any here I didn't use it.

- **Second task: Many to Many realshionship**

Let say we have students table that have **[ID (PK), name]** and course table that have **[ID (PK), name]** now I want to combine them in one table that called studend_course that have **[student_ID (FK), Student_name, Course_ID (FK), Course_name]**

Each student can have multi course and each course can have multiable student therefore the realashionship is many to many.

Course table:

```
SELECT * FROM `course`
```

	id	name
<input type="checkbox"/>	201	Calc
<input type="checkbox"/>	222	Cyber
<input type="checkbox"/>	303	Database
<input type="checkbox"/>	321	English 1
<input type="checkbox"/>	369	English 2
<input type="checkbox"/>	777	Grad project
<input type="checkbox"/>	101	Math
<input type="checkbox"/>	202	Programming 1
<input type="checkbox"/>	333	Programming 2
<input type="checkbox"/>	123	Social Skills

Students table:

Showing rows 0 - 4 (5 total. Query took 0.0003 seconds)

```
SELECT * FROM `students`
```

☐ Profiling [Edit inline](#) [Edit](#) [Explain SQL](#) [Create PHP code](#) [Refresh](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	id	name
<input type="checkbox"/>	1	Faisal Bandar
<input type="checkbox"/>	2	Khalid Fahad
<input type="checkbox"/>	3	Saad Khalid
<input type="checkbox"/>	4	Majed Khalid
<input type="checkbox"/>	5	Nawaf Khalid

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

Now we create the relashion table (many to many)

```
CREATE TABLE student_course (  
    student_id INT,  
    course_id INT,  
    FOREIGN KEY (student_id) REFERENCES students(id),  
    FOREIGN KEY (course_id) REFERENCES course(id)  
);
```

After that we INSERT student id and what course they are studing

```
INSERT INTO student_course (student_id, course_id) VALUES  
(1, 222), (1,777), (1,369),  
(2, 101), (2, 369), (2, 123),  
(3, 222), (3, 101), (1, 123),  
(4, 333), (4, 303), (4,201),  
(5, 222), (5,777);
```

Now let say we want to view students name course name all in one

```
SELECT students.name, course.name FROM student_course
JOIN students ON student_course.student_id = students.id
JOIN course ON student_course.course_id = course.id;
```

name	name
Faisal Bandar	Cyber
Faisal Bandar	Grad project
Faisal Bandar	English 2
Faisal Bandar	Social Skillies
Khalid Fahad	Math
Khalid Fahad	English 2
Khalid Fahad	Social Skillies
Saad Khalid	Cyber
Saad Khalid	Math
Majed Khalid	Programming 2
Majed Khalid	Database
Majed Khalid	Calc
Nawaf Khalid	Cyber
Nawaf Khalid	Grad project

What if we want to view who are registter in a course ? we can also do that like this



















```
SELECT * FROM students JOIN student_course ON students.id =
student_course.student_id
WHERE student_course.course_id = 222
```

Extra options

id	name	student_id	course_id
1	Faisal Bandar	1	222
3	Saad Khalid	3	222
5	Nawaf Khalid	5	222

Task 3: Delete duplicate in a table.

Let say we have this table

				id	pName	quantity
<input type="checkbox"/>		Edit		Copy		Delete
	1	macbook	4			
<input type="checkbox"/>		Edit		Copy		Delete
	2	iphone16	15			
<input type="checkbox"/>		Edit		Copy		Delete
	3	ipad	8			
<input type="checkbox"/>		Edit		Copy		Delete
	4	macbook	1			
<input type="checkbox"/>		Edit		Copy		Delete
	5	iphone16	1			
<input type="checkbox"/>		Edit		Copy		Delete
	6	ipad	2			

There is a lot of duplicates so how can we delete them ?? by using this:

```
DELETE f1 FROM products f1, products f2
```













```
WHERE f1.pName = f2.pName
```

```
AND f1.id > f2.id
```

Note: we only deleted the one with the highest id since it was add last.

There is a lot of ways to delete duplicates like group by, but this is the simplest one.

Here is the result:

				id	pName	quantity
<input type="checkbox"/>		Edit		Copy		Delete
	1	macbook	4			
<input type="checkbox"/>		Edit		Copy		Delete
	2	iphone16	15			
<input type="checkbox"/>		Edit		Copy		Delete
	3	ipad	8			
<input type="checkbox"/>		Edit		Copy		Delete
	7	headphone	6			