SQL JOIN EXERCISE

1. Use the following demonstrated tables and create relationship between the given tables.

    a. Display Employee name, Project name order by firstname from "EmployeeDetail" and "ProjectDetail" for those employees which have assigned project already.

    b. Display employee name, project name order by firstname from "EmployeeDetail" and "ProjectDetail" for all employee even they have not assigned project.

EmployeeDetail table

	EmployeeID	First Name	Last Name	Salary	Joining Date	Department	Gender
1	1	Vikas	Ahlawat	600000.00	2013-02-15 11:16:28.290	IT	Male
2	2	nikita	Jain	530000.00	2014-01-09 17:31:07.793	HR	Female
3	3	Ashish	Kumar	1000000.00	2014-01-09 10:05:07.793	IT	Male
4	4	Nikhil	Sharma	480000.00	2014-01-09 09:00:07.793	HR	Male
5	5	anish	kadian	500000.00	2014-01-09 09:31:07.793	Payroll	Male

ProjectDetail table

	Project DetailID	Employee DetailID	Project Name
1	1	1	Task Track
2	2	1	CLP
3	3	1	Survey Managment
4	4	2	HR Managment
5	5	3	Task Track
6	6	3	GRS
7	7	3	DDS
8	8	4	HR Managment
9	9	6	GL Managment

c. Display employee name, project name order by firstname from "EmployeeDetail" and "ProjectDetail" for all employee if project is not assigned then display "-No Project Assigned".

	EmployeeID	FirstName	LastName	ProjectName
1	1	Vikas	Ahlawat	Task Track
2	1	Vikas	Ahlawat	CLP
3	1	Vikas	Ahlawat	Survey Management
4	2	nikita	Jain	HR Management
5	3	Ashish	Kumar	Task Track
6	3	Ashish	Kumar	GRS
7	3	Ashish	Kumar	DDS
8	4	Nikhil	Sharma	HR Management
9	5	asish	Kadian	-No Project Assigned

d. Display all project name even they have not matching any employeeid, in left table, order by firstname from "EmployeeDetail" and "ProjectDetail".

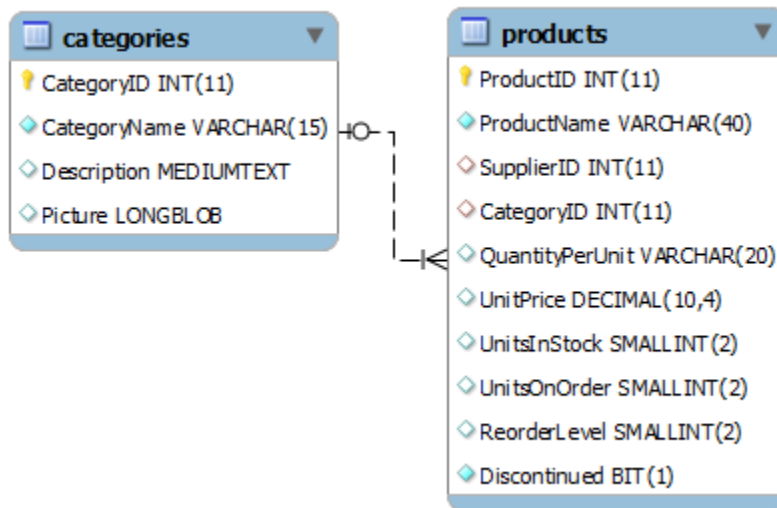|	FirstName	ProjectName
1	NULL	GL Managment
2	Ashish	Task Track
3	Ashish	GRS
4	Ashish	DDS
5	Nikhil	HR Managment
6	nikita	HR Managment
7	Vikas	Task Track
8	Vikas	CLP
9	Vikas	Survey Managment

e. Write down the query to fetch EmployeeName & Project who has assign more than one project

	EmployeeID	FirstName	ProjectName
1	1	Vikas	Task Track
2	1	Vikas	CLP
3	1	Vikas	Survey Managment
4	3	Ashish	Task Track
5	3	Ashish	GRS
6	3	Ashish	DDS

f. Write down the query to fetch ProjectName on which more than one employee are working along with EmployeeName.

	First Name	Project Name
1	Vikas	Task Track
2	nikita	HR Managment
3	Ashish	Task Track
4	Nikhil	HR Managment

2. Try Another Example with the following tables

categories
- CategoryID INT(11)
- CategoryName VARCHAR(15)
- Description MEDIUMTEXT
- Picture LONGBLOB

products
- ProductID INT(11)
- ProductName VARCHAR(40)
- SupplierID INT(11)
- CategoryID INT(11)
- QuantityPerUnit VARCHAR(20)
- UnitPrice DECIMAL(10,4)
- UnitsInStock SMALLINT(2)
- UnitsOnOrder SMALLINT(2)
- ReorderLevel SMALLINT(2)
- Discontinued BIT(1)

productID	productName	categoryName
1	Chai	Beverages
2	Chang	Beverages
3	Aniseed Syrup	Condiments
4	Chef Anton's Cajun Seasoning	Condiments
5	Chef Anton's Gumbo Mix	Condiments
6	Grandma's Boysenberry Spread	Condiments
7	Uncle Bob's Organic Dried Pears	Produce
8	Northwoods Cranberry Sauce	Condiments

productID	productName	categoryName	supplier
1	Chai	Beverages	Specialty Biscuits, Ltd.
2	Chang	Beverages	Exotic Liquids
3	Aniseed Syrup	Condiments	Exotic Liquids
4	Chef Anton's Cajun Seasoning	Condiments	New Orleans Cajun Delights
5	Chef Anton's Gumbo Mix	Condiments	New Orleans Cajun Delights
6	Grandma's Boysenberry Spread	Condiments	Grandma Kelly's Homestead
7	Uncle Bob's Organic Dried Pears	Produce	Grandma Kelly's Homestead
8	Northwoods Cranberry Sauce	Condiments	Grandma Kelly's Homestead
9	Mishi Kobe Niku	Meat/Poultry	Tokyo Traders
10	Ikura	Seafood	Tokyo Traders

Use the products and categories tables in the sample database. In the diagram above:

- One category can have many products.
- One product belongs to one and only one category.

Therefore, there is a many-to-one relationship between the rows in the categories table and rows in the products table. The link between the two tables is the categoryid column.

You need to query the following data from both tables:

productID, productName from the products table.

categoryName from the categories table.

productID	productName	categoryName
1	Chai	Beverages
2	Chang	Beverages
3	Aniseed Syrup	Condiments
4	Chef Anton's Cajun Seasoning	Condiments
5	Chef Anton's Gumbo Mix	Condiments
6	Grandma's Boysenberry Spread	Condiments
7	Uncle Bob's Organic Dried Pears	Produce
8	Northwoods Cranberry Sauce	Condiments

Specify the join condition like INNER JOIN clause as the expression to display product name and categories name.

SQL INNER JOIN – query data from three tables.

You can use the same techniques for joining three tables.

productID	productName	categoryName	supplier
1	Chai	Beverages	Specialty Biscuits, Ltd.
2	Chang	Beverages	Exotic Liquids
3	Aniseed Syrup	Condiments	Exotic Liquids
4	Chef Anton's Cajun Seasoning	Condiments	New Orleans Cajun Delights
5	Chef Anton's Gumbo Mix	Condiments	New Orleans Cajun Delights
6	Grandma's Boysenberry Spread	Condiments	Grandma Kelly's Homestead
7	Uncle Bob's Organic Dried Pears	Produce	Grandma Kelly's Homestead
8	Northwoods Cranberry Sauce	Condiments	Grandma Kelly's Homestead
9	Mishi Kobe Niku	Meat/Poultry	Tokyo Traders
10	Ikura	Seafood	Tokyo Traders

- Create another supplier table and create relations to the above table and join all the above tables.