

##	Task	Query	Result
1.1	Write a query to show all information about the user with ID = 7	SELECT * FROM Users WHERE ID = 7;	1_1.png
1.2	Alternative query if we want to get all information about the user with ID = 7, include user's orders from last to first and what he's bought	SELECT Users.*, Orders.OrderDate, Products.Name, Products.Description FROM Users INNER JOIN Orders ON Users.ID = Orders.UserID INNER JOIN Products ON Products.ID = Orders.ProductID WHERE Users.ID = 7 ORDER BY OrderDate DESC;	1_2.png
2.1	Write a query to show FirstName and LastName of all users from the city of Kyiv	SELECT FirstName, LastName FROM Users WHERE Address = 'Kyiv';	2_1.png
2.2	Alternative query, to be sure that users' city is correct	SELECT FirstName, LastName, Address FROM Users WHERE Address = 'Kyiv';	2_2.png
3	Calculate the number of users with Active status	SELECT COUNT(*) AS 'Number of Active' FROM Users WHERE Status = 'Active';	3.png
4	Write a query to show Name, Description and Price of products where Price is less than 200 and sort results by name in ascending order	SELECT Name, Description, Price FROM Products WHERE Price < 200 ORDER BY Name;	4.png
5.1	Write a query to show all orders where OrderDate in the range from '2020-04-20' (including) to '2020-05-30' (including) and sort by OrderDate in descending order	SELECT * FROM Orders WHERE OrderDate >= '2020-04-20' AND OrderDate < '2020-05-31' ORDER BY OrderDate DESC;	5_1.png
5.2	or	SELECT * FROM Orders WHERE OrderDate BETWEEN '2020-04-20' AND '2020-05-30T23:59:59Z' ORDER BY OrderDate DESC;	5_2.png
5.3	And one more version of solution as a more informative and easy-to-use table. For example, for report or to be shown to a client. It contains the names of customers and information about purchased products instead of their ID, I also changed the date format to a more familiar one and displayed the user's name in one column	SELECT Orders.ID AS 'Order ID', Users.FirstName + ' ' + Users.LastName AS 'Customer Name', CONVERT(varchar, Orders.OrderDate, 104) AS 'Order Date', Products.Name AS 'Product', Products.Description AS 'Product Description' FROM Orders INNER JOIN Users ON Users.ID = Orders.UserID INNER JOIN Products ON Products.ID = Orders.ProductID WHERE OrderDate BETWEEN '2020-04-20' AND '2020-05-30T23:59:59Z' ORDER BY OrderDate DESC;	5_3.png
6	Write a query to show all users from the city of Kyiv and with Active status	SELECT * FROM Users WHERE Address = 'Kyiv' AND Status = 'Active';	6.png
7.1	Write a query to show all users from Kyiv, Kharkiv or Poltava	SELECT * FROM Users WHERE Address IN ('Kyiv', 'Kharkiv', 'Poltava');	7_1.png
7.2	or	SELECT * FROM Users WHERE Address = 'Kyiv' OR Address = 'Kharkiv' OR Address = 'Poltava';	7_2.png
8	Write a query to show Address and number of users from each city	SELECT Address, COUNT(*) AS 'Number of Users' FROM Users GROUP BY Address ORDER BY 2 DESC;	8.png

9.1	Write a query to show FirstName, LastName, and OrderDate for users who ordered after '2020-05-30' (not including). (Hint — use INNER JOIN)	SELECT Users.FirstName, Users.LastName, Orders.OrderDate FROM Users INNER JOIN Orders ON Users.ID = Orders.UserID WHERE Orders.OrderDate > '2020-05-30T23:59:59Z';	9_1.png
9.2	Or a bit shorter syntax + convert date to a more usable format. We can omit columns' names in this case because all of them are unique	SELECT FirstName, LastName, CONVERT (varchar, OrderDate, 105) AS 'OrderDate' FROM Users INNER JOIN Orders ON Users.ID = Orders.UserID WHERE OrderDate > '2020-05-31';	9_2.png
10	Write a query to show FirstName, LastName, and number of orders for each user	SELECT FirstName AS 'First Name', LastName AS 'Last Name', COUNT (Orders.ID) AS 'Number of Orders' FROM Users INNER JOIN Orders ON Users.ID = Orders.UserID GROUP BY FirstName, LastName ORDER BY 3 DESC;	10.png
11	Change the name of the city Kyiv to Uzhhorod in Users table.	UPDATE Users SET Address ='Uzhhorod' WHERE Address = 'Kyiv';	11.png
12	Add a new order to Orders table	INSERT INTO Orders (ID, UserID, ProductID, OrderDate) VALUES (16, 5, 8, CAST(N'2020-05-31 17:29:47' AS smalldatetime));	12_1.png
	or	INSERT INTO Orders VALUES (15, 2, 4, CAST(N'2020-05-31 00:00:00' AS smalldatetime)); INSERT INTO Orders VALUES (16, 5, 8, CAST(N'2020-05-31 17:29:47' AS smalldatetime));	12_2.png
13	Delete an order from Orders table	DELETE FROM Orders WHERE ID = 8; DELETE FROM Orders WHERE ProductID = 8;	13_1.png 13_2.png