

# SELECT: Order statements 1

Challenge 2



An estate agent in the north east of England has a database of properties that are currently for sale. An extract from the **Properties** table is below:

PropertyID	Address	City	PropertyType	Bedrooms	ListPrice
Dur032	8 New Elvet	Durham	detached	3	350000
Dur070	2 Sherburn Rd	Durham	terraced	2	200000
New635	6A Salters' Rd	Newcastle Upon Tyne	semi-detached	3	220000
New388	29 Leazes Rd	Newcastle Upon Tyne	terraced	4	480000
Sun112	2 Roker Lane	Sunderland	detached	4	450000

## Part A

A buyer is using the agents' website to find all available properties in **Sunderland**. Use the lines of code below to construct a SQL query that would return the following fields for the buyer **Address, City, PropertyType, Bedrooms, ListPrice**.

**Not all of the statements provided are required to solve the problem**

### Available items

WHERE City = 'Sunderland';

SELECT Address, City, PropertyType, Bedrooms, ListPrice

FROM table

FROM Properties

SELECT \*

WHERE 'City' = 'Sunderland';

## Part B

Using the table above, which of the properties in the list below would be returned when the follow query is executed:

```
1 SELECT PropertyID
2 FROM Properties
3 WHERE (Bedrooms = 3 OR Bedrooms = 4) AND ListPrice <= 350000;
```

- ☐ Dur032, New635
- ☐ New635
- ☐ Dur032, New388, Sun112

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# SELECT query 6

Challenge 2



Dana has been looking at her app purchases. She wants to redownload an app that she thinks she downloaded in November 2021. An extract from the **AppDownloads** table is below:

DownloadID	App	PurchaseDate	Price
187362	Monopoly Classic	2022-03-01	4.99
273340	Mini Football	2022-03-20	2.79
317333	Stardew Valley	2021-11-19	4.99
387737	Game Dev Tycoon	2021-04-28	4.99
622100	Alien Isolation	2022-02-12	12.99

Choose the option that would complete the query below to help Dana find the game.

```
1 SELECT *
2 FROM AppDownloads
3 WHERE _____ ;
```

The date format for SQL is YYYY-MM-DD, i.e. year, month, then day.



- ☐ PurchaseDate >= '2021-11-01' OR PurchaseDate <= '2021-11-30'
- ☐ PurchaseDate >= '2021-11-01' AND <= '2021-11-30'
- ☐ PurchaseDate >= '2021-11-01' AND PurchaseDate <= '2021-11-30'
- ☐ PurchaseDate >= '2021-11-01' OR '2021-11-30'

Quiz:

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# Clinic: select customer

Repair & Reform is a muscle therapy clinic that provides support for everyday pain and sports injuries. The company uses a relational database to hold the details of appointments, treatments, customers, and staff.



You can study the table layouts and see some sample data on the [Repair & Reform database information page](#).

A sample of the records from the **appointment** table is shown below.

customer_id	treatment_ref	appointment_date	start_time	staff_id	d
21	UB_arm	2024-01-02	09:00:00	3	0
29	LB_foot	2024-01-02	09:30:00	1	0
36	LB_thigh	2024-01-02	11:00:00	3	0

The SQL statement below will return all of the appointments in the database.

Edit the statement so that only the records for the customer whose ID number (**customer\_id**) is 4 are displayed.

## SQL

```
1 SELECT treatment_ref, staff_id, appointment_date, start_time
2 FROM appointment;
```

Enter the **total number of appointments** (the number of records returned) for this particular customer as your answer.

# Clinic: select consultation

Repair & Reform is a muscle therapy clinic that provides support for everyday pain and sports injuries. The company uses a relational database to hold the details of appointments, treatments, customers, and staff.



You can study the table layouts and see some sample data on the [Repair & Reform database information page](#).

A sample of the records from the `customer` table is shown below.

customer_id	first_name	last_name	email	telephone
1	Kohen	Ceyhun	kohen106@example.com	0770090048
2	Vaclovas	Derry	vaclovas167@example.net	0770090015
3	Mar	Sylvia	mar160@example.edu	0770090049

A member of staff wants a list of all of the customers who have not yet had an initial consultation. The `customer` table contains a field — `had_consultation` — that indicates whether or not the initial consultation has taken place.

The SQL statement below currently returns the first name, last name, and email address of **all** of the customers in the database.

Edit the SQL statement so it displays only the records for the customers who have **not** had an initial consultation.

## SQL

```
1 SELECT first_name, last_name, email
2 FROM customer;
```

Enter the **first name** of the customer that appears **at the top** of the list of results produced by your query.

Repair & Reform is a muscle therapy clinic that provides support for everyday pain and sports injuries. The company uses a relational database to hold the details of appointments, treatments, customers, and staff.



You can study the table layouts and see some sample data on the [Repair & Reform database information page](#).

The database currently contains records for appointments made between January 2nd and 31st, 2024 (inclusive). A sample of the data in the `appointment` table is shown below.

customer_id	treatment_ref	appointment_date	start_time	staff_id	d
21	UB_arm	2024-01-02	09:00:00	3	0
29	LB_foot	2024-01-02	09:30:00	1	0
36	LB_thigh	2024-01-02	11:00:00	3	0

The SQL statement below currently returns the date, start time, customer ID, and treatment reference of all of the appointments stored in the database.

SQL

```
1 SELECT appointment_date, start_time, customer_id, treatment_ref
2 FROM appointment;
```

## Part A Number of appointments

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Edit the SQL statement so that only the appointments that took place on the **18th January 2024** are returned.

What are the **total number of appointments** (i.e., the number of records returned) for this date?

When querying this database, you need to use single quotation marks around a date value. This is the standard in most implementations of SQL.



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## Part B Order by start time

Edit the SQL statement to order the results so that they appear in start time order, with the earliest time shown first.

What is the **customer ID of the first appointment** on the 18th January 2024 when ordered in this way?

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Repair & Reform is a muscle therapy clinic that provides support for everyday pain and sports injuries. The company uses a relational database to hold the details of appointments, treatments, customers, and staff.



You can study the table layouts and see some sample data on the [Repair & Reform database information page](#).

The database currently contains records for appointments made between January 2nd and 31st, 2024 (inclusive). A sample of the data in the `appointment` table is shown below.

customer_id	treatment_ref	appointment_date	start_time	staff_id	d
21	UB_arm	2024-01-02	09:00:00	3	0
29	LB_foot	2024-01-02	09:30:00	1	0
36	LB_thigh	2024-01-02	11:00:00	3	0

When run, the SQL statement below returns the appointment date, start time, customer ID, and treatment reference for **all** the appointments stored in the database.

SQL

```
1 SELECT appointment_date, start_time, customer_id, treatment_ref
2 FROM appointment;
```



## Part A Appointments between 8th and 14th January 2024

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Edit the SQL statement so that only the appointments that took place between the 8th and 14th of January 2024 (inclusive) are returned.

What are the **total number of appointments** (i.e., the number of records returned) that took place between these dates?

When querying this database, you need to use single quotation marks around a date value. This is the standard in most implementations of SQL.



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## Part B Order by appointment date and start time

Edit the SQL statement from Part A to order the results so that they appear in appointment date order (oldest dates are shown first, newest dates are shown last). Where there are multiple appointments on the same date, they should appear in order of start time (earliest times are shown first, latest times are shown last).

The query should still return only the appointments made between the 8th and 14th January 2024 (inclusive) as specified in Part A.

Enter the **customer ID** of the customer that appears **at the top** of the list of results produced by your query.

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# Art studio: SELECT multiple tables

Vanessa is an artist who creates paintings. Each original painting is displayed in her gallery. Vanessa doesn't sell the original works, but customers can purchase prints made from the paintings. Vanessa uses a relational database to hold the details about the paintings, her customers, and the sales of prints.



You can study the table layouts and see some sample data on [Vanessa's art studio database information page](#).

Vanessa wants the details of everyone who purchased a print of any painting that she created in 2023. The report must display the painting id, the print number, and the customer's first name, last name and email address. The report must be sorted in ascending order of the customer's last name.

To get this information, three tables must be accessed:

- `painting_id` and `print_number` will be retrieved from the `sale` table
- `first_name`, `last_name` and `email` will be retrieved from the `customer` table
- `painting_year` is stored in the `painting` table

Sample data from table `painting`

<code>painting_id</code>	<code>painting_name</code>	<code>description</code>	<code>painting_year</code>	<code>print_limit</code>
1	Constellations	An abstract painting that...	2021	60
2	The hunter	An owl perching on a branch...	2021	75
3	Windswept	A landscape that has been...	2021	75

Sample data from table `customer`

<code>customer_id</code>	<code>last_name</code>	<code>first_name</code>	<code>email</code>
1	Smith	John	<a href="mailto:john.smith@example.com">john.smith@example.com</a>
2	Williams	Latoya	<a href="mailto:latoya.williams@example.com">latoya.williams@example.com</a>
3	Brown	Emily	<a href="mailto:emily.brown@example.com">emily.brown@example.com</a>

Sample data from table `sale`

<code>painting_id</code>	<code>print_number</code>	<code>customer_id</code>	<code>sale_date</code>	<code>sale_price</code>
1	1	1	2021-06-15	150.0
1	2	2	2021-07-20	140.0
1	3	3	2021-08-10	145.0

Vanessa uses an SQL **SELECT** statement to query the database. Part of the statement below is missing. Identify the missing part of the statement.

### SQL

```
1 ✓ SELECT sale.painting_id, sale.print_number, customer.first_name, customer.la
2 FROM sale, customer, painting
3 WHERE >>> [missing statement] >>>
4 AND painting.painting_id = sale.painting_id
5 AND painting.painting_year = '2023'
6 ORDER BY customer.last_name;
```

Enter **only** the missing part of the statement on line 3 as your answer, **not** including the **WHERE** keyword.

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Clinic: select multiple

Challenge 1

Repair & Reform is a muscle therapy clinic that provides support for everyday pain and sports injuries. The company uses a relational database to hold the details of appointments, treatments, customers, and staff.



You can study the table layouts and see some sample data on the [Repair & Reform database information page](#).

The manager wants to find out how many appointments have been made for their standard knee injury treatment and which staff member carried out each appointment.

To get this information, two tables must be accessed:

- `treatment_ref` will be retrieved from the `appointment` table
- `first_name` and `last_name` of the staff member will be retrieved from the `staff` table

A sample of the records from the `appointment` table is shown below.

customer_id	treatment_ref	appointment_date	start_time	staff_id	d
21	UB_arm	2024-01-02	09:00:00	3	0
29	LB_foot	2024-01-02	09:30:00	1	0
36	LB_thigh	2024-01-02	11:00:00	3	0

And a sample of the records from the `staff` table.

staff_id	first_name	last_name	email	telephone
1	Sondra	Jorginho	sondra656@example.edu	07700900993
2	Deepti	Vesna	deepti273@example.edu	07700900339
3	Mariel	Vappu	mariel487@example.com	07700900992

The SQL statement shown below is partially complete. Complete the statement so that the manager gets the information she needs. Your statement should select only

appointments for the knee injury treatment with the treatment reference of "LB\_knee".

You will need to join the **appointment** and **staff** tables. The **common field** between these two tables is **staff\_id**, which is the primary key of the **staff** table and the foreign key of the **appointment** table.



### SQL

```
1 | SELECT appointment.treatment_ref, staff.first_name, staff.last_name
2 | FROM appointment, staff;
```

## Part A Number of appointments

What are the **total number of appointments** (the number of records returned) for the knee injury treatment?

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## Part B Staff member

Enter the **last name** of the staff member that appears **at the top** of the list of results produced by your query.

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