How do you perform CRUD operations using Django ORM? (Create, Read, Update, Delete)

Here’s how you can **perform CRUD operations using Django ORM**, with simple and clear examples that are good for interview explanation:

**1. Create – Insert data into the database**

# Example: Create a new student

from myapp.models import Student

student = Student(name="Ravi", age=20)

student.save() # Saves to database

(or)

from myapp.models import Student

# This automatically saves the object

Student.objects.create(name="Ravi", age=20)

**Short Answer for Interview:**  
Use Model.objects.create() or create an instance and call .save().

**2. Read – Fetch data from the database**

**a) Get all records:**

students = Student.objects.all()

**b) Get one record by condition:**

student = Student.objects.get(id=1)

**c) Filter records:**

students = Student.objects.filter(age\_\_gte=18)

**d) Order records:**

students = Student.objects.order\_by('name')

**Short Answer for Interview:**  
Use Model.objects.get(), filter(), all(), order\_by() for reading data.

**3. Update – Modify existing records**

student = Student.objects.get(id=1)

student.name = "Raj"

student.save()

**Or using update() method:**

Student.objects.filter(id=1).update(name="Raj")

**Short Answer for Interview:**  
Fetch object, modify fields, then call .save(). Or use .update() on queryset.

**4. Delete – Remove records from database**

student = Student.objects.get(id=1)

student.delete()

**Or using filter() + delete()**

Student.objects.filter(age\_\_lt=10).delete()

**Short Answer for Interview:**  
Use .delete() on an object or a queryset to remove records.

**Summary Table (Interview-Friendly):**

| **Operation** | **ORM Syntax** |
| --- | --- |
| Create | Model.objects.create() or .save() |
| Read | Model.objects.get(), filter(), all() |
| Update | Modify object + .save() or .update() |
| Delete | .delete() |

Common Field Lookups:

| **Lookup** | **Meaning** | **Example** |
| --- | --- | --- |
| exact | Equal to | age\_\_exact=18 |
| iexact | Case-insensitive equal | name\_\_iexact="ravi" |
| gt | Greater than | age\_\_gt=18 |
| gte | Greater than or equal to | age\_\_gte=18 |
| lt | Less than | age\_\_lt=18 |
| lte | Less than or equal to | age\_\_lte=18 |
| contains | Contains (case-sensitive) | name\_\_contains="vi" |
| icontains | Contains (case-insensitive) | name\_\_icontains="vi" |
| in | Value in list | age\_\_in=[18, 19, 20] |