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**Working with Database Q Objects in Django 5**

It works if we combine two queries like with and , or

At last own file work :

### **Working with Database Q Objects in Django**

* **Definition**:  
  Q objects (from django.db.models) are used to build **complex queries** in Django, especially when you need to use **OR, AND, or NOT** conditions in database filters.
* **Why use**:  
  Normal filter() in Django works with **AND logic** by default.  
  If you want to combine conditions with **OR** or **exclude with NOT**, you must use Q objects.
* **Key Features**:
  + Q(condition1) | Q(condition2) → OR condition
  + Q(condition1) & Q(condition2) → AND condition
  + ~Q(condition) → NOT condition
* **Example**:

Views.py:

from django.db.models import Q

from school.models import Student

# Students with marks greater than 80 OR city = 'Lahore'

students = Student.objects.filter(Q(marks\_\_gt=80) | Q(city='Lahore'))

# Students with marks greater than 80 AND city = 'Lahore'

students = Student.objects.filter(Q(marks\_\_gt=80) & Q(city='Lahore'))

# Students NOT from Lahore

students = Student.objects.filter(~Q(city='Lahore'))

👉 This is the **short professional explanation** for your notes.

Own file :

Views.py:

from django.shortcuts import render

from school.models import Student

from django.db.models import Q   # Import Q objects to handle complex queries

# Create your views here

def home(request):

    """

    Example: Working with Q objects in Django

    Q is used to create complex queries with OR, AND, and NOT conditions.

    """

    # AND condition → Both conditions must be True

    # Fetch student where id=2 AND roll=102

    student\_data = Student.objects.filter(Q(id=2) & Q(roll=102))

    # OR condition → At least one condition must be True

    # Example: Fetch student where id=2 OR roll=103

    student\_data = Student.objects.filter(Q(id=2) | Q(roll=103))

    # NOT condition → Exclude certain condition

    # Example: Fetch all students EXCEPT the one with id=2

    student\_data = Student.objects.filter(~Q(id=2))

    # Combined condition with AND + filter

    # Example: Students from 'bokaro' with marks >= 100

    student\_data = Student.objects.filter(Q(city='bokaro') & Q(marks\_\_gte=100))

    # Final data sent to template

    context = {'students': student\_data}

    return render(request, 'school/home.html', context)