
django-custom-query Documentation

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django-custom-query is a python module to write user provided search queries, using AND, OR and parenthesis grouping. This module will translate those to Django ORM Q objects.

CHAPTER 1

Install

```
$ pip3 install django-custom-query
```

django-custom-query was developed and tested on Python 3.5. Is based on [sqlparse](#).

CHAPTER 2

Source

Source can be downloaded as a tar.gz file from <http://pypi.python.org/pypi/django-custom-query>

Using [git](#) you can clone the source from <http://github.com/lfagundes/django-custom-query.git>

django-custom-query is free and open for usage under the MIT license.

Contents:

3.1 Using Django Custom Query

```
>>> from customquery import Parser
>>> from myapp import MyModel
>>>
>>> parser = Parser(MyModel)
>>> query = parser.parse("numberfield = 10 or (numberfield > 20 and numberfield < 30)
↪")
>>> items = MyModel.objects.filter(query)
```

`Parser.parse()` will create Django Q objects based on SQL-like condition statements.

The model is used for field validation and proper interpretation of field input:

```
>>> class MyModel(models.Model):
>>>     numberfield = models.IntegerField()
```

3.1.1 Foreign Keys

```
>>> class RelatedModel(models.Model):
>>>     name = models.CharField(max_length=16)
>>>
>>> class MyModel(models.Model):
>>>     related = models.ForeignKey(RelatedModel, on_delete=models.CASCADE)
>>>
>>> parser = Parser(MyModel)
>>> query = parser.parse('related__name="foo bar"')
>>> query = parser.parse('related.name="foo bar"') # dots can be used instead of __
```

3.1.2 Annotations

```
>>> from django.db.models import Value
>>> from django.db.models.functions import Concat
>>>
>>> qs = MyModel.objects.annotate(full_name=Concat('first_name', Value(' '), 'last_
↳name')).all()
>>> parser = Parser(qs)
>>> query = parser.parse('full_name="foo bar"')
```

3.1.3 Date formatting

```
>>> class MyModel(models.Model):
>>>     birthday = models.DateField()
>>>
>>> parser = Parser(MyModel, date_format='%d/%m/%Y')
>>> parser.parse('birthday=13/12/2018')
```

3.1.4 Operators

```
>>> parser.parse("numfield=1")      # Q(numfield=1))
>>> parser.parse("numfield = 1")    # Q(numfield=1))
>>> parser.parse("numfield  = 1")    # Q(numfield=1))
>>> parser.parse("numfield > 1")     # Q(numfield__gt=1))
>>> parser.parse("numfield >= 1")    # Q(numfield__gte=1))
>>> parser.parse("numfield < 1")     # Q(numfield__lt=1))
>>> parser.parse("numfield <= 1")    # Q(numfield__lte=1))
>>> parser.parse("numfield > 1")     # Q(numfield__gt=1))
>>> parser.parse("numfield >= 1")    # Q(numfield__gte=1))
>>> parser.parse("numfield < 1")     # Q(numfield__lt=1))
>>> parser.parse("numfield <= 1")    # Q(numfield__lte=1))
>>> parser.parse("numfield <> 1")     # ~Q(numfield=1))
>>> parser.parse("numfield != 1")    # ~Q(numfield=1))
>>> parser.parse("numfield NOT 1")   # ~Q(numfield=1))
```

CHAPTER 4

API Reference

4.1 Parser

CHAPTER 5

Contributing

Please submit [bugs](#) and [patches](#), preferably with tests. All contributors will be acknowledged. Thanks!

CHAPTER 6

Credits

django-custom-query was created by Luis Fagundes and was sponsored by [Spatial Datalyst](#).

CHAPTER 7

Changelog

- 0.4.0
 - Support for IS NULL and IS NOT NULL queries
- 0.3.0
 - Support for annotations
 - Support for date formatting
 - NOT operator
 - IN operator
- 0.2.0
 - Support for filters on models.ForeignKey fields
- 0.1.0
 - Initial release, with support for integer and char fields, =, >, <, <=, >=, <>, !=, AND, OR, BETWEEN and parenthesis.