



Django URL patterns | Python

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Prerequisites: [Views in Django](#)

In Django, views are Python functions which take a URL request as parameter and return an HTTP response or throw an exception like 404. Each view needs to be mapped to a corresponding URL pattern. This is done via a Python module called URLConf(URL configuration)

Let the project name be myProject. The Python module to be used as URLConf is the value of `ROOT_URLCONF` in `myProject/settings.py`. By default this is set to `'myProject.urls'`. Every URLConf module must contain a variable `urlpatterns` which is a set of URL patterns to be matched against the requested URL. These patterns will be checked in sequence, until the first match is found. Then the view corresponding to the first match is invoked. If no URL pattern matches, Django invokes an appropriate error handling view.

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module needs to be included in the root URLConf module as follows:

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('books.urls')),
]
```

This tells Django to search for URL patterns in the file `books/urls.py`.

URL patterns

Here's a sample code for `books/urls.py`:

```
from django.urls import path
from . import views

urlpatterns = [
    path('books/<int:pk>/', views.book_detail),
    path('books/<str:genre>/', views.books_by_genre),
    path('books/', views.book_index),
]
```

For example,

- A URL request to /books/crime/ will match with the second URL pattern. As a result, Django will call the function `views.books_by_genre(request, genre = "crime")`.
- Similarly a URL request /books/25/ will match the first URL pattern and Django will call the function `views.book_detail(request, pk =25)`.

Here, `int` and `str` are path convertors and capture an integer and string value respectively.

Path convertors:

The following path convertor types are available in Django

- **int** – Matches zero or any positive integer.
- **str** – Matches any non-empty string, excluding the path separator('/').
- **slug** – Matches any slug string, i.e. a string consisting of alphabets, digits, hyphen and under score.
- **path** – Matches any non-empty string including the path separator('/')
- **uuid** – Matches a UUID(universal unique identifier).

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