ISSN: 2455 - 1597

ijergs
Open Access

International Journal of Engineering Research and Generic Science (IJERGS)
Available online at: https://www.ijergs.in

Volume - 6, Issue - 2, March – April - 2020, Page No. 01 - 05

The Python Django Web Framework

[1]Manish Lakhpatani, [2]Mohd. Talib, [3]Sourabh Banga, [4]Vivek Kumar Jethani

[1,2] B.Tech Student, Department of Computer Science Engineering, Arya College of Engineering and Research Centre, Kukas, Jaipur, Rajasthan, India

[3, 4]Assisatnt Professor, Department of Computer Science Engineering, Arya College of Engineering and Research Centre, Kukas, Jaipur, Rajasthan, India

Abstract

This article tells us about why we should use Django over any other framework. Django is a type of high level Python structure by which we can make program faster and clearer. Python is very popular in this era and Django is based on it, as we compared with other programming languge like Ruby and Java, it is a dynamic object-oriented language. When we use python then a tool is used called Django Framework which is an excellent open source web application framework and use in drive complex data and website development. This report will mainly introduce that how we can use Django to create a program in which we can change content dynamically, component implementation process is use to manage web page user interface and inner logic. For each category of Django framework in python, most common algorithms and their dynamic websites are provided in the last section.

Keywords: Framework, Web Development, Models, Python, Modules.

Introduction

As it is important to know, Programmers are using python widely because it is a high-level language, use in generalpurpose, interpreted, dynamic language in programming. In it's designing pattern we will got readable code, and its syntax give the facility to express programmer's concepts in few lines of code that may be also possible in languages such as C++ or Java. Python provides constructs intended to give the facility of clear programs on both the scaled small and large. Python has been updated many times since its released and many add-on features are introduced with different versions and updates is not completed yet since 25 years. Many companies which involved in software development prefer python because of its features and easy and clear programming codes. Python has many features like it is Interactive, Interpreted, Modular, Dynamic, Object oriented. It can feature a dynamic type system and automatic memory management and has a large standard library. Python interpreters are available on many operating systems and we can install them easily, allowing Python code execution on a wide range of systems. [1]

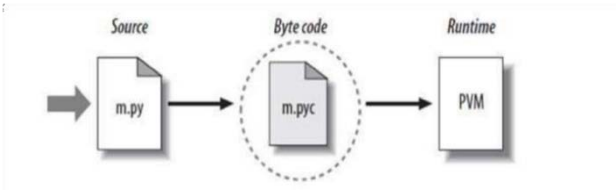


Figure 1: Python Code Execution

Overview of Django

Django is based on stack Python in the sense of memory "web framework that admire development rapidly and clearly with best available design. Development with the help of python is very fast and we can run our process on different system, online news claims that "the web framework for professional with perfection and deadlines". Django was come about in 2003, but was not available at open source until July 2005, the release of 1.0 version was in September 2008 formally and the current version 1.1 was introduced in June 2009.

1.The Django framework mainly focused on making the program automatic and keep it with a standard form that is a principle known as DRY (don't repeat yourself). Djangosites.org serves as a collection of Django sites and there are 2383 websites available according to requirement, including news and entertainment sites such as:

Lawrence (http:// lawrence.com),

Washington Post (http://washingtonpost.com), Social networking and we can also share photos with the help of different sites:

Tabblo (http://tabblo.com).

Grono (http://grono. net).

On the other hands business, educational, ecommerce, and other sites also there. There are several CMS built in Django, such as Ellington, it is a CMS which is mainly built for newspapers, magazines, and entertainment websites. We can find more detailed information, documentation on Django's official site, http:// www.djangoproject.com. [2]

Usability of templates (view)

"One of the basic reason in including of a template language in Django is to separate application and business terms from presentation. There are many merits of this theory according to designer and programmer:

1. Designers access the application after passes to user and they never touch the application code and the mistake done by the designer will not reflects in your application while using.
2. Designers can access to the application if there in no password and can do anything with the content without permission of programmer.
3. Programmers are not allowed to access design design of applications and front-end code while user is using it. In other words, no one access your data without permission.

"Web frameworks like Django are affected by a large number of constantly occurring factors includes: social, perceptual, and contextual forces.

Data Management and Migration

With the help of we can make database schema from model definition with the use of a file known as model.py file. In present time we cannot migrate data from database with the help any tool but Django programmers are working to solve this problem and they are trying to find the way for migration. Django ORM's easy to use and there is similar syntax to the rest of Django and ability it handles 90% of SQL queries, that's make the Django in easy to start. However, Django's ORM does not handle many cases and complex queries as well and programmer have to write SQL by himself to make it work. SQL theory is handling many cases and it kept the Python standards for Object Relational Mapping. SQL theory is the default ORM for all web based and non-web based projects. Whenever there is any requirement for an ORM, SQL chemistry is used to fulfil the need. Although SQL chemistry can be used in place of Django's ORM and it is not the first choice and there is still needs for some hacks to get integrated. In the initial phases of Django development, SQLAlchemy was only an option, so there is no other option accept ORM. Today Django developers are working on a better way between SQLAlchemy and Django. Python-based web structure, such as Pylons, already support similar behaviour. Moreover, there is a new type of databases on the web, a non-relational database, including Google App Engine. [5]

Python has many types of web-frameworks, including scalability-proven and time-tested frameworks like Django, Flask and Pyramid.

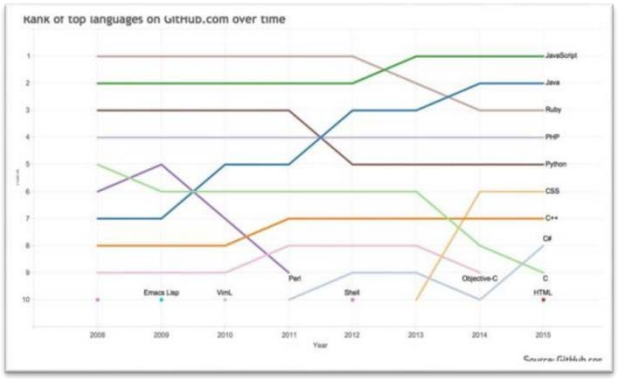


Figure 2: Django

- Django is the very popular and big among all of the python frameworks. It is good for developing complex applications with many sub parts. There are many users includes: Pinterest, Instagram, Mozilla.
- Django can connect to the number of other party applications that already has an account on web and we can also share data and can do further development process quickly. For example, django-allauth is the best way to provide different social logins like, Twitter and other options to the users. And the Rest Django Framework is the best way to write REST APIs to connect Django with applications by which we can payments. [6]

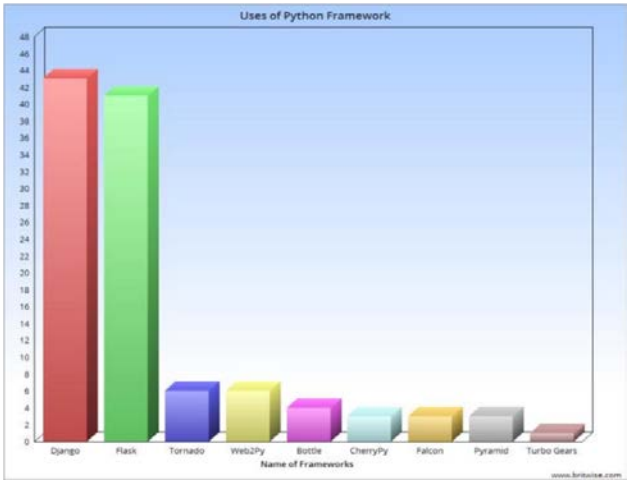


Figure 3: Uses of Python Framework

A. FLASK

In Flask there is no need for any specific libraries or tools and it does not have an info abstraction layer, a pre-existing third party based mostly on inherent libraries and customer functions or different type of strategies. It also provides a large sort of extensions that once put to useworks as if inbuilt Flask, however, tell about performance problems for regular access patterns over different situations.

B. Web2py

Web2py is a free and open-source Python web framework in development different application. The framework has a computer program, code editor similarly as a disperse tool to change you to make and write the code and also check and maintain web applications.

C. Turbogears

Turbogears is type of application framework which is available at open server and we can drive data dynamically. It is designed to combine all answer and give the best result from internet by using python.

D. Bottle

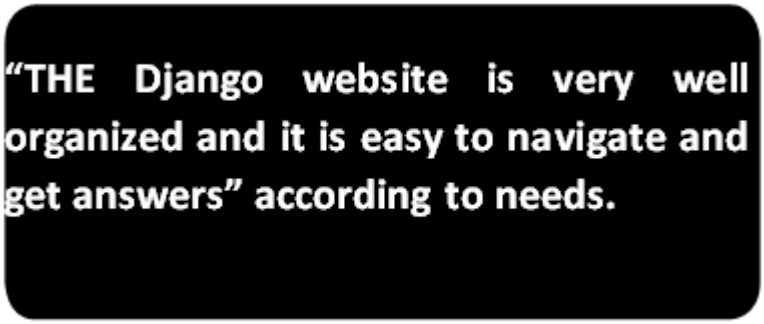
Another interesting non-full stack Python web framework is Bottle, which falls in the category of small-scale frameworks. In real, it was mainly developed for building internet APIs. Also, Bottle tries to execute everything in an single document, that give to offer you a brief perspective on however little it's designed to be.

E. CherryPy

CherryPy is an related open-source Python net development framework that fabricated its terribly own multi-strung server. It can be run on any operating framework that supports Python. CherryPy options incorporate threadpooled web server, setup framework, and module framework.

F. Tornado

The Tornado is related with Nursing open-source Python framework in Nursingd an asynchronous networking library. Additionally to determination the C10k issue (which generally suggests that to handle 10k connections at any given time), the asynchronous framework uses a nonblocking network I/O.



Conclusion

Though there different measure python web development frameworksthat may be common and in-demand within this era, particularly in 2019, each framework has its own professionals and developers and each developer has completely different writing designs and preferences patterns. Paging is a memory management technique that permit the physical address space of a process to be nonfitted.

Where asDjango is a high-level web framework which was developed for quick web project development. It gives highquality code and make it important for developers as well as for customers. There are many advantages and disadvantages as well.

Disadvantages such as it doesn't support real time web application. The aim of Django is to take the developers from project concepts to the launch it on given platform quickly, and it really helps in that. It also takes away from different security issues like cross-site request forgery, SQL injection, cross-site scripting, and clickjacking. Developers can manage user accounts and passwords with the help of user authentication system.

References

1. C. Barry, M.Lang. A Survey of Multimedia and Web Development Techniques and Methodology Usage, IEEE MultiMedia, 2001
2. Django, 2016. Django overview. Django Software Foundation. Accessed 2 April 2016. Available at: https://www.djangoproject.com/start/overview/
3. Fabian Pedregosa, GaëlVaroquaux, AlexandreGramfort, et al. Scikitlearn: Machine Learning in Python. The Journal of Machine Learning Research. 12, 201
4. M. P. Malhotra and M. K. Shah. Python Based Software for Calculating Cyclomatic Complexity. (2015). International Journal of Innovative Science, Engineering and Technology.
5. Hacker, Scot. "Notes on a Django Migration." http://birdhouse.org/blog/2008/11/19/notes-on-a-django-migration.
6. R. Brown. (2015). Django vs. flask vs. pyramid: Choosing a python web framework. Recuperado el, 31.