

Revel- A Very Efficient and Adaptable Web Framework for the Google Go Language

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Abstract: Design and develop big and enterprise-grade applications can be very difficult, but with Revel (A Web Framework), you can design, develop and maintain apps with productiveness and easily. In this paper, **Revel- a very efficient and adaptable web framework for the Google Go language**, you'll get an introduction to this full-featured framework and its many capabilities.

Keywords: Go Programming Language, Web Framework, Revel framework.

I. INTRODUCTION

In Market there are many Go Programming language web frameworks like Revel, Echo, Gin, Iris are there but **Revel is one of the most popular full-stack web application framework.**

Revel is a framework that is a heavyweight framework that is comprehensive enough to compare with Rails.

Revel using the Model-View-Controller (MVC) architecture by relying on the concept that requires a certain framework in your application. In return, it provides the features that can provide an application very light on configuration and provides the feature that enables the fast development cycle.

Revel is a new open source Go-based web application framework that helps to develop simple, reliable, and efficient software. Revel seems to be the only opinionated web framework that cares about how you organize your web app. It's very similar to Rails in that sense. Revels' uses the license that falls under MIT licence.

Revel provides features that are very hot code reloading, high performance (3 to 10x Rails in recent benchmarks), synchronous programming style, and a comprehensive set of tools, including:

- routing
- parameter parsing
- validation
- session/flash

- templating
- caching
- job running
- a testing framework
- internationalization

Why use Revel: From An engineering perspective, Revel permits code reload that rebuilds the project whenever files modification in your project directory. It's additionally needed to run, build, or package your project, and has sensible support for work and completely different levels of work correct, info, error, etc. Revel builds on prime of the Go hypertext transfer protocol server, that was recently benchmarked to serve 3 to 10 times as several requests as Rails across a range of masses.

Key Takeaways: Go may be a Google initiated open supply project that has been gaining traction as a efficient language for development. it's the advantage of not requiring an important runtime like Java, Python, or Ruby. Revel may be a affordable full-featured server facet MVC framework for internet development. an alternate to those frameworks is to use the inherent protocol categories and a electronic device (HTTP request router) like httprouter.

Revel associate tries to create it simple to create internet applications exploitation the Model-View-Controller (MVC) pattern by hoping on conventions that need an exact structure in an application. In return, it's flash on configuration and allows a particularly quick development cycle.

Revel is very customizable; you will be able to enter your own example system communications protocol server engine or session engine. Revel to boot permits integration of custom communications protocol HTTP MUX, so if you have got associate in nursing existing code base you will be able to migrate to Revel at your own pace, or integrate generated code merely. It is the correct middleware that is designed to work out of the box and provide the facility to implement just about any application.

MVC

Here is a quick summary:

Models area unit the essential knowledge objects that describe your application domain. Models additionally contain domain-specific logic for querying and change the information.

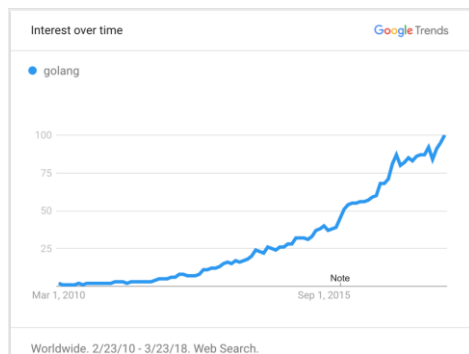
- Views describe however knowledge is given and manipulated. In our case, this is often the model that's accustomed gift knowledge and controls to the user.
- Controllers handle the request execution. They perform the user's desired action, they decide that read to show, and that they prepare and supply the mandatory knowledge to the read for rendering.

II. GO PROGRAMMING LANGUAGE (Golang)

Go is one altogether the fastest growing programming languages today, and much of developers unit finding that it permits applications to be designed quickly whereas remaining straightforward to stay up.

Go language (golang) have choices like: - traditional library has many choices further as networking. - Straightforward to put in writing down synchronous programs. - Straightforward to manage practicable files as a result of it's merely one file. With these options, Go language is additionally obtaining common for web application development.

We can see the popularity from Google Trends below.



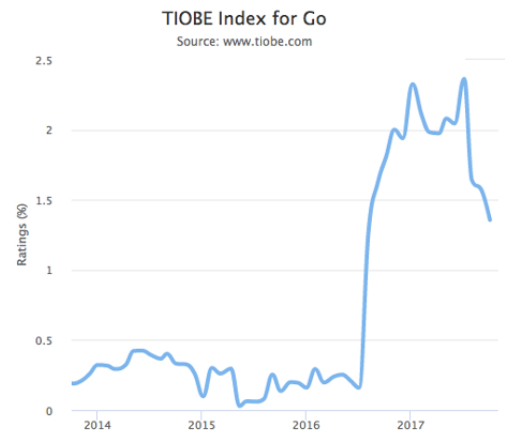
From [google trends](#)

The Go artificial language, generally knowns as Google's golang, is creating robust gains in quality. Whereas languages like Java and C still dominate programming, new models have emerged that area unit higher suited to trendy computing, notably within the cloud. Go's increasing use is due, in part, to the actual fact that it's a light-weight; open linguistic communication fitted to today's microservices architectures.

Container darling Docker and Google's container orchestration product Kubernetes are built using Go programming. Go is additionally gaining ground in information science, with strengths that information scientist area unit trying to find in overall performance and also the ability to travel from "the analyst's laptop computer to full production." As an engineered language (rather than something that evolved over time), Go benefits developers in multiple ways, including garbage collection, native concurrency, and many other native capabilities that reduce the need for developers to write code to handle memory leaks or networked apps. Go also provides many other features that fit well with microservices architectures and data science. Because of this, Go is being adopted by interesting companies and projects. Recently an API for Tensorflow has been added, and products like Pachyderm (next-gen data processing, versioning, and storage) are being built using Go. Heroku's Force.com and parts of Cloud Foundry were also written in Go. More names are being added regularly.

III. RISING POPULARITY AND USAGE

In the Sep 2017 TIOBE Index for Go, you'll be able to clearly see the unbelievable jump in Go quality since 2016, together with being named TIOBE's artificial language Hall of Fame winner for 2016, because the artificial language with the best rise in ratings in an exceedingly year. It presently stands at #17 on the monthly list, up from #19 a year ago, and up from #65 in just 2 years ago



The Stack Overflow Survey 2017 conjointly shows signs of Go's rise in quality. Stack Overflow's comprehensive survey of sixty four,000 developers tries to induce at developers' preferences by asking concerning the "Most darling, Dreaded, and needed Languages." This list is dominated by newer languages like Mozilla's Rust, Smalltalk, Typescript, Apple's Swift, and Google's Go. except for the third year in an

exceedingly row Rust, Swift, and Go created the highest 5 "most loved" programming languages.

Below image show the statistics:

Most Loved, Dreaded, and Wanted Languages



Most Loved, Dreaded, and Wanted Languages, Stackoverflow.com.

IV. GO ADVANTAGES

Some programming languages were hacked along over time, whereas others were created academically. Still, others were designed in a very totally different age of computing with different issues, hardware, and needs. Go is associate degree expressly built language supposed to unravel issues with existing languages and tools whereas natively taking advantage of recent hardware architectures. It's been designed not solely with groups of developers in mind, however additionally long-run maintainability. At its core, Go is pragmatic. Within the world of IT, complex, massive-scale software system is written by large groups of developers. These developers generally have varied talent levels, from juniors up to seniors. Go is simple to become purposeful with and applicable for junior developers to figure on. Also, having a language that encourages readability and comprehension is incredibly useful. The mixture of duck writing (via interfaces) and convenience choices like ":= " for transient variable declarations provide Go the feel of a dynamically communication whereas retaining the positives of a powerfully written one. Go's native pickup removes the necessity for developers to undertake and do their own memory management, that helps negate a pair of common issues:

First, several programmers have come back to expect that memory management are going to be in deep trouble them.

Second, memory management needs different routines for various process cores. Manually trying to account for every configuration will considerably increase the chance of introducing memory leaks.

Go's native concurrency could also be a boon for network applications that live and die on concurrency. From API's to web servers to net app frameworks, Go comes tend to consider networking, distributed functions, and/or services that Go's go-routines and channels unit of measurement compatible.

V. SUITED FOR DATA SCIENCE

Extracting business value from large datasets is quickly turning into a competitive advantage for companies Associate in Nursingd an awfully active house in programming, encompassing specialties like engineering, machine learning, and more. Go has multiple strengths in these areas of knowledge science, which is increasing its use and recognition.

Superior error handling and easier debugging area unit serving to that gain quality over Python and R, the two most commonly used information science languages.

Data scientists' sometimes not programmers. Go helps with every prototyping and production, thus it finally lands up being a further durable language for swing information science solutions into production.

Performance is superb, that's essential given the explosion in large information and thus the increase of GPU databases. Go doesn't have to be compelled to call in C/C++ based optimizations for performance gains, but provides you the facility to undertake and do thus.

VI. SEEDS OF GO'S EXPANSION

Software delivery and readying have modified dramatically. Small services architectures became key to unlocking application lightness. Fashionable apps are designed to be cloud-native and to require advantage of loosely coupled cloud services offered by cloud platforms.

Go is associate degree expressly built programming language, specifically designed with these new necessities in mind. Written expressly for the cloud, Go has been growing in quality thanks to its mastery of co-occurring operations and therefore the great thing about its construction.

Not solely is Google supporting Go, however alternative corporations are aiding in market growth, as well. as an example, Go code is supported and enlarged with enterprise-level distributions like ActiveState's ActiveGo. As associate degree open supply movement, the golang.org web site and annual GopherCon conferences kind the premise of a robust, fashionable open supply community that permits new ideas and new energy to be brought into Go's development method.

VII. CONCLUSION

In this paper we've tried to clarify the options of Go Language and its fashionable net framework Revel. Here we've learnt that Go is changing into most well-liked language day by day and its framework conjointly popularized.

VIII. REFERENCES

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