Go

Group - B
Software Architecture

About Go

- Compiled
- Go is an open source project developed by a team at Google and many contributors from the open source community.
- Go is distributed under a BSD-style license.

How to install Go

Workspace

- Go programmers typically keep all their Go code in a single workspace.
- A workspace contains many version control repositories (managed by Git, for example).
- Each repository contains one or more packages.
- Each package consists of one or more Go source files in a single directory.
- The path to a package's directory determines its import path.

GOPATH

The GOPATH environment variable specifies the location of your workspace. It defaults to a directory named go inside your home directory

Changing GOPATH

Edit your .bash_profile to add the following line:

```
export GOPATH=$HOME/work
```

Save and exit your editor. Then, source your ~/.bash_profile.

```
$ source ~/.bash_profile
```
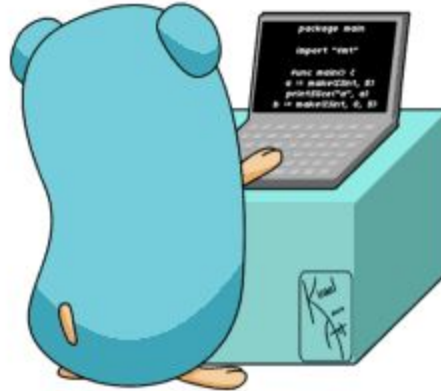
Workspace Structure

```
bin/
    hello                             # command executable
    outyet                            # command executable
pkg/
    linux_amd64/
        github.com/golang/example/
            stringutil.a              # package object
src/
    github.com/golang/example/
        .git/                         # Git repository metadata
        hello/
            hello.go                  # command source
        outyet/
            main.go                   # command source
            main_test.go              # test source
        stringutil/
            reverse.go                # package source
            reverse_test.go           # test source
    golang.org/x/image/
        .git/                         # Git repository metadata
        bmp/
            reader.go                 # package source
            writer.go                 # package source
... (many more repositories and packages omitted) ...
```

Examples

REST

- go-json-rest: https://github.com/ant0ine/go-json-rest, includes a Testing module
- go-rest: https://github.com/googollee/go-rest
- Gorilla: http://www.gorillatoolkit.org/pkg/mux

MongoDB + Go

- mgo: https://godoc.org/labix.org/v2/mgo

github.com/juju/blobstore	This package provides a Mongo GridFS-backed blob storage engine.
59 IMPORTS · 1 STARS	
github.com/mongodb/mongo-tools/common/options	Package options implements command-line options that are used by all of the mongo tools.
46 IMPORTS · 353 STARS	
github.com/ungerik/go-start/mongo	Wraps MongoDB to make it compatible with the model package.
35 IMPORTS · 263 STARS	
github.com/mongodb/mongo-tools/common/db	Package db implements generic connection to MongoDB, and contains subpackages for specific methods of connection.
35 IMPORTS · 357 STARS	
github.com/goinggo/beego-mgo/utilities/mongo	Package mongo provides mongo connectivity support.
26 IMPORTS · 117 STARS	
github.com/mongodb/mongo-tools/common/util	Package util provides commonly used utility functions.
25 IMPORTS · 342 STARS	
github.com/mongodb/mongo-tools/common/log	Package log provides a utility to log timestamped messages to an io.Writer.
23 IMPORTS · 309 STARS	
github.com/mongodb/mongo-tools/common/json	Package json implements encoding and decoding of JSON objects as defined in RFC 4627.
19 IMPORTS · 323 STARS	

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