

# The Mabel Literate Programming Tool

A Simple Tangler

M-CS-ME

## Introduction

I wanted to take notes with executable code snippets inside, and I didn't want it to be glued to my text editor. This little project is supposed to (eventually) do that.

I chose markdown because it's simple, light weight, and has many implementations. A markdown engine or `pandoc` will be better than any weaver that I could write.

The source in `src/mabel.go` is generated with `mabel` through `mabel mabel.md > src/mabel.go`.

## Imports and packages

I let the package name be `main` for now. For this file we will need the `os`, `bufio`, and `fmt` packages from the `stdlib`.

```
package main
```

```
import (  
    "os"  
    "bufio"  
    "fmt"  
)
```

## Dealing with errors

Since we'll be doing a lot of file i/o, lets make a `check` function that will panic if it recieves an error.

```
func check(e error) {
    if e != nil {
        panic(e)
    }
}
```

## Tangling

This is still an early implmentation and so doesn't have all the features I want. For now it looks through the code, and if it's in a code block (determined by the `open` boolean) it will print the line into stdout which then could be piped into a file.

```
func tangle(in string) {
    file, err := os.Open(in)
    check(err)
    f := bufio.NewScanner(file)
    var open bool = false
    for i := 0; f.Scan(); i++ {
        ln := f.Text()
        if len(ln) >= 3 {
            if ln[:3] == "```" {
                open = !open
                fmt.Println()
                continue
            }
        }
        if open {
            fmt.Println(ln)
        }
    }
}
```

## Main and dealing with input

For now just tangle all argument given to it, or if no arguments are given, take one from stdin.

```
func main() {  
    if len(os.Args) > 1 {  
        for _, i := range os.Args[1:] {  
            tangle(i)  
        }  
    } else {  
        var file string  
        fmt.Scan(&file)  
        tangle(file)  
    }  
}
```

## What's next?

- ☐ Add concurrency for speed
- ☐ Ability to execute/print to stdout a selected group of code blocks (like org-babel)