

# Templating Basics

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# Introduction



**Purpose of templates**

**Basic functions**

**Loading**

**Subtemplates**

**Template composition**

**Data driven templates**



# Purpose of Templates



Template



Data



# Purpose of Templates



**Document**



# Purpose of Templates

Dear {{.FirstName}},

We would like to personally  
invite you to {{.Event}}!

Sincerely,

{{.AuthorName}}

```
type Data struct {  
    FirstName string  
    Event      string  
    AuthorName string  
}
```



# Purpose of Templates

Dear {{.FirstName}},

We would like to personally  
invite you to {{.Event}}!

Sincerely,

{{.AuthorName}}

```
type Data struct {  
    FirstName string  
    Event      string  
    AuthorName string  
}
```



# Purpose of Templates

Dear **Amanda**,

We would like to personally  
invite you to **a party!**

Sincerely,

**Franklin**

```
type Data struct {  
    FirstName  string  
    Event      string  
    AuthorName string  
}
```



# Purpose of Templates

Template

Template

Template

Data

Document





# Basic Functions

New

Parse

Execute



# Loading Templates

**ParseFiles**

**ParseGlob**

**Lookup**

**Must**



# Subtemplates

## Template

```
<!DOCTYPE html>
<html>
<head>
    <title>Lemonade Stand Supply</title>
    <link rel="stylesheet" href="..." />
</head>
<body>
    <div id="content"></div>
    <script>...</script>
    <script>...</script>
</body>
</html>
```



# Subtemplates

## Template

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>Lemonade Stand Supply</title>
```

```
    <link rel="stylesheet" href="style.css">
```

```
</head>
```

```
<body>
```

```
    <div id="content"></div>
```

```
    <script>...</script>
```

```
    <script>...</script>
```

```
</body>
```

```
</html>
```

```
{{define "head"}}
```

```
<head>...</head>
```

```
{{end}}
```

```
{{define "scripts"}}
```

```
<script>...</script>
```

```
<script>...</script>
```

```
{{end}}
```



# Subtemplates

## Template

```
<!DOCTYPE html>  
<html>  
  {{template "head"}}  
  <body>  
    <div id="content"></div>  
    {{template "scripts"}}  
  </body>  
</html>
```

**Warning: Reusing a template name overwrites original!**



# Template Composition

## Subtemplate

```
<!DOCTYPE html>
<html>
  {{template "head"}}
  <body>
    <div id="content"></div>
    {{template "scripts"}}
  </body>
</html>
```

Flow of page  
preserved

Duplicated code



# Template Composition

## Layout template

```
<!DOCTYPE html>
<html>
  {{define "head"}}{{end}}
  {{template "head" .}}
  <body>
    <div id="content">
      {{template "content" .}}
    </div>
    {{define "scripts"}}{{end}}
    {{template "scripts" .}}
  </body>
</html>
```



# Template Composition

## Layout template

```
<!DOCTYPE html>
<html>
  {{define "head"}}{{end}}
  {{template "head" .}}
  <body>
    <div id="content">
      {{template "content" .}}
    </div>
    {{define "scripts"}}{{end}}
    {{template "scripts" .}}
  </body>
</html>
```





# Template Composition

## Layout template

```
<!DOCTYPE html>
<html>
  {{block "head" .}}{{end}}
  <body>
    <div id="content">
      {{template "content" .}}
    </div>
    {{block "scripts" .}}{{end}}
  </body>
</html>
```

## Required child

```
{{define "content"}}
...
{{end}}
```

## Optional child

```
{{define "head"}}
...
{{end}}
```



# Data Driven Templates

Template

Document

Data



# Data Driven Templates

```
t := template.Must(template.New("").Parse("..."))  
t.Execute(w, nil)
```



# Data Driven Templates

```
type Context struct {  
    Title string  
    ImageURL string  
}
```

```
context := Context{Title: "The Title", ImageURL: "http://..."}  
t := template.Must(template.New("").Parse("..."))  
t.Execute(w, context)
```



# Data Driven Templates

```
type Context struct {  
    Title string  
    ImageURL string  
}
```

```
context := Context{Title: "The Title", ImageURL: "http://..."}
```

```
t := template.Must(template.New("").Parse("..."))
```

```
t.Execute(w, context)
```



# Data Driven Templates

```
<!DOCTYPE html>

<html>

<head>

    <title>{{.Title}}</title>

</head>

<body>

    

</body>

</html>
```

```
type Context struct {
    Title string
    ImageURL string
}
```



# Summary



**Purpose of templates**

**Basic functions**

**Loading**

**Subtemplates**

**Template composition**

**Data driven templates**

