

```
package dsl.html.cont
```

```
@DslMarker
```

```
annotation class HtmlTagMarker
```

```
interface Element
```

```
sealed class Tag(val name: String): Element {  
    protected val children = arrayListOf<Element>()
```

```
    protected fun <T : Element> initTag(tag: T, init: T.() -> Unit): T {  
        tag.init()  
        children.add(tag)  
        return tag  
    }  
}
```

```
    override fun toString(): String =  
        children.joinToString(  
            prefix = "<$name>\n",  
            postfix = "</$name>\n",  
            separator = "",  
            transform = Any::toString  
        )  
}
```

```
abstract class TagWithText(name: String): Tag(name) {  
    operator fun String.unaryPlus() {  
        children.add(TextElement(this))  
    }  
}
```

```
class TextElement(val text: String): Element {  
    override fun toString() = "$text\n"  
}
```

```

@HtmlTagMarker
class HTML : Tag("html") {
    fun head(init: Head.() -> Unit) = initTag(Head(), init)
    fun body(init: Body.() -> Unit) = initTag(Body(), init)
}

@HtmlTagMarker
class Head : Tag("head") {
    fun title(init: Title.() -> Unit) = initTag(Title(), init)
}

@HtmlTagMarker
class Title : TagWithText("title")

@HtmlTagMarker
class Body : Tag("body") {
    fun p(init: Paragraph.() -> Unit) = initTag(Paragraph(), init)
}

@HtmlTagMarker
class Paragraph : TagWithText("p")

fun html(init: HTML.() -> Unit): HTML {
    val html = HTML()
    html.init()
    return html
}

fun main() {
    val markup =
        html {
            head {
                title { +"Document Title" }
            }
            body {
                p { +"Hello, World!" }
            }
        }
    println(markup)
}

```