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0.3   Structural Elements

Uses native LaTeX structural elements(Section, Subsection, etc,.). Paragraphs are indented even the first paragraph in each section, this can be easily turned off using latex native commands.

0.4   Paragraph Level Markup

0.4.1   Inline Markup

Documents contain text and may contain inline markup: inline literals , *emphasis*, **strong emphasis**, stand alone links (https://www.wikibooks.org), external hyperlinks (wikibooks home), and some action . For software library or a package use LIB PackageName and a *filename.out*

0.5   Lists & Tables

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0.5.1   code format

```
1  package main
2
3  import "fmt"
4
5  func main() {
6      var x int = 7
7      fmt.Println(x)
8      fmt.Println(&x)
9  }
```

If we run the above program

```
>> go run pointers.go
7
0xc00001c0a8
```

Line two is the value of the variable x (i.e. 7) and line three is the address where it is stored (i.e. 0xc00001c0a8)

$$e^{i\pi} + 1 = 0 \tag{1}$$

0.5.2   Pointers

A pointer is a special kind of datatype which takes a reference as its value . It is defined in the program as *datatype (i.e. `*int, *uint, *char, *byte`, etc,) they declare a pointer object which points to something(variables, constants, etc.) with a given datatype. Code code title In the program given below line 9 and 10 prints the same address

```go
package main

import "fmt"

func main() {
    var x int = 73
    var xptr *int = &x
    fmt.Println(x)
    fmt.Println(&x)
    fmt.Println(xptr)
}
```

Running the above program

```
>> go run pointers.go
73
0xc00001c0a8
0xc00001c0a8
```

As one can notice line three and four are the same. In order to get the value of what the pointer is pointing at one can use the `*` operator. This operator operates from the left of the pointer variable. Operating on the right has no meaning if the variable is a pointer and if the variable is any-other datatype then it has the usual meaning of multiplication. Since `*` is doing the opposite of the referencing operator `&` it is called `dereference` operator. The following example illustrates the operation.

> **! Note**
>
> Not to be confused with multiplication operator `*` or the asterisk in front of the pointer data type `*datatype`

```go
1  package main
2
3  import "fmt"
4
5  func main() {
6      var x int = 73
7      var xptr *int = &x
8      fmt.Println(x)
9      fmt.Println(&x)
10     fmt.Println(xptr)
11     fmt.Println(*xptr)
12 }
```

Code 1: code title

Result:

```
>> go run pointers.go
73
0xc00001c0a8
0xc00001c0a8
73
```

> **! Warning**
>
> this is a warning

> **! tip**
>
> this is a tiphint

> **! Error**
>
> this is an error

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0.5.3   Tables

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Group	One	Two	Three	Four	Sum
Red	1000.00	2000.00	3000.00	4000.00	10000.00
Green	2000.00	3000.00	4000.00	5000.00	14000.00
Blue	3000.00	4000.00	5000.00	6000.00	18000.00
Sum	6000.00	9000.00	12000.00	15000.00	42000.00

Table 1: this is a table

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Group	One	Two	Three	Sum
Red	1000.00	2000.00	3000.00	10000.00
Green	2000.00	3000.00	4000.00	14000.00
Blue	3000.00	4000.00	5000.00	18000.00
Sum	6000.00	9000.00	12000.00	42000.00
Blue	3000.00	4000.00	5000.00	18000.00
Gray	3000.00	4000.00	5000.00	18000.00

Table 2: this is a table2