

# Maps



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- Maps are unordered
- Maps <key>:<value> pairs

Similar to arrays and slices.... **but...**

**<key>:<value>**

Sunderland : 6

Manchester Utd : 20

Chelsea : 4

Newcastle : 4

Liverpool : 18

## Similar to arrays and slices.... **but...**

- Maps are unordered
- Maps <key>:<value> pairs
- Maps Dynamically resizable
- Maps are references

**<key>: <value>**

Sunderland : 12

Manchester Utd : 20

Chelsea : 4

Liverpool : 18

Manchester City : 4

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# Building Maps

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map[keyType]valueType

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# Iterating Maps...

...and random offsets

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# References and Performance

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# Maps are **reference types**

- Passed to functions by *reference*
- Changes made by functions visible to caller
- Unsafe for concurrency
- Cheap to pass

## Specify size for large maps

- `make(map[<keyType>]<valueType>, size)`
- Can improve performance



# Summary

## Declaring Maps

```
map[string]float64
```

Maps are **unordered**

**for range** loops iterate maps  
Returned with random offset

Maps are dynamic

```
myMap[<key>] = <value>
```

```
delete(myMap, <key>)
```

Maps are references

Similar to slices and pointers  
Passed by reference