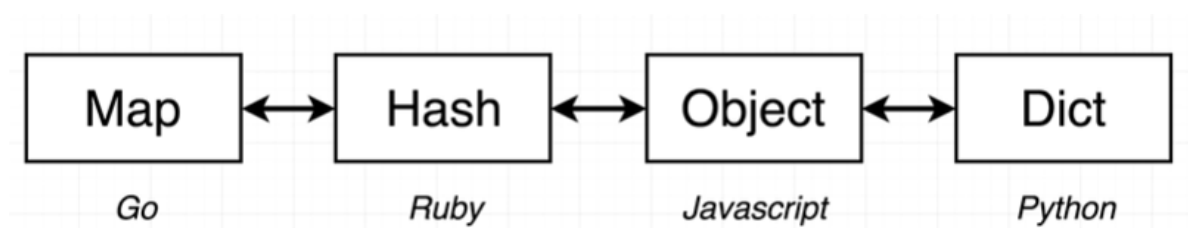


# Maps

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## What is a Map?

- A map is a collection of key-value pairs



- This code declares a map with key value pairs for color names, and hex codes. Both of which are stored as strings
- An empty map can be declared like so: `var colors map[string]string`
- Another way of accomplishing this is:

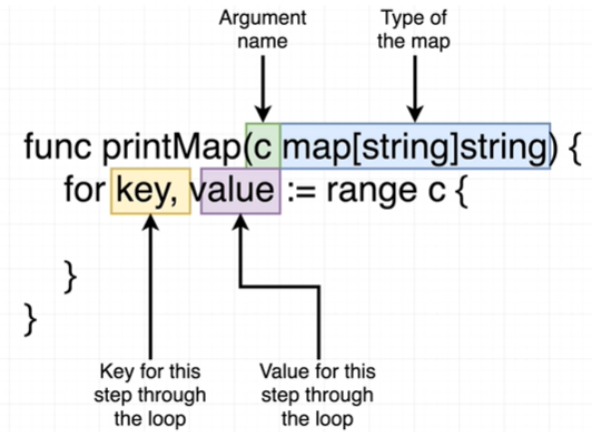
```
colors := map[string]string{
    "red":    "#ff0000",
    "green":  "#00ff00",
    "blue":   "#0000ff",
}
```

```
colors := make(map[string]string)
```

- Values can be added to a map with this syntax `colors["white"] = "#ffffff"`
- Values can be deleted with `delete(colors, "white")`

## Iterating over Maps

```
func printMap(c map[string]string) {
    for color, hex := range c {
        // ...
    }
}
```



## Maps vs Structs

Map		Struct	
All keys must be the same type	Use to represent a collection of related properties	Values can be of different type	You need to know all the different fields at compile time
All values must be the same type	Don't need to know all the keys at compile time	Keys don't support indexing	Use to represent a "thing" with a lot of different properties
Keys are indexed - we can iterate over them	Reference Type!	Value Type!	