



Wait, Those Aren't Classes?

Week 6

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Struct



Class-Lite

Structs originated before OOP as a way to organize data.

Essentially you create new variable types.

In C, these couldn't hold methods

In C++, you can give structs methods, but use a class at that point

Public by Default



Put it in the Header “Node.h”

// You could put this in the header of a relevant class instead

#pragma once

```
struct Node {
```

```
    Node left, right;
```

```
};
```



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Going Annon

// You can leave a struct unnamed if you only use it a few times

```
struct {
```

```
    uint8_t r, g, b;
```

```
} color1, color2;
```

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Using A Struct

```
#include "Node.h"
```

```
Node root = { leftNode, rightNode };
```

```
root.left;
```

```
root.right;
```

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Enum



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And a 1, a 2, a 1 2 3 4

Creates a type that can be a discrete list of values

Used to avoid invalid inputs and improve code legibility

Under the hood—they're just integers

(unless you're using Java, then they're another type of class)

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Put it in the Header

// This may go in the header of a class that uses it as well

```
enum Status {
```

```
    OPERATIONAL, // 0 by default
```

```
    DETERIORATING, // 1 by default
```

```
    BROKEN // 2 by default
```

```
};
```



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Set the Numbers

```
enum Status {  
    OPERATIONAL = 9,  
    DETERIORATING = 81,  
    BROKEN = 72  
};
```

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Using An Enum

```
#include "HeaderWithEnum.h"
```

```
enum Status iceCreamMachine = BROKEN;
```

```
int x = iceCreamMachine;
```

```
std::cout << x;
```

```
// Prints 72
```

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The background of the entire image is a photograph of bright yellow autumn leaves on tree branches, with sunlight filtering through the foliage.

Assignment



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Create a Pixel Struct

Optional: Create an enum for various text styles

I will walk you through this process in class!

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