

The slide features a light blue background with abstract circuit-like patterns. Purple and orange lines, some straight and some curved, crisscross the slide, often ending in small circles or dots. In the bottom right corner, there is a grid of small blue dots with a few orange dots interspersed, and some purple geometric shapes like triangles and rectangles.

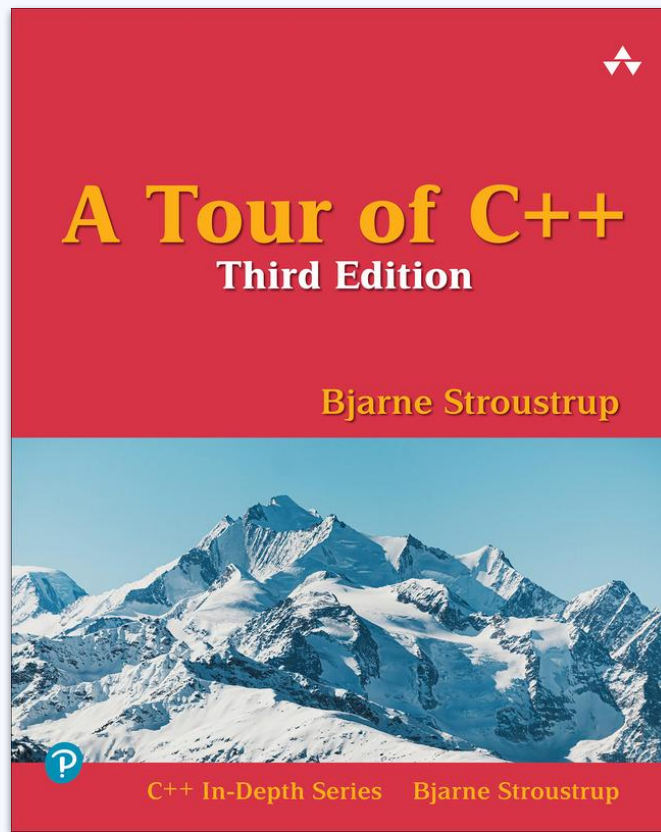
# Classes

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CSE 232 – Dr. Josh Nahum

# Reading:

Section 2.3





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00

enum & union

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“enums and unions are powerful types, but not essential enough to be taught in CSE 232.”

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—Me



**01**

# **Return Type**

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# Alternative Return Types

Most function return ordinary types (non-const copies of objects). Functions can return pointers, references and const objects, if needed.

Danger! Functions should not return references or pointers to variables that are local to the function. These local variables will fall out of scope and be deleted when the function call ends.

# Live Coding Example







**02**

# Constructors

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# Constructors

## Constructor

A constructor is a member function with the same name as the class

## Member initializer list

Optionally a list can be provided to initialize data members

## No Return Type

Constructors never have a return type

## Body

The body of the constructor can do other initialization work (if any)

# Default Constructor

A default constructor is a constructor that can be called with no arguments.

Example:

```
class Vector {  
public:  
    Vector() {  
        elem = nullptr;  
        sz = 0;  
    }  
    // ...  
};
```

Could also be written like this with a member initialization list:

```
class Vector {  
public:  
    Vector() : elem{nullptr}, sz{0} {}  
    // ...  
};
```

# Attribution

Please ask questions via Piazza

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