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## Constructors

Lesson 2:

SEARCH

RESOURCES

CONCEPTS

Intro to OOP

1. Classes and OOP

3. Jupyter Notebooks

☑ 5. Member Initialization

☑ 8. Encapsulation and Abstraction

13. Initializing Constant Members

🗹 9. Bjarne on Encapsulation

10. Constructors

11. Scope Resolution

☑ 12. Initializer Lists

14. Encapsulation

15. Accessor Functions

16. Mutator Functions

☑ 17. Quiz: Classes in C++

🗹 18. Exercise: Pyramid Class

19. Exercise: Student Class

🗹 20. Encapsulation in C++

🗹 21. Bjarne On Abstraction

23. Exercise: Sphere Class

24. Exercise: Private Method

25. Exercise: Static Members

🛂 26. Exercise: Static Methods

27. Bjarne On Solving Problems

22. Abstraction

✓ 6. Access Specifiers

☑ 7. Classes

✓ 4. Structures

☑ 2. Bjarne On Classes In C++

Constructors are member functions of a class or struct that initialize an object. The Core Guidelines **define a constructor**) as:

constructor: an operation that initializes ("constructs") an object. Typically a constructor establishes an invariant and often acquires resources needed for an object to be used (which are then typically released by a destructor).

A constructor can take arguments, which can be used to assign values to member variables.

As you can see, a constructor is also able to call other member functions of the object it is constructing. In the example above, <code>Date(int d, int m, int y)</code> assigns a member variable by calling <code>Day(int d)</code>.

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## ↑ Menu 🗾 Expand

## Default Constructor

A class object is always initialized by calling a constructor. That might lead you to wonder how it is possible to initialize a class or structure that does not define any constructor at all.

## For example:

```
class Date {
  int day{1};
  int month{1};
  int year{0};
};
```

We can initialize an object of this class, even though this class does not explicitly define a constructor.

This is possible because of the **default constructor**. **The compiler will define a default constructor**, which accepts no arguments, for any class or structure that does not contain an explicitly-defined constructor.