

Lesson 2:
Intro to OOP

SEARCH

RESOURCES

CONCEPTS

1. Classes and OOP

2. Bjarne On Classes In C++

3. Jupyter Notebooks

4. Structures

5. Member Initialization

6. Access Specifiers

7. Classes

8. Encapsulation and Abstraction

9. Bjarne on Encapsulation

10. Constructors

11. Scope Resolution

12._INITIALIZER Lists

13. Initializing Constant Members

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

22. Abstraction

23. Exercise: Sphere Class

24. Exercise: Private Method

25. Exercise: Static Members

26. Exercise: Static Methods

27. Bjarne On Solving Problems

Exercise: Sphere Class

SEND FEEDBACK

In 1 1:

#include <cassert>
#include <cmath>
#include <stdexcept>

// TODO: Define class Sphere
class Sphere {
public:
// Constructor
Sphere(int radius) : radius_(radius), volume_(pi_ * 4/3 * pow(radius_,3)) {
if(radius <= 0) throw std::invalid_argument("radius must be positive");
}

// Accessors
int Radius() const { return radius_; }
int Volume() const { return volume_; }

private:
// Private members
float const pi_{3.14159};
int const radius_;
float const volume_;
};

// Test
int main(void) {
Sphere sphere(-3);
assert(sphere.Radius() == 5);
assert(abs(sphere.Volume() - 523.6) < 1);
}

Compile & Run Explain

Loading terminal (id_000kq9), please wait...

Menu

Shrink

NEXT