Lesson 2: Exercise: Pyramid Class SEND FEEDBACK Intro to OOP SEARCH In []: | #include <cassert> | #include <stdexcept> RESOURCES // TODO: Define class Pyramid class Pyramid { public: CONCEPTS // constructor Pyramid(int length, int width, int height)
 : length_(length), width_(width), height_(height) {
 Validate();
} ✓ 1. Classes and OOP // accessors
int Length() const { return length_; }
int Width() const { return width_; }
int Height() const { return height_; } 🗹 2. Bjarne On Classes In C++ ☑ 3. Jupyter Notebooks // mutators void Length(int length) {
 length_ = length; ✓ 4. Structures Validate(); void Width(int width) {
 width_ = width;
 Validate(); 🗹 5. Member Initialization void Height(int height) {
 height_ = height;
 Validate(); 7. Classes // public Volume() function
float Volume() const { return Length() * Width() * Height() / 3.0; } // private class members 🗹 8. Encapsulation and Abstraction private class members
private:
 int length_;
 int width_;
 int height_;
 void Validate() {
 if (length_ <= 0 || width_ <= 0 || height_ <= 0)
 throw std::invalid_argument("negative dimension");
}</pre> 9. Bjarne on Encapsulation 10. Constructors // Test
int main() {
 Pyramid pyramid(4, 5, 6);
 assert(pyramid.Length() == 4);
 assert(pyramid.Width() == 5);
 assert(pyramid.Height() == 6);
 assert(pyramid.Volume() == 40); 12. Initializer Lists 13. Initializing Constant Members bool caught{false}; try {
 Pyramid invalid(-1, 2, 3);
} catch (...) { caught = true; 15. Accessor Functions assert(caught); Compile & Run Explain 16. Mutator Functions Loading terminal (id_6962hjh), please wait... ☑ 17. Quiz: Classes in C++ 18. Exercise: Pyramid Class 19. Exercise: Student Class ☑ 20. Encapsulation in C++ 🗹 21. Bjarne On Abstraction

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22. Abstraction

23. Exercise: Sphere Class

24. Exercise: Private Method

25. Exercise: Static Members

26. Exercise: Static Methods

27. Bjarne On Solving Problems