#include <iostream>

#include <string>

#include <array>

class Book {

private:

std::string title;

std::string author;

std::string isbn;

bool available{true};

public:

// Set all attributes at once

void setBookDetails(const std::string& t, const std::string& a,

const std::string& i, bool isAvailable = true) {

title = t;

author = a;

isbn = i;

available = isAvailable;

}

// Display book details in a clear format

void displayBookDetails() const {

std::cout << "Title : " << title << "\n"

<< "Author : " << author << "\n"

<< "ISBN : " << isbn << "\n"

<< "Availability : " << (available ? "Available" : "Borrowed")

<< "\n";

}

// Attempt to borrow the book; returns true on success

bool borrowBook() {

if (!available) return false;

available = false;

return true;

}

// Return the book; returns true if state actually changed

bool returnBook() {

if (available) return false;

available = true;

return true;

}

// Helper accessor for lookups

const std::string& getISBN() const { return isbn; }

};

int main() {

std::array<Book, 5> books;

// Initialize library with 5 books

books[0].setBookDetails("The C++ Programming Language", "Bjarne Stroustrup", "9780321563842");

books[1].setBookDetails("Clean Code", "Robert C. Martin", "9780132350884");

books[2].setBookDetails("Design Patterns", "Gamma, Helm, Johnson, Vlissides", "9780201633610");

books[3].setBookDetails("Effective Modern C++", "Scott Meyers", "9781491903995");

books[4].setBookDetails("Cracking the Coding Interview", "Gayle Laakmann McDowell", "9780984782857");

std::cout << "=== Community Library Catalog ===\n\n";

for (const auto& b : books) {

b.displayBookDetails();

std::cout << "------------------------------\n";

}

std::cout << "Borrow a book by entering its ISBN (enter 0 to quit):\n";

std::string inputISBN;

while (true) {

std::cout << "\nEnter ISBN (or 0 to exit): ";

std::cin >> inputISBN;

if (inputISBN == "0") {

std::cout << "Goodbye!\n";

break;

}

bool found = false;

for (auto& b : books) {

if (b.getISBN() == inputISBN) {

found = true;

if (b.borrowBook()) {

std::cout << "Success: You borrowed:\n";

b.displayBookDetails();

} else {

std::cout << "Error: That book is currently unavailable (already borrowed).\n";

}

break;

}

}

if (!found) {

std::cout << "Error: No book with ISBN " << inputISBN << " was found in the catalog.\n";

}

}

return 0;

}