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1: //EVELYN GOH YUAN QI A23CS0222
2: //JOANNE CHING YIN XUAN A23CS0227
3:
4: #include <iostream>
5: #include <string>
6: using namespace std;
7:
8: const int MAX_BOOKS = 100;
9:
10: string titles[MAX_BOOKS];
11: string authors[MAX_BOOKS];
12: int years[MAX_BOOKS];
13: int bookCount = 0;
14:
15: void displayMainMenu();
16: void addBook();
17: void displayLibrary();
18: void searchByTitle();
19:
20: int main() {
21:     int choice;
22:
23:     do {
24:         displayMainMenu();
25:         cout << "Enter your choice: ";
26:         cin >> choice;
27:
28:         switch (choice) {
29:             case 1: addBook();
30:                 break;
31:             case 2: displayLibrary();
32:                 break;
33:             case 3: searchByTitle();
34:                 break;
35:             case 4: cout << "Goodbye!\n";
36:                 break;
37:             default: cout << "\nInvalid choice. Please try again.\n";
38:         }
39:
40:     } while (choice != 4);
41:
42:     return 0;
43: }
44:
45: void displayMainMenu() {
46:     cout << "\n<<<<Library Management System>>>>\n";
47:     cout << "=====\n";
48:     cout << "1. Add a Book\n";
49:     cout << "2. Display Library\n";

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50:     cout << "3. Search by Title\n";
51:     cout << "4. Quit\n";
52: }
53:
54: void addBook() {
55:     if (bookCount < MAX_BOOKS) {
56:         cout << "\nEnter book title: ";
57:         cin.ignore();
58:         getline(cin,titles[bookCount]);
59:
60:         cout << "Enter author name: ";
61:         getline(cin,authors[bookCount]);
62:
63:         cout << "Enter publication year: ";
64:         cin >> years[bookCount];
65:
66:         cout << "\nBook added successfully!\n";
67:         bookCount++;
68:     } else {
69:         cout << "\nLibrary is full. Cannot add more books.\n";
70:     }
71: }
72:
73: void displayLibrary() {
74:     cout << "\nLibrary Contents:\n";
75:     cout << "=====\n";
76:
77:     for (int i = 0; i < bookCount; ++i) {
78:         cout << "Title: " << titles[i] << endl;
79:         cout << "Author: " << authors[i] << endl;
80:         cout << "Year: " << years[i] << endl<<endl;
81:     }
82: }
83:
84: void searchByTitle() {
85:     string searchTitle;
86:     bool found = false;
87:
88:     cout << "\nEnter the title to search: ";
89:     cin.ignore();
90:     getline(cin, searchTitle);
91:
92:     for (int i = 0; i < bookCount; ++i) {
93:         if (titles[i] == searchTitle) {
94:             cout << "\nBook found:\n";
95:             cout << "=====\n";
96:             cout << "Title: " << titles[i] << endl;
97:             cout << "Author: " << authors[i] << endl;
98:             cout << "Year: " << years[i] << endl<<endl;

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99:         found = true;
100:         break;
101:     }
102: }
103:
104: if (!found) {
105:     cout << "\nBook not found in the library.\n";
106: }
107: }
108:
```