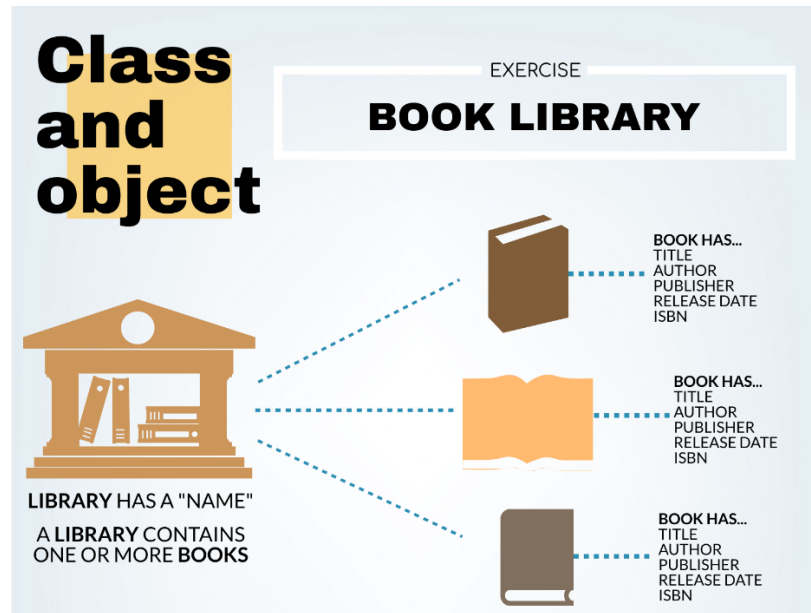


CLASS and OBJECT

@indaleenq



PROBLEM

There is a **book library**. Define classes respectively for **book** and a **library**.

The **library** must contain:

- a name
- a list of books

The **books** must contain:

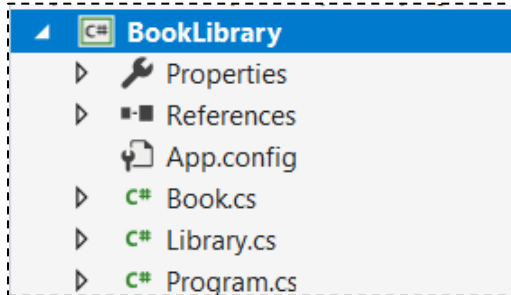
- the title,
- author,
- publisher,
- release date
- ISBN-number

In the class, which describes the **library**, create *methods*:

- to **add a book** to the library
- to **search for a book** by a predefined author
- to **display information** about a book
- to **delete a book** from the library

SOLUTION

Create a new Console Project name “**BookLibrary**”



Add a new Class name “**Book**”

```
using System;

namespace BookLibrary
{
    public class Book
    {
        public string title;
        public string author;
        public string publisher;
        public DateTime releaseDate;
        public string ISBN;
    }
}
```

Add a new Class name “Library”

```
using System;
using System.Collections.Generic;

namespace BookLibrary
{
    public class Library
    {
        public string name;
        List<Book> books = new List<Book>();

        public void AddBook(Book book)
        {
            books.Add(book);
        }

        public void SearchBook(string author)
        {
            foreach (var book in books)
            {
                if (book.author.Contains(author))
                {
                    Console.WriteLine("BOOK FOUND...");
                    DisplayBookInfo(book);
                }
            }
        }

        public void DisplayBookInfo(Book book)
        {
            Console.WriteLine("BOOK INFORMATION in " + name + "...");
            Console.WriteLine("TITLE: " + book.title);
            Console.WriteLine("AUTHOR: " + book.author);
            Console.WriteLine("PUBLISHER: " + book.publisher);
            Console.WriteLine("RELEASE DATE: " + book.releaseDate);
            Console.WriteLine("ISBN: " + book.ISBN);
            Console.WriteLine("-----");
        }

        public void DeleteBook(Book book)
        {
            books.Remove(book);
        }
    }
}
```

Test the classes

In the “Program.cs”, write:

```
using System;

namespace BookLibrary
{
    class Program
    {
        static void Main(string[] args)
        {
            Library myBestBooksLibrary = new Library();
            myBestBooksLibrary.name = "My recommended books..";

            Book top1Book = new Book();
            top1Book.title = "The Alchemist";
            top1Book.author = "Paulo Coelho";
            top1Book.publisher = "some publisher";
            top1Book.releaseDate = new DateTime(1988, 1, 1);
            top1Book.ISBN = "BOOK1231231";

            Book top2Book = new Book
            {
                title = "Harry Potter and the Philosopher\'s Stone",
                author = "J.K. Rowling",
                publisher = "some publisher",
                releaseDate = new DateTime(1997, 1, 1),
                ISBN = "BOOK456456"
            };

            myBestBooksLibrary.AddBook(top1Book);
            myBestBooksLibrary.AddBook(top2Book);

            myBestBooksLibrary.SearchBook("Rowling");
            myBestBooksLibrary.DisplayBookInfo(top1Book);
        }
    }
}
```

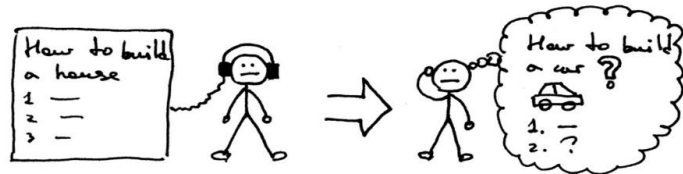


I believe the best way to get better and deeper understanding of programming is to actually *CODE*. Build something, brick by brick, wall by wall.

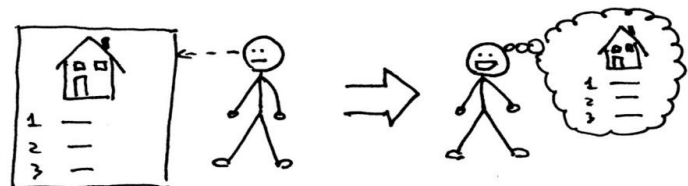


Confucius put it this way:

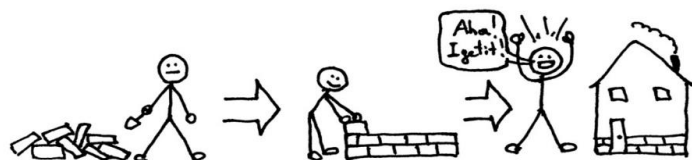
"I hear and I forget."



"I see and I remember."



"I do and I understand."



*ccto for the stickman images

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