

C#|07 Hands-On Activity 1

LibrarySystem.Program

```
1     using System;
2
3     namespace LibrarySystem
4     {
5         // Class: Book (base)
6         // 3 references
7         public class Book
8         {
9             // Private (Encapsulation)
10            private string title;
11            private string author;
12            private int publicationYear;
13
14            // Public properties
15            // 3 references
16            public string Title
17            {
18                get { return title; }
19                set { title = value; }
20            }
21
22            // 3 references
23            public string Author
24            {
25                get { return author; }
26                set { author = value; }
27            }
28
29            // 3 references
30            public int PublicationYear
31            {
32                get { return publicationYear; }
33                set { publicationYear = value; }
34            }
35
36            // Method to display book info.
37            // 4 references
38            public virtual void DisplayInfo()
39            {
40                Console.WriteLine($"Title: {Title}");
41                Console.WriteLine($"Author: {Author}");
42                Console.WriteLine($"Publication Year: {PublicationYear}");
43            }
44        }
45    }
46}
```

```
41 // Class: EBook
42 2 references
43 public class EBook : Book
44 {
45     // Private field for file size
46     private double fileSize;
47
48     2 references
49     public double FileSize
50     {
51         get { return fileSize; }
52         set { fileSize = value; }
53     }
54
55     4 references
56     public override void DisplayInfo()
57     {
58         base.DisplayInfo(); // Call the base class
59         Console.WriteLine($"File Size: {FileSize} MB");
60     }
}
```

```
61 // output
62
63
64 class Program
65 {
66     static void Main(string[] args)
67     {
68         // Create a Book object
69
70         Console.WriteLine("***** Book Information *****");
71         Book physicalBook = new Book();
72         physicalBook.Title = "The Price of Salt";
73         physicalBook.Author = "Patricia Highsmith";
74         physicalBook.PublicationYear = 1952;
75
76         physicalBook.DisplayInfo();
77
78         Console.WriteLine();
79
80         // Create an EBook object
81         Console.WriteLine("***** E-Book Information *****");
82         EBook digitalBook = new EBook();
83         digitalBook.Title = "The Price of Salt";
84         digitalBook.Author = "Patricia Highsmith";
85         digitalBook.PublicationYear = 1952;
86         digitalBook.FileSize = 16.0;
87
88         digitalBook.DisplayInfo();
89
90         Console.ReadLine();
91
92     }
93
94 }
95
96 }
```

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~~~~~ Book Information ~~~~~

Title: The Price of Salt

Author: Patricia Highsmith

Publication Year: 1952

~~~~~ E-Book Information ~~~~~

Title: The Price of Salt

Author: Patricia Highsmith

Publication Year: 1952

File Size: 16 MB