

COMP 2221 Practical 02 – Building a Class

In this practical, you will create and use a class.

As a reminder, remember to Google for the required functions and learn new functions through online documentation and examples. If you find a bug in your program, try to use the debugging functionalities in Visual Studio to debug your program.

Task 1: Extending a Class

You are provided with a simple program for storing and displaying notes. Please read, compile and run the program to understand the logic. You are also provided with an EXE file that showcases what the final product of the program could be – you may run it and understand more.

Please implement the following functionalities:

1. The Note class now can only store the content of a note. Please extend the class such that it can also store the title. You will need to:
 - a. Add a new class variable with the right access modifiers.
 - b. Add the corresponding properties – as your title cannot be empty, you should add in data checking logic in the properties.
 - c. Change the class constructor to include the title.
 - d. Change the Load, Save and Print methods to include the title – you may consider saving the title as a single line before saving the content.
2. As your Note's constructor has changed, in your Main program, make the appropriate update such that you can now create a note with a title.

Task 2: Using DateTime

You are then asked to include the creation date and time of the note in the Note class:

1. Please repeat what you have done in task 1, but this time, use the DateTime class to store and display the creation date and time. Please read and understand how to use DateTime:
<https://docs.microsoft.com/en-us/dotnet/api/system.datetime?view=netframework-4.7.2>
2. When you create a new Note object, please get the current date and time and pass it to the DateTime variable via the constructor. You can Google how to get the date and time, or you can also read more to see what functions DateTime provides.

Task 3: Getting User Input

Up to now, your Note objects are pre-programmed in the Main method. We wish to create the functionality such that a user can create a note and display a note.

1. Using Console.WriteLine and Console.ReadLine, please ask the user for note title, note content and the file name to store the note. Then, please store the notes accordingly with the system date and time.
2. Similar to the above, please write some code in Main to ask the user for a file name. Then, you can open a note with such a file name and display the note.

Task 4: The Menu

Please implement a menu to let the user choose what to do.

1. When the program starts, the user will be prompt for some choices, including (1) creating a new note (i.e. the first point of task 3), (2) displaying a stored note (i.e. the second point of task 3), and (3) exit.
2. If the choice is 1 and 2, after the operations, the user should see the menu again and make another choice. The program quits when choice 3 is entered.
3. Your program should not crash no matter what the user enters, including the menu and the notes to be stored/displayed.