Library Project

*Documentation*

1. Meet the team Durian: (”{0} – {1} {2}”, TAid, FirstNameBg, SecondNameBg ):

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Program description: Product deliverable is a an implmented logic and structure of an online Library API allowing users to read and comment on books, newspapers and magazies that are present in the library. The delivered product implements a clean UI via WPF/XAML.

1. RepositoryLocation: <https://github.com/IlianaB/TA-TeamWork-CSharpOOP>

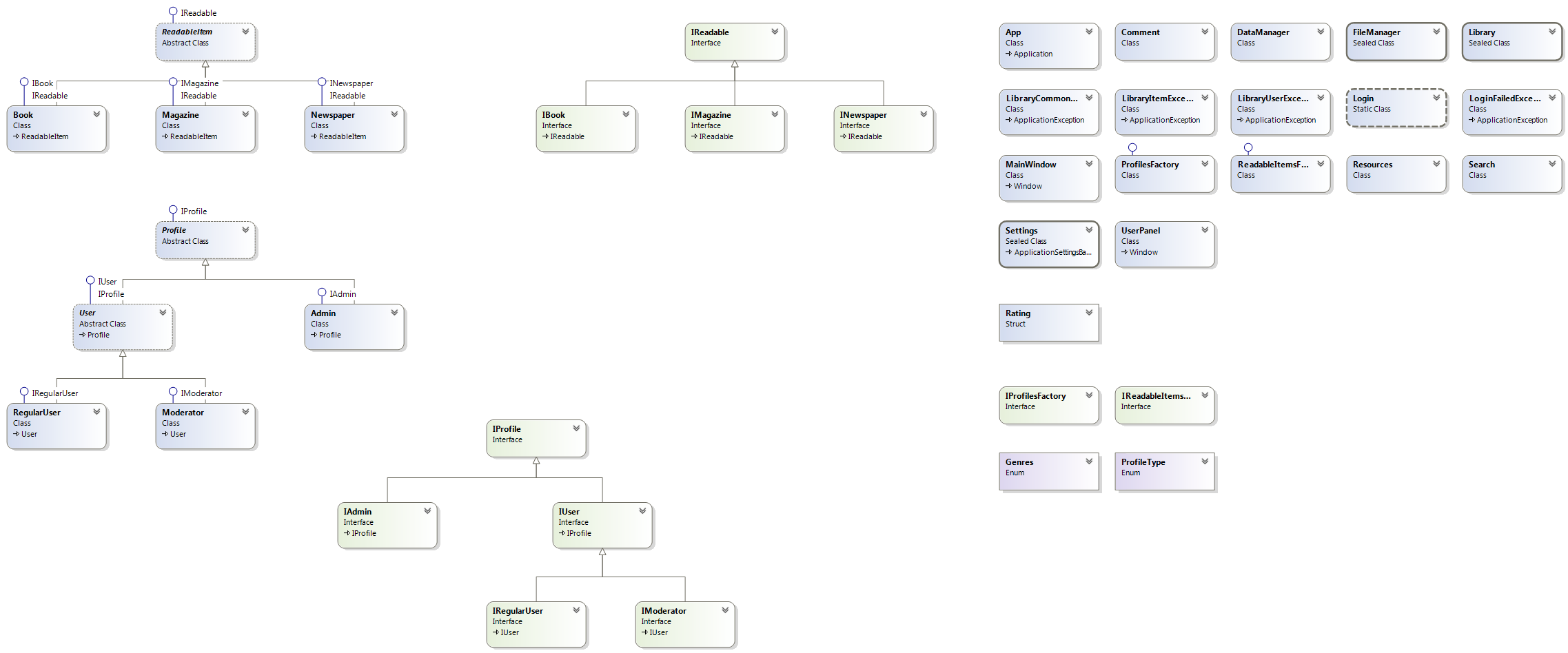
All code under MIT licence.

1. Highlevel description of underlying logic and implementation: We have used the Factory method pattern as a creational pattern. An additional design patter is Singleton. The common interfaces implemented in the factory IProfilesFactory and IReadableItemsFactory require implementation of IProfile and IReadable interfaces respectively. The Profile class implements the IProfile interface. This class creates a user with properties Name, Password and Profile Type. Profile class is being inherited by the User and Admin classes. Moderator and Regular users are treated as subclasses of the User class. All users can keep statistics on their activities in the Library by adding or removing items in their custom lists Wish-to-read-list, currently-reading and read items. The items produced by our virtual Factory for our Libarary are of 3 types: Books, Magazines and Newspapers. Those items have some different set of properties but share a common genre from a predefined set, listed in the Genres enumeration. The Datamanger class takes care of reading and writing information about users profiles, and the collection of readable items. All the information about user and readable items is to be stored in the DB folder in our project structure. The FileManager class checks if some user using the application is new one or exist already, and if this is the case then request his password.

Users can comment on everything they read in the Library.

The program provides functionalities like searching in its own DB(text file) and rating a book. This is done with the Search and Rating class respectively.

1. Class diagram:



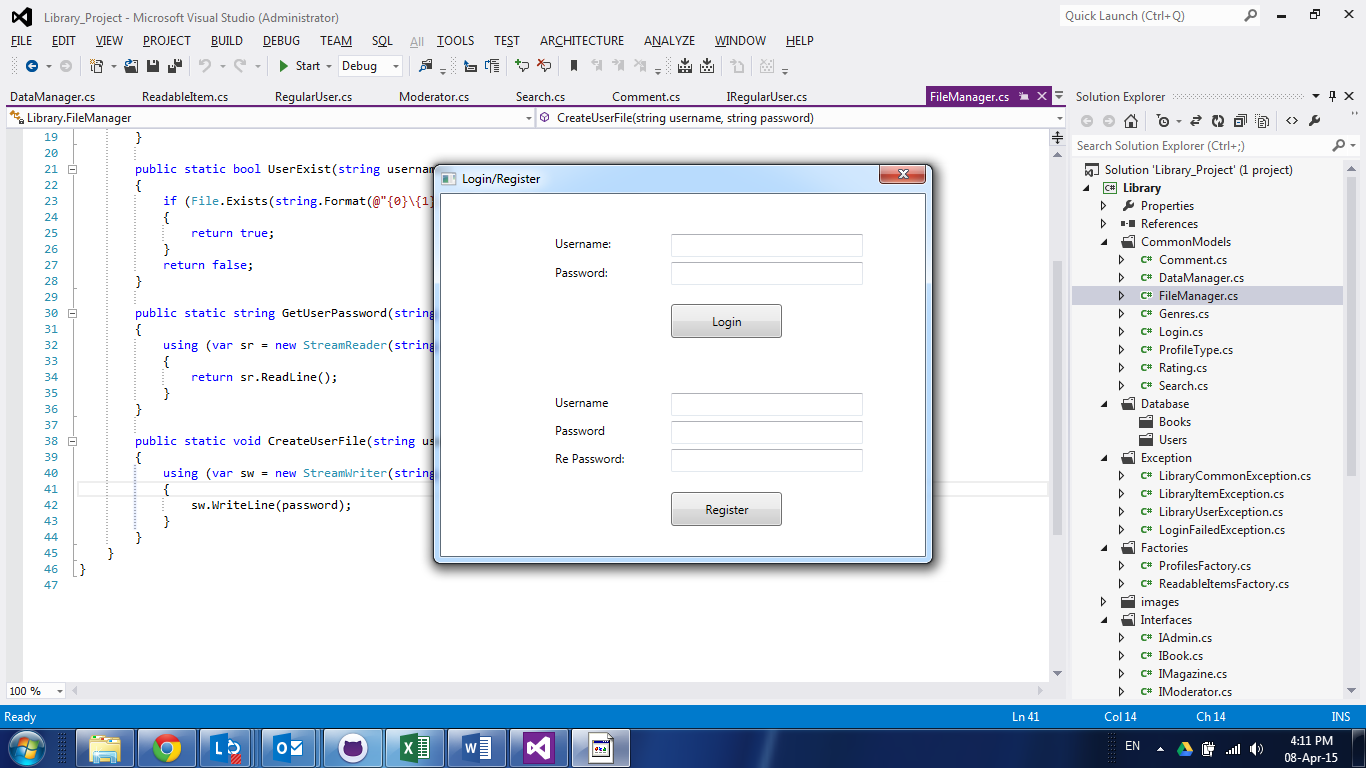
1. Requirements for the project vs. project implementation:

All requirments are being met incl. those for classes, interfaces enumerations, OOD, structures, polymorphism, inheritance, abstraction, exception handling.

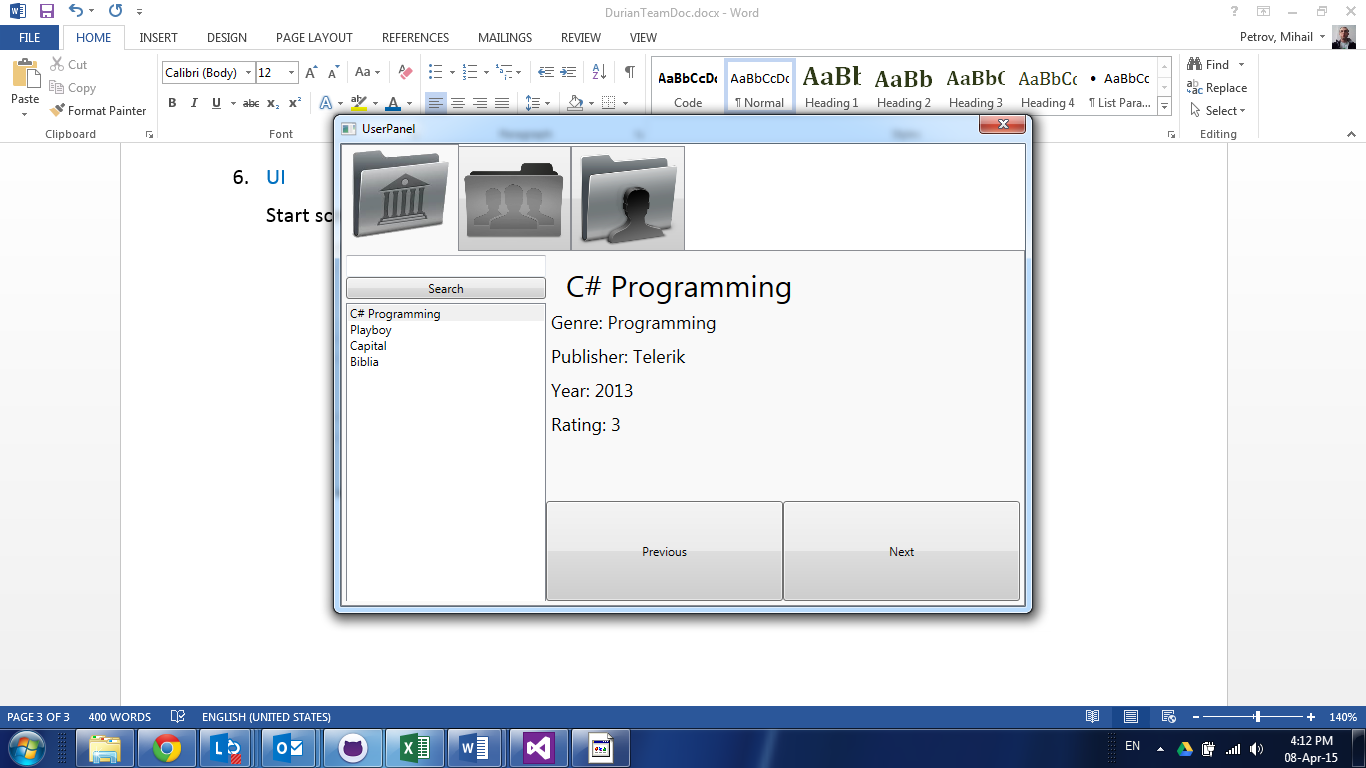
The program implementation uses highest level of abstraction and polymorphism.

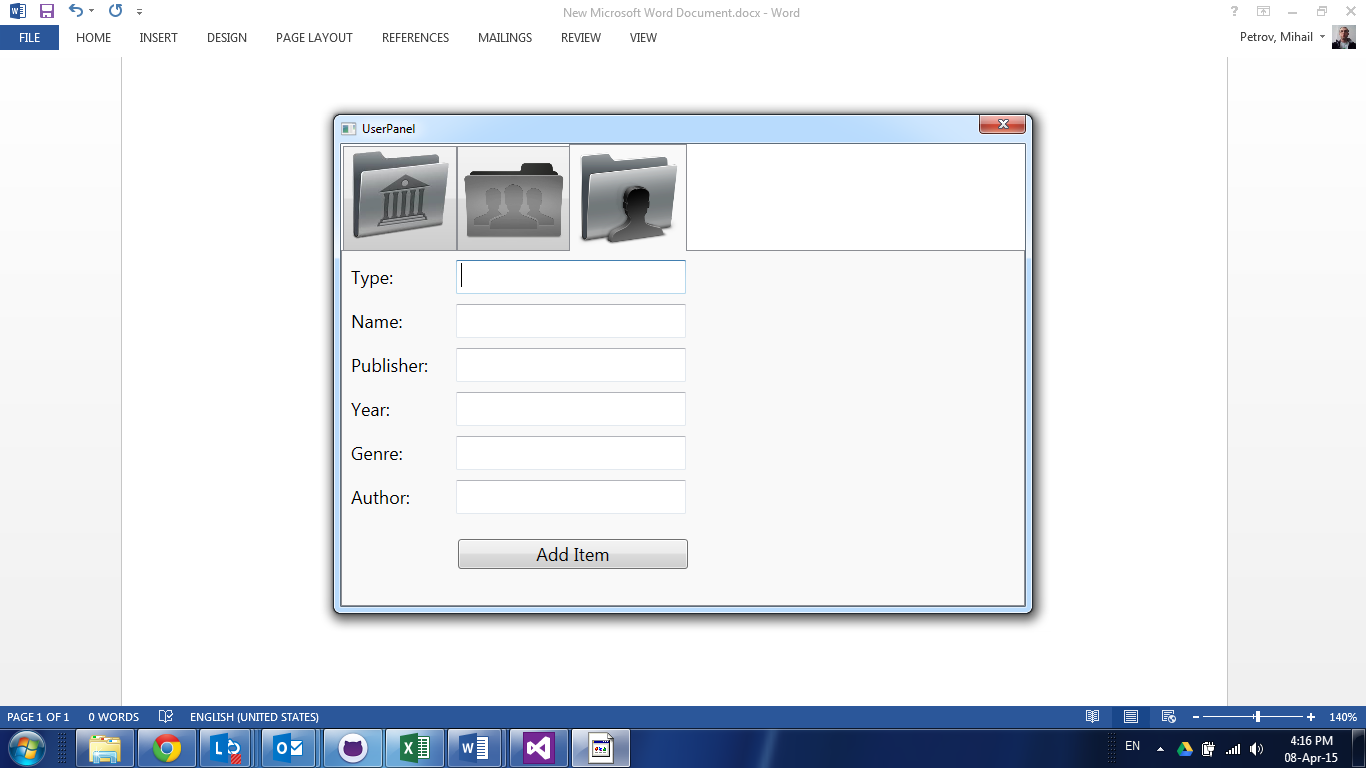
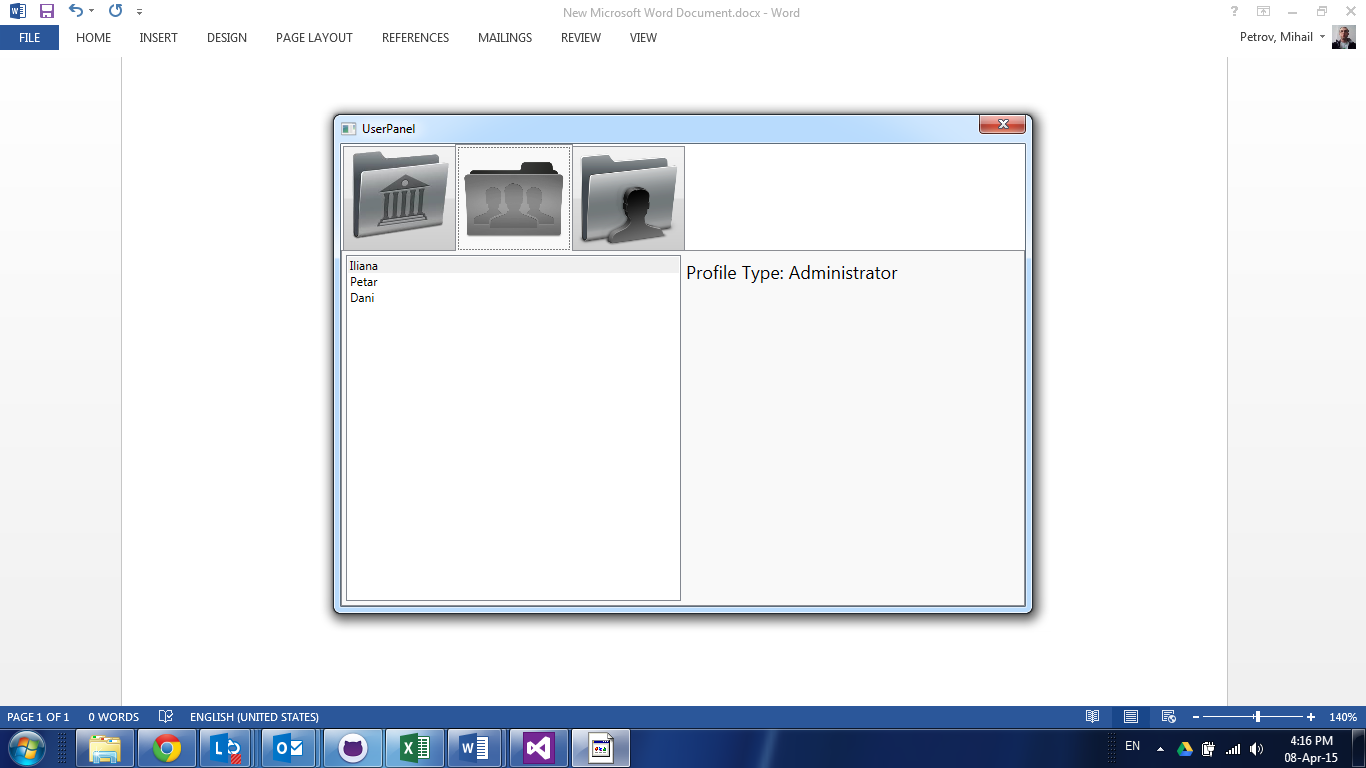
1. UI

Start screen:



Follow on screen:





All entered information is being validated and pop up messages appear in case of validations being not passed through. All fields and menus are functioning as per the logic of the program.