Unit Design Phase Defects

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| **Review Form** | | | |
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|  | **Document Title:** | **Design Analysis Document** | |
|  | **Reviewer Name:** | **Bledea Mihaela Alexandra, Bretan Cezar Alexandru** | |
|  | **Review date:** | **14.03.2023** |  |
|  |  |  |  |
| **Crt. No.** | **Checked Item** | **Doc. Page/line** | **Comments/ improvements** |
| 1 | D\_02 | Code Class Service – Line 24 | There is no defined function for generate reports functionality and filter functionality |
| 2 | D\_05 | Code Class NotaXMLRepo – Line 19 | There is no description for the method createElementFromEntity specified |
| 3 | D\_06 | Code Class UI – Line 16 | No DTOs are used, which means that when changing the GUI to a web based one, some languages send the data in another format like JSON and by not having those DTOs, then many changes will be needed in order to adapt the program. |
| 4 | D\_03 | Page 6 – L 14 | The error handling is not good enough. It is not sufficient to say that an exception occurs when the fields aren’t filled. There might also be the case when the student doesn’t exist or the assignment doesn’t exist. |
| 5 | D\_03 | Page 4, 5, 6 | The preconditions for each use case is not specified properly. For example, the use case number 1 should have in the precondition specified that: Every field must be filled with a valid data type, instead of “User gives data for a student” |
| 6 | D\_07 | Page 6 | In the use cases number 9 and 10, there are multiple specified entities for filtering and report generation in a single use case when they should be separated instead. |
| 7 | D\_07 | Page 5 | The postconditions for print all students and print all laboratory assignments are not specified. |
| 8 | D\_01 | Page 8 | The fields for each entity should be private instead of public.s |
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|  | **Effort to review document (hours): 2** | |  |

Coding Phase Defects

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| **Review Form** | | | |
|  |  |  |  |
|  | **Document Title:** | **Source Code Analysis Document** | |
|  | **Reviewer Name:** | **Bledea Mihaela Alexandra, Bretan Cezar Alexandru** | |
|  | **Review date:** | **14.03.2023** |  |
|  |  |  |  |
| **Crt. No.** | **Checked Item** | **Doc. page/line** | **Comments/ improvements** |
| 1 | D\_01 | Code Class Service – Line 172 | The case when the student delivered the assignment with 2 weeks delay or more is not treated properly, instead of throwing an exception, it should add a 1 grade. |
| 2 | D\_04 | Code Class StudentValidator – Line 26, 32 | The email field is not validated properly. |
| 3 | D\_04 | Code Class NotaValidator – Line 39 | The grade is not validated properly. It can be at most 10 and at least 1, not at least 0. |
| 4 | D\_07 | Code Entities Classes | Some setters are not used in the code, when they should have, meaning that in case of updating, the whole entity was replaced, when only the specific attributes should have been changed. |
| 5 | D\_01 | Code Class AbstractFileRepository - Line 105,  AbstractXMLRepository – Line 160 | The writeToFile() method execution should be conditioned on the null check of the variable entity1 (the one which is returned by the update method), instead of the variable entity (the one given in the header). |
| 6 | D\_07 | Code Class AbstractXMLRepository – Line 104 | The DocumentBuildeFactory builderFactory instance should be used in the writeToFile() method instead on creating a new instance with each call |
| 7 | D\_07 | Code Class StudentValidator – Line 20 | String values compared using “==” instead of “.equals()” |
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|  | **Effort to review document (hours): 1.5** | |  |