

**TME2413/TMI2113/TMN2223/TMS2833/TMT2673**  
**Object-Oriented Software Development**  
**Group Project (40%)**

This group project is a continuation from Assignment. Please stick to the same group that you have in your assignment.

**Tasks**

1. **Identify the classes** in the proposed system.
2. **Draw a class diagram** to show the structure of your classes and relationships that they may have with one another. Your class diagram should exhibit the object-oriented concepts of **polymorphism and inheritance**.
3. **List possible attributes and methods** for each of the classes identified above.
4. **Design the user interfaces** according to your class diagram and object oriented design principles.
5. **Implement the classes** using an object-oriented programming language of your choice (C++/Java/C#/Python and only object oriented programming language is allowed). Your implementation should reflect the structure of your classes (including the user interface design) accordingly and exhibit the object-oriented concepts of **polymorphism, inheritance, association and encapsulation**.
6. **Implement the user interfaces and methods** of the classes. It is not necessarily to implement the methods in detail. It is sufficient if each method can print an output on the screen so that we know which method is called.
7. **Prepare at least 5 test cases** (other than the 'login' test case sample shown in the Test Case template).
8. **Implement the driver (main program)** which will test all the classes and methods declared according to the **class diagram** and test according to the **test cases**.

**Group work**

Remain to use the same Microsoft Team you set up for your Assignment. Again, you might be required to let the lecturer join the Team to observe team work among members. It is recommended that each member will implement a class and prepare a set of test cases.

**Presentation**

1. Your group will be required to present your project at the end of the semester.
2. A link will be provided on eLEAP to register for a presentation slot nearer to the time of submission.

**Report**

1. Your report must **document all the tasks** performed above in a document file.
2. Your report must **include the test cases** that you had prepared, which should follow the template given in this project.
3. Your report must not exceed **8 pages**.
4. Your report must include the **assignment cover sheet completed with signature**.

**Submission**

1. Due date for submission is on **5<sup>th</sup> January 2021, Friday, 10 am**. Late penalty of -5 marks per day applies.
2. Use the FCSIT standard cover with all information correctly filled and signed by all members.
3. Please submit **softcopy of your report and soft copy of your coding**.
4. Softcopy submission can be done through a link provided in eLEAP according to your group.

**Important Note**

1. This is your **final assessment** for this course and all the rules for final examination are applied.
2. Follow all the instructions given in this project.
3. High quality projects and substantial differences between each group project are expected.
4. Highly similar work can be considered as plagiarism. **Plagiarism** will not be tolerated and similar work from multiple groups you will be awarded a **FAIL** for this course.
5. **No contribution** to the project will also be awarded a **FAIL** for this course.
6. Safeguard your work in reliable storage and make duplicate copies. Excuses such as lost files, no internet access, computer damage or stolen, storage damage and the likes will not be entertained.

**TEST CASE TEMPLATE****Class Admin**

Test Case	Input	Action	Expected output	Actual Test Result
Log in				
Log in (positive)	Log in ID: admin Password: admin12#	Key in the log in ID and password	Log in successful and main page of Admin appears	Test Date: 12/12/2020 Fail. Error Page: Network problem
Log in (negative)	Log in ID: admin Password: 12#	Key in the log in ID and password	Log in fail and error page ID or password is wrong appears	Test Date: 12/12/2020 Pass.
Add User				
Manually Add user (positive)	User email: user123@gmail.com (make sure is setup correctly and have access to the email acc) Password: 123user\$	Log in with correct admin ID and password. Click Add button. Add the user email. Set the password. Click Add Button	User email user123@gmail.com successfully added to the database. Email sent to user123@gmail.com	