**COP 4331 - Fall 2014**

**Homework 1**

**Due: September 18, 2014**

* **No late submissions will be accepted**
* **Please submit the homework through Webcourses using the following format: COP4331\_Fall14\_HW#\_LastName\_FirstName.pdf, where # will be 1, 2, or 3.**
* **This homework assignment is an INDIVIDUAL assignment, not a team effort!!!**

**Problem statement:**

You are a designer for an online course tool for new public courses offered by a university. Your task is to handle the development of the system that allows users to interact each other and provides distance learning.

The following is the list of requirements of the system:

1. Each user should be able to log in to their account and register to a course.
2. Each teacher should be able to upload videos to the media library.
3. Each teacher should be able to create or edit exams and grade students’ exams.
4. Each teacher should be able to upload files.
5. Each student should be able to view the media library and watch videos online.
6. Each student should be able to solve an exam and send their answers to each question.
7. A student or a teacher should be able to create a personal profile which includes the following: Short biography, attended schools, age, gender, citizenship, and contact information.
8. Admins should be able to remove files and exams.
9. Admins should be able to view and manage user accounts.
10. Users should be able to send private messages to each other.

**Assignment:**

You are required to submit a digital copy of the following UML diagrams (no hand-drawn diagrams. Do not attempt to circumvent this by drawing your homework out on paper and scanning it). There are both open-source and proprietary UML tools (you can check Wikipedia for available UML tools: <http://en.wikipedia.org/wiki/List_of_Unified_Modeling_Language_tools>). Additionally, you are required to follow UML notations. Please submit your homework as a PDF based on the format provided above.

a) **Use Case Diagram** of the specified system

b) **Class Diagram** that includes the following classes: MediaLibrary, FileLibrary, VideoPlayer, User, Student, Teacher, Admin, ExamTool, MessageHandler.

c) **Sequence Diagram** of the following scenario in order: A student logs in, creates a personal profile, watch a video and solves an exam.