

**COP 4331 - Fall 2016**  
**Homework 1**  
**Due: September 27, 2016**

- Please submit the homework through webcourses using the following format: COP4331\_Fall16\_HW1\_LastName\_FirstName.pdf
- Homework assignment is an INDIVIDUAL assignment, not a team effort!!!
- No late submissions will be accepted

**Problem statement:**

You are working as a system analyst for a rental company in which a customer can lease entire apartment, shared or private rooms within an apartment or house within a city from one day to several months.

The following are the system requirements:

1. The system has three types of users: admin, landlord, and tenant.
2. The landlord should give his/her apartment or room specification (city, type, price per night, available dates, capacity in terms of number of guests, cleaning fee per person) and his/her personal information for verification purposes.
3. The landlord can upload a list of apartments/rooms to the company website.
4. The landlord should be able to print his/her previous tenants.
5. The tenant can view the list of available apartments, private rooms or shared rooms for the desired locations, dates within their price range.
6. The tenants should create an account and provide personal information including official picture IDs (driver's license, passport, and so on) in order to rent the property.
7. The admin is responsible for verifying the legitimacy of the landlords and tenants.
8. The system will ask the tenants the following information:
  - a. type of property (entire house or apartment, or individual/shared rooms within an apartment or house)
  - b. location (city)
  - c. dates (check in and check out)
  - d. price range
  - e. number of guests
9. The system will ask the landlord the following information:
  - a. type of property (entire house or apartment, or individual/shared rooms within an apartment or house)
  - b. location (city)
  - c. dates (check in and check out)
  - d. price (the landlord can change the price depending on the dates)
  - e. maximum number of guests
10. After the reservation is completed, the customer should pay the total price of the rental property.
11. Admin should be able to add/delete accounts and have access to all the documents.
12. The tenants and landlords can rate (5 star rating) and write comments about each other through the system after checking out.
13. Admin should be able to delete or edit the comments written by the landlords or tenants.

**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](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** of the specified system