

SE322: Software Design and Architecture

Activity 3: UMLI and Tools Workshop

Objective: In this activity, the students will learn how to use tools to draw diagrams and collaborate their work on drawing, revising and sharing charts and diagrams.

Expected Outcome: After completing this exercise, the students will be able to:

1. Use tools properly.

Course Learning Outcome:

1. CLO 6: Create, implement, and present an architecture and design in a group project.

Tool needed:

1. **Lucidchart:** <https://lucidchart.zendesk.com/hc/en-us/articles/207300186-Get-Started-with-Lucidchart>
2. **Visio:** https://www.tutorialspoint.com/microsoft_visio/microsoft_visio_tutorial.pdf
3. **StarUml:** <https://docs.staruml.io>
4. **Visual Paradigm:** <https://online.visual-paradigm.com/w/ouuzhxc/drive/#diagramlist:proj=0&new>

Also at the same time **Objective:** In this activity, the students will learn how draw class, and use case diagram.

Expected Outcome: After completing this exercise, the students will be able to draw:

2. Class diagram.
3. Use case diagram.

Course Learning Outcome:

1. CLO 3: Differentiate how various architectural styles and design patterns enhance and degrade a system's functional-and non-functional properties.
2. CLO 5: Present concise and unambiguous architecture and design descriptions.

3. CLO 6: Create, implement, and present an architecture and design in a group project.

Tool needed:

Visio, Lucidchart or StarUml

Resource:

1. Class diagram: <http://agilemodeling.com/artifacts/classDiagram.htm>
2. Use case diagram: <http://agilemodeling.com/artifacts/useCaseDiagram.htm>

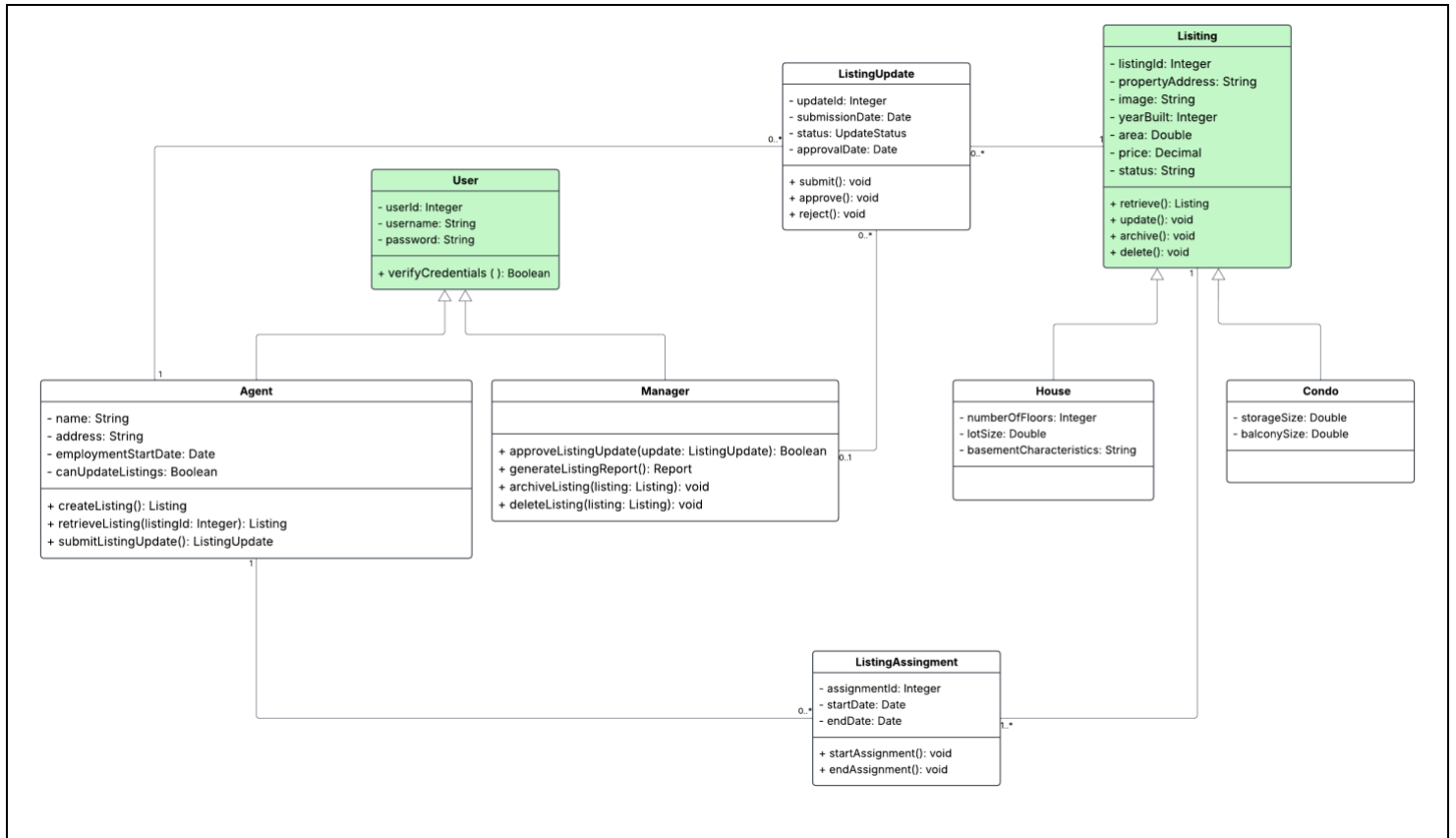
Question1:

A real estate company sells **houses** and **condos** (apartments). The company's **listings management system** stores evidence of **listings**. A **listing** contains the **property address, image, year it was built, area, and price**. In case of **houses**, people usually want to know **the number of floors, size of lot, and basement characteristics**. For **condos**, the **sizes of storage and of balcony** are distinguishing characteristics.

The company's system associates listings with **agent** records. These include **name, address, and employment start date**. A **single agent** manages **a number of listings** at a time. While a listing is usually managed by a **single agent**, sometimes it happens that a listing is **transferred from one agent to another**. **It is recorded when an agent starts and ends to manage a listing.**

The **real estate agents** and **managers** on the daily basis. To be able to do any job with the system, any user must **first have their credentials verified by the system**. An agent can create a listing and then retrieve it later when needed. Some agents can update listings as well. A listing **update** becomes complete only **after** a manager **approves** it. **Managers** can get **listing reports from the system**. They can also remove a listing to an archive file or, when the company ceases to market a **property**, to a **trash** can (deletion).

1. Create a **class diagram** for the above real estate system



2. Create the **use case diagram** for the above real estate System

