

CSCI-101 Programming 1

Lab 12, Part b - Week of Nov 28

INSTRUCTIONS

Write a class named **CommercialBuilding**.

- The class should store data for the square footage of the building (double), the address (String), and the number of units in the building (int).
- The class should set all of its fields in the constructor using arguments passed to the constructor.
- The class should have getters and setters for all of the fields.
- The class should override **toString** and return the building's address.
- The class should override **equals** and consider two commercial buildings equal if their addresses are the same.

Write a class named **ApartmentBuilding** that extends **CommercialBuilding**.

- The **ApartmentBuilding** class has additional field that indicates if there is a penthouse apartment in the building (boolean).
- The constructor should set all of the class fields using the values of the arguments passed into the constructor. The constructor should throw an **IllegalArgumentException** if the address is null.
- The class should have a getter and setter method for the new field.

Write an application in a file named **AptBuildApp.java** that creates two objects of type **ApartmentBuilding** for the apartment buildings described below and then prints the building addresses using the **ApartmentBuilding** class' **toString** method.

- The apartment building at "35 Main Street" has 24000 square feet, 16 units, and has a penthouse apartment.
- The apartment building at "100 Oak Avenue" has 3000 square feet, 2 units, and does not have a penthouse apartment.