Object-Oriented Programming Lab#7, Fall 23

Today's Topics

- Class/Object
- Access modifier
- package
- ArrayList

ArrayLIst:

Action	Code
Creating an ArrayList	ArrayList<T> list = new ArrayList<T>();
Adding element to arraylist	list.add(T t);
Adding multiple elements to arraylist	list.addAll(ArrayList<T> t);
Remove an element	list.remove(int index) list.remove(T t)
Remove multiple elements from an arraylist	list.removeAll(ArrayList<T> t);
Accessing an element	List.get(int index)
Size of arraylist	list.size();

Problems/Assignments – Property Management System

Create an Online property management system to help the owner of the property to manage and rent their properties. There will be 2 types of customers to this system; owner of the property and who wants to rent the property. Each owner has to create an account to the system to add their property info to the system. Customer also has to create account if he/she wants to rent a property.

Here is the list of the classes to implement the Application

1. **Property** Class (under **uap** package):
   a. Attributes (all private): id, description, location, category, ArrayList<String> facilites, expectedRent, isAvailable
   b. Constructor
   c. Methods:
      i. public void addFacility(String facility)
      ii. public void removeFacility(String facility)
      iii. add getter methods for all attributes
      iv. add setter method for rent and isAvailable
      v. public String toString()

2. **PropertyManager** class (under **uap** package):
   a. Attributes (all private): name, ArrayList<Property> properties
   b. Constructor

    c.   Methods:

         i.   public void addProperty(String id, String description, String category, ArrayList<String> facilities, double ren)

        ii.   public void addFacilites(id, ArrayList<String> facilities)

      iii.   public void removeFacilites(id, ArrayList<String> facilites)

      iv.   public int/Property findProperty(String id)

       v.   public void rentProperty(String id, double rent)
-   find the property and then set the isAvailable to false ad expectedRent to rent.

   vi.   public ArrayList<Property) findProperty(String location, String category)

   vii.   public void viewAll()

   viii.   public void viewDetails(String id)

      ix.   public ArrayList<Property> getProperties() – getter method for property attributes

3. **App** class (under **uap.app** package):
    a. Add main method, create an object of **PropertyManager** class and provide menu for each methods.