```
/*-------------------------------------------------------------------------------------------------
 * Author:      Dan Cassidy
 * Date:        2015-07-09
 * Assignment:  HW2-Project
 * Source File: Administrator.java
 * Language:    Java
 * Course:      CSCI-C 490, Android Programming, MoWe 08:00
-------------------------------------------------------------------------------------------------*/
import java.util.Scanner;

/**
 * Implements the Administrator class as per the instructions for Homework 2-Project.<br>
 * Class Invariant: All objects have a name string, hire date, non-negative salary, title string,
 * area of responsibility string, and supervisor name string. A name string of "No name" indicates
 * no real name specified yet. A hire date of Jan 1, 1000 indicates no real hire date specified yet.
 *  A title of "No Title" indicates no real title specified yet. An area of "No Area" indicates no
 * real area of responsibility specified yet. A supervisor's name of "No Supervisor" indicates no
 * real supervisor specified yet.
 * @author Dan Cassidy
 */
public class Administrator extends SalariedEmployee
{
    private String title = "No Title";
    private String area = "No Area";
    private String supervisorsName = "No Supervisor";

    /**
     * Default constructor for an Administrator object.
     */
    public Administrator()
    {
        super();
        // Nothing else to do, defaults are set already.
    }

    /**
     * 6-parameter constructor for an Administrator object.
     * @param theName Employee's name.
     * @param theDate Employee's hire date.
     * @param theSalary Employee's yearly salary.
     * @param title Employee's title.
     * @param area Employee's area of responsibility.
     * @param supervisorsName Name of employee's supervisor.
     */
    public Administrator(String theName, Date theDate, double theSalary, String title,
            String area, String supervisorsName)
    {
        super(theName, theDate, theSalary);
        this.setTitle(title);
        this.setArea(area);
        this.setSupervisorsName(supervisorsName);
    }

    /**
     * Copy constructor.
     * @param originalObject Original Administrator object to duplicate.
     */
    public Administrator(Administrator originalObject)
    {
        super(originalObject);
```

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61          this.setTitle(originalObject.getTitle());
62          this.setArea(originalObject.getArea());
63          this.setSupervisorsName(originalObject.getSupervisorsName());
64      }
65
66      // BEGIN GETTERS AND SETTERS -->
67      public String getArea()
68      {
69          return this.area;
70      }
71
72      public void setArea(String area)
73      {
74          if (area == null)
75              throw new NullPointerException("Area of Responsibility cannot be null.");
76          else if (area.equals(""))
77              throw new IllegalArgumentException("Area of Responsibility cannot be blank.");
78          else
79              this.area = area;
80      }
81
82      public String getSupervisorsName()
83      {
84          return this.supervisorsName;
85      }
86
87      public void setSupervisorsName(String supervisorsName)
88      {
89          if (supervisorsName == null)
90              throw new NullPointerException("Supervisor's Name cannot be null.");
91          else if (supervisorsName.equals(""))
92              throw new IllegalArgumentException("Supervisor's Name cannot be blank.");
93          else
94              this.supervisorsName = supervisorsName;
95      }
96
97      public String getTitle()
98      {
99          return this.title;
100     }
101
102     public void setTitle(String title)
103     {
104         if (title == null)
105             throw new NullPointerException("Title cannot be null.");
106         else if (title.equals(""))
107             throw new IllegalArgumentException("Title cannot be blank.");
108         else
109             this.title = title;
110     }
111     // <-- END GETTERS AND SETTERS
112
113     /**
114      * Equals method to determine equality between this Administrator object and another.
115      * @param other The other Administrator object that will be checked for equality.
116      * @return boolean, indicating whether this Administrator object is equal to <b>other</b>.
117      */
118     public boolean equals(Administrator other)
119     {
120         if (other == null)
```

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121             throw new NullPointerException();
122         else
123             return (super.equals(other) &&
124                     this.getArea().equals(other.getArea()) &&
125                     this.getSupervisorsName().equals(other.getSupervisorsName()) &&
126                     this.getTitle().equals(other.getTitle()));
127     }
128 
129     /**
130      * Overridden toString method to serialize this object into string form.
131      * @return String, representing this Administrator object in string form.
132      */
133     public String toString()
134     {
135         return (super.toString() + "\n" +
136                 this.getTitle() + " of " + this.getArea() + "\n" +
137                 "Supervised by " + this.getSupervisorsName());
138     }
139 
140     /**
141      * Interactive method to get information from keyboard input by the user.
142      */
143     public void readAdminInfo()
144     {
145         boolean valid = false;
146         Scanner keyboardInput = new Scanner(System.in);
147 
148         // Keep trying until fully valid input is obtained.
149         while (!valid)
150         {
151             try
152             {
153                 System.out.println("Employee's Name:");
154                 this.setName(keyboardInput.nextLine());
155                 System.out.println("Employee's Date of Hire:");
156                 Date tempDate = new Date();
157                 tempDate.readInput();
158                 this.setHireDate(tempDate);
159                 System.out.println("Employee's Yearly Salary:");
160                 this.setSalary(Double.parseDouble(keyboardInput.nextLine()));
161                 System.out.println("Employee's Title:");
162                 this.setTitle(keyboardInput.nextLine());
163                 System.out.println("Employee's Area of Responsibility:");
164                 this.setArea(keyboardInput.nextLine());
165                 System.out.println("Employee's Supervisor:");
166                 this.setSupervisorsName(keyboardInput.nextLine());
167                 valid = true;
168             }
169             catch (Exception ex)
170             {
171                 System.out.println("ERROR!");
172                 System.out.println(ex.getMessage() + "\n");
173             }
174         }
175     }
176 }
177 
```