1. Create a Java class which implements the following description.

*Practice Note:* Here I will provide a paragraph discussing a particular object. I’ll mention what kinds of information it needs when created, what kinds of things we can ask it to do, and what it actually does for each of these messages. You will need to add instance variables and methods as appropriate to implement what is described. For example:

Create a class called `HouseFan`, which controls a fan for a house’s heating and cooling. A `HouseFan` has the following state and behavior:

- Each `HouseFan` has a number of ranges, from 0 (off) to a maximum speed. Each speed setting is an integer. The speed of each fan might be different, but the maximum speed of a fan does not change once it is created.
- A `HouseFan` can be told to `adjustFan` and given the current temperature in the house as well as the desired temperature. If the temperature differential (the absolute value of the desired minus the current temperature) is \( x \), the fan sets its speed to \( \frac{\min(10,x)}{10} \cdot \text{maxSpeed} \).