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SWE 619

Assignment 10

The problem with the class is that it does not override the hashcode() method. As a result, the program is using the base class’ implementation of hashcode, which happens to be from Object in this case. This default implementation does not take into account the instance members of the class Name. Instead it generates a hashcode base on the instance of the Object, meaning two different instances of Name will generate different hashcodes, even if the values in first and last are the same. The contains method is dependant of hashcode to determine if the set contains the specified object. When contains is called in this example, a new instance of Name is passed as an actual parameter, and although it has the same values for first and last, it generates a different hashcode because it is a separate instance.

To fix this, an overridden version of the hashcode method must be implemented that takes into account the first and last members. This version of the hashcode method must be written in such a way that different instances of Name will produce the same hashcode if they have the same values for first and last. This way, after the first instance of “Mickey Mouse” is added to the set, when the contains() method is called with a new instance of Name “Mickey Moues” as the actual parameter, the hashcode for both instances will be the same and the contains method will return true.