1 **import** java.util.TreeMap;

2 **import** javax.swing.\*;

3

4 **public** **class** TreeMapApp

5 {

6 **public** **static** **void** main(String[] args)

7 {

8 TreeMap<String, Patient>patientInfo = **new** TreeMap<String, Patient>();

9 String lastName;

10 Patient p1 = **new** Patient("Tom Jones", "2/3/1989", "643 976-4545");

11 Patient p2 = **new** Patient("Amy Adams", "8/5/1991", "643 531-2283");

12 Patient p3 = **new** Patient("Norm Baum", "5/9/1945", "541 386-2371");

13 Patient p4 = **new** Patient("Ray Rondo", "2/6/1998", "643 736-2949");

14 Patient aPatient;

15

16 **//Save the key and value pairs in the collection**

17 patientInfo.put("Jones", p1);

18 patientInfo.put("Adams", p2);

19 patientInfo.put("Baum", p3);

20 patientInfo.put("Rondo", p4);

21

22 **//Fetch and output a patient's value (object)**

23 lastName = JOptionPane.showInputDialog("Enter a patient's last " +

24 "name \nClick Cancel " +

25 "to output all patients");

26 **while**(lastName != **null**) **//not a Cancel click**

27 {

28 aPatient = patientInfo.get(lastName);

29 if(aPatient == **null**) **//key is not in collection**

30 {

31 JOptionPane.showMessageDialog(**null**, "That person is not in" +

32 "our data base");

33 }

34 **else** **//output the value**

35 {

36 JOptionPane.showMessageDialog(**null**, aPatient);

37 }

38 lastName = JOptionPane.showInputDialog("Enter a patient's last " +

39 "name \nClick Cancel " +

40 "to output all patients");

41 }

42

43 **//Output all patients**

44 **for** (String key: patientInfo.keySet()) **//all keys in the collection**

45 {

46 aPatient = patientInfo.get(key);

47 System.out.println(aPatient);

48 }

49 }

50 }

**Figure 13.34 The application TreeMapApp.**