1 **import** java.awt.\*;

2

3 **public class** SnowmanV8

4 {

5 **private static int** w = 40;

6 **private static int** h = 77;

7 **private int** x;

8 **private int** y;

9 **private** String name; **//data members for aggregated objects**

10 **private** Hat aHat;

11

12 **public** SnowmanV8(**int** intialX, **int** intialY)

13 {

14 x = intialX;

15 y = intialY;

16 name = "sm"; **//aggregates a String object into this class**

17 }

18 **public void** show(Graphics g)

19 { int[] xPoly = {x + 20, x + 15, x + 25};

20 int[] yPoly = {y + 8, y + 13, y + 13};

21

22 if(aHat != null) **//snowman has a hat**

23 {

24 aHat.setX(x + w/2 - aHat.getW()/2); **//locate the hat on the head**

25 aHat.setY(y - aHat.getH());

26 aHat.show(g); **//draw the hat**

27 }

28 g.setColor(Color.WHITE);

29 g.fillOval(x + 10, y, 20, 20); **// head**

30 g.fillOval(x, y + 20, 40, 40); **// body**

31 g.setColor(Color.RED);

32 g.fillPolygon(xPoly, yPoly, 3); **// nose**

33 g.setColor(Color.BLACK);

34 g.setFont(new Font("Arial", Font.BOLD, 16));

35 g.drawString(name, x + 10, y + 45); **// name**

36 }

37

38 **public boolean** collidedWith(Hat hat)

39 {

40 **if**( !(x > hat.getX( ) + hat.getW() || x + w < hat.getX( ) ||

41 y > hat.getY( ) + hat.getH() || y + h < hat.getY( )))

42 {

43 **return** **true**;

44 }

45 **else**

46 {

47 **return false**;

48 }

49 }

50 **public void** setHat(Hat newHat)

51 {

52 aHat = newHat; **//aggregates a Hat object into this class**

53 }

54 **public int** getX()

55 {

56 **return** x;

57 }

58 **public void** setX(int newX)

59 {

60 x = newX;

61 }

62 **public int** getY()

63 {

64 **return** y;

65 }

66 **public void** setY(int newY)

67 {

68 y = newY;

69 }

70 }

**Figure 7.24 The class SnowmanV8.**