1 **import** javafx.application.Application;

2 **import** javafx.scene.Scene;

3 **import** javafx.scene.layout.Pane;

4 **import** javafx.scene.paint.Color;

5 **import** javafx.stage.Stage;

6 **import** javafx.event.ActionEvent;

7 **import** javafx.util.Duration;

8 **import** javafx.animation.KeyFrame;

9 **import** javafx.animation.Timeline;

10

11 **public** **class** Animation3 **extends** Application

12 {

13 **private** SnowManCanvas sm1;

14 **private** **double** speedX, speedY;

15

16 **public** **void** **start**(Stage primaryStage)

17 {

18 sm1 = **new** SnowManCanvas(0, 0, Color.GREEN);

19 speedX = 4.0;

20 speedY = speedX/2.63;

21

22 KeyFrame kF1 = **new** KeyFrame(Duration.seconds(0.03),

23 e -> kF1KeyFrameHandler());

24 Timeline tL1 = **new** Timeline(kF1);

25 tL1.setCycleCount(430);

26 tL1.play();

27

28 Pane root = **new** Pane();

29

30 root.getChildren().addAll(sm1.getCanvas());

31

32 Scene scene = **new** Scene(root, 600, 300, Color.LIGHTGRAY);

33

34 primaryStage.setTitle("Animation Using a Timeline");

35 primaryStage.setScene(scene);

36 primaryStage.show();

37 }

39

40 **public** **void** kF1KeyFrameHandler(ActionEvent e)

41 {

42 if((sm1.getCanvas().getTranslateY() >= 215.0) ||

43 (sm1.getCanvas().getTranslateY() < -1))

44 {

45 speedX = -speedX;

46 speedY = -speedY;

47 }

48 sm1.getCanvas().setTranslateX(sm1.getCanvas().getTranslateX() + speedX);

49 sm1.getCanvas().setTranslateY(sm1.getCanvas().getTranslateY() + speedY);

50 }

51

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

53 {

54 launch(args);

55 }

56 }

**Figure 11.29**

The application Animation3.