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.scene.input.MouseEvent;

7 **import** javafx.scene.input.MouseButton;

8

9 **public** **class** Animation2 **extends** Application

10 {

11 **private** SnowManCanvas sm1;

12 **double** deltaX, deltaY;

13 **boolean** sm1Clicked = false;

14

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

16 {

17

18 sm1 = **new** SnowManCanvas(280, 40, Color.BLUE);

19

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

21

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

23

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

25 scene.setOnMouseClicked((e) -> mouseClickedHandler(e));

26 scene.setOnMouseDragged((e) -> mouseDraggedHandler(e));

27

28 primaryStage.setTitle("Drawing On a Canvas");

29 primaryStage.setScene(scene);

30 primaryStage.show();

31 }

32

33 **public** **void** mouseClickedHandler(MouseEvent e)

34 {

35 **if**((e.getButton() == MouseButton.PRIMARY)) //a left click

36 {

37 **if**(e.getX() > sm1.getX() + sm1.getCanvas().getTranslateX() &&

38 e.getX() < sm1.getX() + sm1.getCanvas().getTranslateX() + 40 &&

39 e.getY() > sm1.getY() + sm1.getCanvas().getTranslateY() &&

40 e.getY() < sm1.getY() + sm1.getCanvas().getTranslateY() + 90)

41 { //the click was on the canvas

42 deltaX = e.getX() - sm1.getCanvas().getTranslateX();

43 deltaY = e.getY() - sm1.getCanvas().getTranslateY();

44 sm1Clicked = true;

45 }

46 **else** //the click was not on the canvas

47 {

48 sm1Clicked = false;

49 }

50 }

51 }

52

53 **public** **void** mouseDraggedHandler(MouseEvent e)

54 {

55 **if**(sm1Clicked == true && e.getButton() == MouseButton.PRIMARY)

56 {

57 sm1.getCanvas().setTranslateX(e.getX() - deltaX);

58 sm1.getCanvas().setTranslateY(e.getY() - deltaY);

59 }

60 }

61

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

63 {

64 launch(args);

65 }

66 }

**Figure 11.26**

The application Animation2.