The “Dragging” program uses three mouse operations, mousePressed, mouseDragged and mouseReleased. All three of these operations represent the three distinct mouse behaviors that the program can accept.

The mousePressed operation first checks if a second button is clicked at the same time, and if it does then it discards the second press. After this check it determines if the cursor is being dragged. If it’s not being dragged it returns out of the method. If it is being dragged, then it records the starting point of the cursor and keeps track of the previous position of the cursor. This allows the for the line to be drawn the two points by tracking the position of the cursor all through the movement. All the variables that store the start and most recent variables are instance variables because they are non-static and available to every method in the class.

The mouseDragged operation first checks if the mouse is being dragged, and if it is not then it exits the method. If it is dragging it gets the x and y positions of the cursor on the canvas, by calling a method for each co-ordinate. These variables that hold the current position of the mouse are local variables that are only available inside the mouseDragged method. At the end of the method, then assign the values to the prevX and prevY instance variables at the end of the method. The mouseDragged also checks that the cursor is on the canvas, and it also calls the methods to draw the lines on the canvas.

The mouseReleased method determines if the mouse button has been released and if it has then it changes the Boolean to false and stops drawing on the canvas.

References

Eck, D. J. (2019). *Introduction to programming using Java*, version 8.1. Hobart and William Smith Colleges. <http://math.hws.edu/javanotes/>.