This learning object teaches how to move an object toward a point using the unit vector to give it direction. You may want to do this if you wish to be more accurate in your movement towards a point rather than using multiple if statements.

To get the unit vector first you need the distance between two points. You can use the equation:

http://www.purplemath.com/modules/xyplane/dist07b.gif

But you will need the distances on the x and y plane so store them as separate variables, like so



To get the unit vector you need to divide the distance between the x values and the distance between the y values by the total distance:



Now you need to set your velocity as the unit vector multiplied by whatever force or speed you wish to use:



Finally you need to update the object position by adding on the velocity:



This can be used if you want to move an object toward a players touch in an iPhone application, if you want an object to follow the mouse in html, If you wish to out a homing missile in a game, etc. There are many uses