

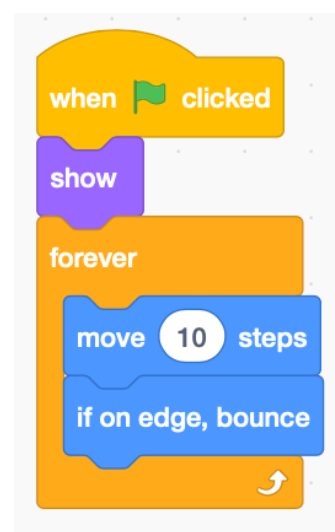
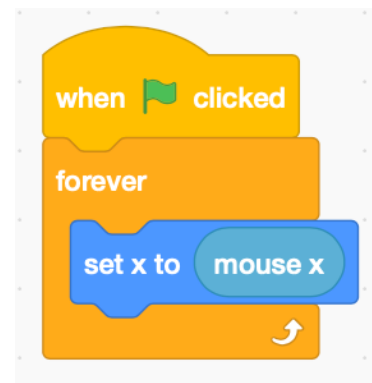
SCRATCH Breakout

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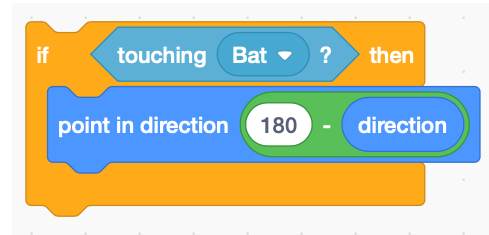
In Breakout, you have a paddle and a ball and have to knock out the bricks.



- 1) Make the bat. Create a new sprite and use **paint** to draw a rectangle in the centre.
- 2) Use the mouse to control the bat. Move the bat to the bottom of the screen and add code that **sets the x** (horizontal) position to **mouse x** in a loop.
- 3) Make a ball. Create a new sprite and use paint to draw a circle in the centre.
- 4) Add code to make the ball bounce around the screen. Make sure the ball is **showing** and then **move** the ball inside a loop. Add “**if on edge, bounce**” to bounce off the edges.
- 5) **Hide** the ball if it gets past the bat. Add an **if** block to the loop to detect when the vertical (y) position of the ball nears the edge, before it bounces. Experiment with the y position.

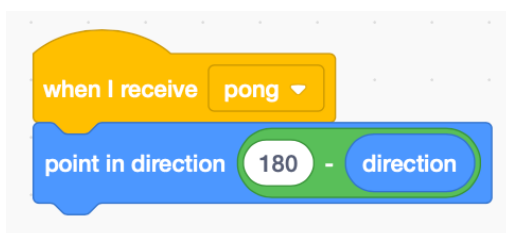
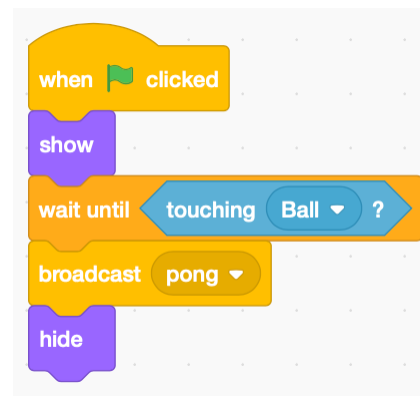


- 6) When the ball is **touching** the **bat** it has to bounce off. Add an **if** block that changes the ball **direction**, subtracting it from 180° (180 degrees is half a circle).
- 7) Give the player more control over the bounce by adding the horizontal (x) difference between the ball and the mouse, to the direction.



Add this inside the **if** block above.

- 8) Make a brick. Create a new colourful square sprite.
- 9) The brick will disappear when the ball hits it. Use **wait until touching Ball**.
- 10) To make the ball bounce off the brick, broadcast a 'pong' message to the ball.
- 11) When the ball **receives** the pong message it bounces the same way it bounced off the bat.



*Click on the green flag to restart the game.
Duplicate more bricks. Try adding a score.*

Save your code with a good name. **File > Save now**