A Breakout Game Created in Scratch

http://cs.oregonstate.edu/~mjb/scratch

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Events

- when clicked
- when space key pressed
- when this sprite clicked
- when backdrop switches to backdrop1
- broadcast message1
- when I receive message1
Data

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**Make a Variable**

- **Speed**
  - set Speed ▼ to 0
  - change Speed ▼ by 1
Control

- wait 1 secs
- repeat 10
- when I start as a done
  - forever
    - create clone of myself
  - if then
    - delete this done
  - else
  - wait until
- repeat until
Sensing

touching mouse-pointer?
touching edge?
touching color?
distance to mouse-pointer?
key space pressed?
mouse down?
mouse x
mouse y
x position of Sprite1
y position of Sprite1
direction of Sprite1
size of Sprite1
Operators

- Pick random 1 to 10
- Less than, equal to, greater than
- And, or, not
- Sin of 9
- Cos of 9
Motion

- move 10 steps
- turn 15 degrees
- turn 15 degrees
- point in direction 90°
- point towards mouse-pointer
- go to mouse-pointer
- go to random position
- change x by 10
- change y by 10
- set x to 0
- set y to 0
- if on edge, bounce
Scratch Handles the Directions you are Going Like a Compass Does
Three Actors

Displaying Data Variables

Three Actors
Paddle

When the program starts, set some good values into the variables, get everyone else going, then have the Paddle continuously follow the mouse pointer.

The 'q' key can end the game.
Bricks

Create the bricks to start with

Test to see if you've won

when I receive CreateBricks
show
repeat BricksLeft
create clone of Button3
hide

when / clicked
wait until BricksLeft = 0
broadcast YouWin

Position each brick in a random location. Then, wait for the Ball to hit the brick. When it does, decrease the brick count, bounce the Ball (which will result in a pop sound), and delete this brick.

when I start as a clone
go to x: pick random -240 to 240 y: pick random 50 to 180

forever
wait until touching Ball
set BricksLeft to BricksLeft - 1
broadcast BounceBall
delete this clone
Ball -- top

- **when clicked**
  - Start the ball

- **set rotation style** all around

- **go to x:** pick random -200 to 200  **y:** pick random -50 to 50

- **point in direction** pick random -45 to 45

- **when clicked**
  - Handle the ball getting by the paddle

- **forever**
  - wait until y position < PaddleY
  - play sound crash beatbox
  - set BallsLeft to BallsLeft - 1
  - go to x: pick random -200 to 200  **y:** pick random -50 to 50
  - point in direction pick random -45 to 45

- **when I receive** BounceBall
  - **point in direction** 180 - direction
  - turn pick random -20 to 20 degrees
  - play sound pop

- **when I receive** YouWin
  - say You Win!
  - play sound whoop until done
  - stop all

- **when clicked**
  - Move the ball

- **forever**
  - move Speed steps
  - if on edge, bounce

- **when I receive** YouWin
  - Handle winning
Ball -- bottom

when I receive StartGame
forever
wait until touching Paddle
point in direction 180 - direction
turn ( ) pick random -20 to 20 degrees
play sound pop

when I receive StartGame
wait until BallsLeft = 0
say You lose!
play sound laugh-male2 until done
stop all

when clicked
Make the Ball move faster
forever
wait until key f pressed?
set Speed to Speed + 1

when clicked
Make the Ball move slower
forever
wait until key s pressed?
set Speed to Speed - 1