

# Cat Script



x: 10  
y: 71

when up arrow key pressed

TryCatMove 0 10

when down arrow key pressed

TryCatMove 0 -10

when left arrow key pressed

TryCatMove -10 0

when right arrow key pressed

TryCatMove 10 0

define TryCatMove x change y change

change x by x change

change y by y change

if touching color ? then

change x by x change \* -1

change y by y change \* -1

## Mouse Script Without Cloning

New Variable

Variable name:

For all sprites  For this sprite only

The image shows a Scratch script for a mouse movement without cloning. The script is organized into several parts:

- when green flag clicked:**
  - Pick Mouse Direction:** A block that sets the `direction` variable to a random value between 1 and 4.
  - forever loop:**
    - if direction = 1 then:** `TryMouseMove` (10, 0), `point in direction` (90).
    - if direction = 2 then:** `TryMouseMove` (-10, 0), `point in direction` (-90).
    - if direction = 3 then:** `TryMouseMove` (0, 10), `point in direction` (0).
    - if direction = 4 then:** `TryMouseMove` (0, -10), `point in direction` (180).
- define TryMouseMove:** A function that takes `x change` and `y change` as arguments. It changes the x and y coordinates by the specified amounts. It then checks if the mouse is touching a color or the edge. If so, it reverses the x and y changes and picks a new direction.

## Mouse Script With Cloning

The image shows a Scratch script for a mouse cursor that clones itself and moves in different directions based on mouse clicks. The script is organized into several sections:

- Initial Setup:** A "when green flag clicked" event triggers a "show" block, followed by a "repeat 10" loop containing "create clone of myself" and "change color effect by 20". After the loop, a "hide" block is executed.
- Clone Behavior:** A "when I start as a clone" event triggers a "Pick Mouse Direction" block, followed by a "forever" loop. Inside the loop, four "if" blocks check the "direction" variable (1, 2, 3, 4) and call "TryMouseMove" with specific x and y changes, followed by "point in direction" blocks.
- TryMouseMove Function:** A "define TryMouseMove" block takes "x change" and "y change" as arguments. It updates the x and y coordinates and includes an "if" block that checks "touching color" or "touching edge". If true, it reverses the x and y changes and calls "Pick Mouse Direction".
- Pick Mouse Direction Function:** A "define Pick Mouse Direction" block sets the "direction" variable to a "pick random 1 to 4" value.

```
when green flag clicked
  show
  repeat (10)
    create clone of myself
    change color effect by (20)
  hide

when I start as a clone
  Pick Mouse Direction
  forever
    if (direction = 1) then
      TryMouseMove (10) (0)
      point in direction (90)
    if (direction = 2) then
      TryMouseMove (-10) (0)
      point in direction (-90)
    if (direction = 3) then
      TryMouseMove (0) (10)
      point in direction (0)
    if (direction = 4) then
      TryMouseMove (0) (-10)
      point in direction (180)

define TryMouseMove x change y change
  change x by x change
  change y by y change
  if (touching color ? or touching edge ?) then
    change x by (x change * -1)
    change y by (y change * -1)
    Pick Mouse Direction

define Pick Mouse Direction
  set direction to pick random (1) to (4)
```

Coordinates: x: -207, y: 63

## Game Ideas

1. Cat gets a point each time it touches a mouse.
2. When cat touches a mouse, the mouse clone deletes. How quickly can you get all the mice?
3. Cat has to get to goal *without* touching a mouse. When it touches a mouse it goes back to the start.
4. Mice shoot spit-ball at the cat.
5. Cat shoots spit-ball at the mice.