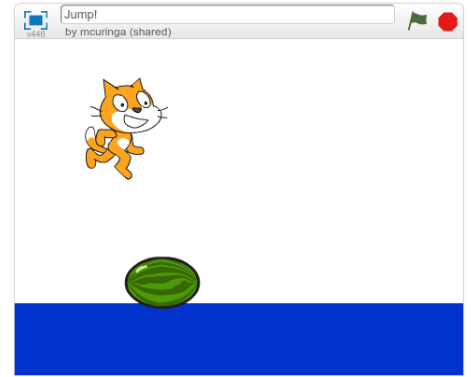


Jump!

Use these blocks to help scratchy jump over things, and detect collisions and crashes.

Tags: x-y coordinates, predicates, indefinite loops, keyboard events, jump, gravity, platformer, games



1

When the program starts, use a **forever loop** to check for a **key press event**. If the space bar is pressed, **then glide** up, keeping **x** the same and adding **140** pixels to the **y**. **140** is the height of the jump.

To “fall” down, add a **repeat until** loop that ends when the sprite is touching the color of the ground. In the loop body, subtract from **y**. **-4** is the speed the sprite falls.



2

Switch to the watermelon sprite. We will write some custom blocks to make the code clearer.

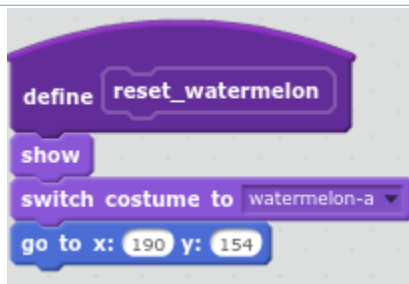
When the program starts, use a **forever loop** to control the watermelon. In the loop body:

- 1) reset the watermelon 
- 2) use a **repeat until** loop to drop it to the floor
- 3) roll it across the screen



3

reset_watermelon is a custom block that gets the watermelon sprite ready to drop. It shows the sprite, switches the **custom** and uses a move block to set the position.



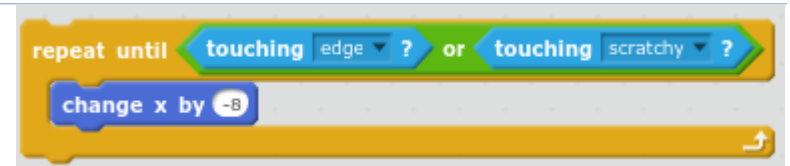
4

roll is the custom block that does most of the work for the watermelon sprite. It rolls it across the screen until it either crashes into Scratchy or gets to the edge. Then it either resets for the next watermelon, or ends the game.



5

Here we use a **repeat until** loop where the loop body moves the watermelon across the screen to the left by subtracting from **x**. **-8** controls the speed the watermelon moves.



This loop uses the **or** operator to know when it should stop running. Here, the loop stops if the watermelon touches the edge **or** touches Scratchy.

6

After the loop finishes, the code wants to know if the loop ended because the watermelon reached the edge or hit Scratchy.

The **if then** statement calls the **reset_watermelon** custom block if the watermelon sprite reaches the edge. **else** the code knows that the watermelon hit Scratchy. For this condition, the code changes the watermelon costume and stops the program.

