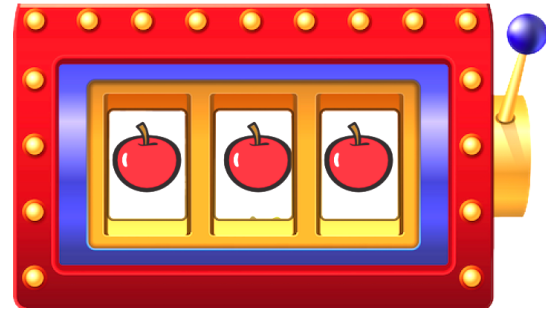


# SCRATCH Bandit



Register/login at

<https://scratch.mit.edu>

*A one-armed bandit (fruit machine).*

1) Download the bandit graphic

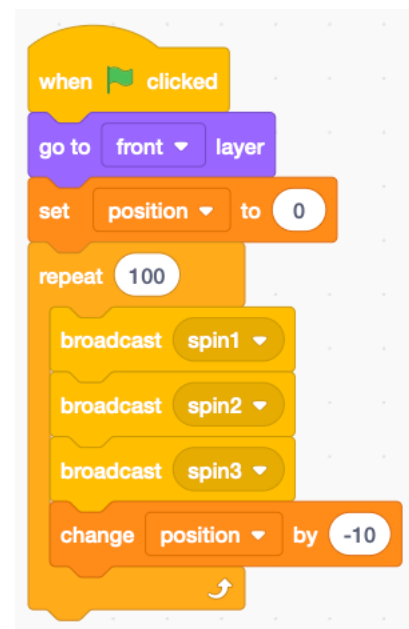
<http://codeclub67.github.io/images/bandit.png>

2) Create a new sprite from this graphic and position it at x=0, y=0.

3) Don't show it for now (crossed eye).

4) Create a new **variable** called **position** (for all sprites).

5) Add code (right) to the bandit to spin the three rotors we'll create below. The change in position is negative because the fruit moves *down* the screen.



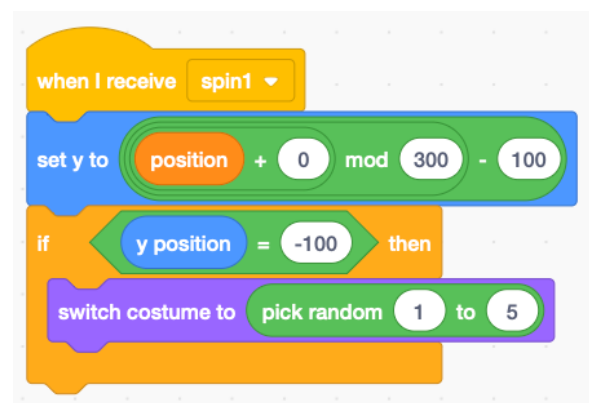
Bandit code

6) Create a new sprite and choose a "fruit".

7) Rename the sprite "fruit".

8) Open the **costumes** tab and choose four more fruit costumes so 5 in total.

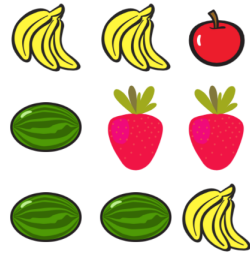
9) Add code (right) to the fruit.



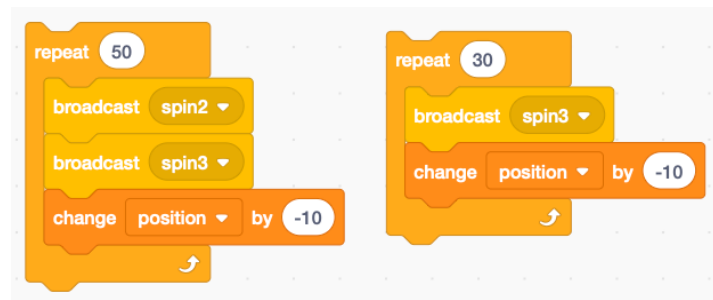
Fruit code

$((\text{position} + 0) \bmod 300) - 100$

There are 3 rotors and each has 3 faces on show, so we need 9 sprites arranged 3 by 3. Each fruit is 100 pixels high so the total height is 300. The **modulus** is the remainder after dividing by 300. Everything is moved down the screen by one third of 300 (subtract 100) to make room for two rows above. When it rotates back to the topmost position (-100) it selects a new fruit costume at random.



- 10) Duplicate the fruit until you have 9 of them and arrange them 3x3. *Double-click* a sprite to select it.
- 11) Change the fruit in the 2nd column to receive **spin2**, and the 3rd column to received **spin3**.
- 12) Change the fruit in the 1st column to have x=-120, the 2nd column x=-20, and the 3<sup>rd</sup> column x=70.
- 13) Change the fruit in the 2nd row to add 200 to the position, and those in the 3rd row to add 100.
- 14) Show the bandit again.  
Make it more realistic by adding code to spin the 2<sup>nd</sup> and 3<sup>rd</sup> rotors for a bit, then finally the last rotor.



Bandit code

*Change the bandit to run when you click on the sprite.*

*Can you detect when the three fruit are the same?*

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