

Rebounder

Adventure Mode - Play and Explore!

Overview

Your game already works, but how can you make it better? Adventure modes are all about exploring new ideas and making new features in your game. To get you started, we have come up with four ideas for adventure modes. You can complete these, or come up with your own!

Let's Get Started

Open a web browser and go to scratch.mit.edu. Log in to your account and go to **my stuff** by clicking on your profile menu in the top right. Open the rebounder project that you have already started.

These are suggestions, so you can try one, all, or even create your own adventure mode. Have **fun!**

Materials

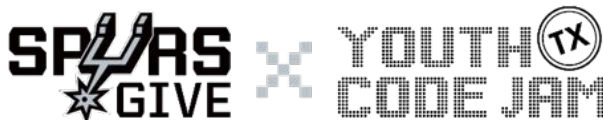
- Computer or Chromebook
- Internet connection
- Web browser

1

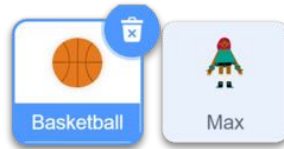
Change the difficulty with variables

- Add a variable for the speed of the ball and increase (or decrease) it at points thresholds.
- Add a variable for the speed of the player and increase it at points thresholds.
- Add variables for the min and max random time between generating clones of the ball. Decrease the time at points thresholds.
 - Don't go below the travel time of the ball after it "misses," or it will spawn a new clone and delete the old one before you have a chance to rebound it.
- Add a variable to store the amount of time the player has to grab the rebound after it hits the ground before someone else steals it!

*Example code is on the next page.



a New code for the basketball:



```

define brick
  go to x: pick random -220 to 220 y: 200
  show
  glide .2 secs to x: 7 y: 114
  set pitch effect to pick random 0 to 10
  start sound basketball bounce
  glide bball speed secs to x: pick random -220 to 220 y: -200
  wait steal seconds
  delete this clone

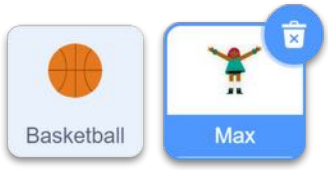
when clicked
  hide
  set rebounds to 0
  set random low to 3
  set random high to 5
  set bball speed to 1.5
  set player speed to 10
  set steal to 1
  forever
    wait pick random random low to random high seconds
    create clone of myself

when clicked
  forever
    if rebounds > 39 then
      set random low to 1
      set random high to 2
      set bball speed to .6
      set player speed to 20
      set steal to .2

when clicked
  forever
    if rebounds > 19 then
      set random low to 1.5
      set random high to 2.5
      set bball speed to .85
      set player speed to 15
      set steal to .5
  
```

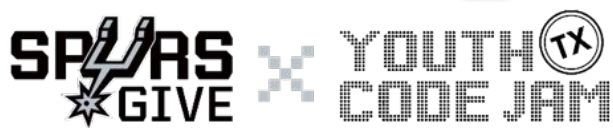


b New code for the player:



```

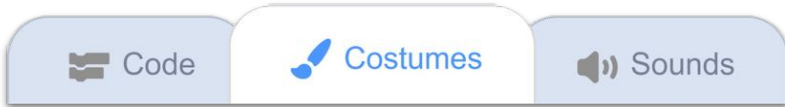
when clicked
  forever
    if key left arrow pressed? then
      point in direction -90
      change x by player speed * -1
    if key right arrow pressed? then
      point in direction 90
      change x by player speed
  
```



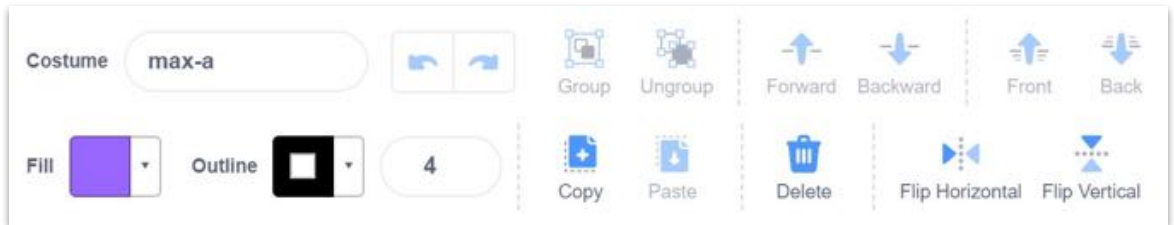
2

Customize your character.

- Using the costume editor, edit the costumes of your sprite to make it look like they're wearing Spurs gear.
 - Change the jersey.
 - Change the shorts.
 - Change the shoes.
- Who is your favorite basketball player? Can you add their number to your jersey?
- Can you make the player look like you or your favorite teammate?



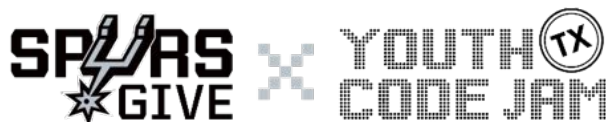
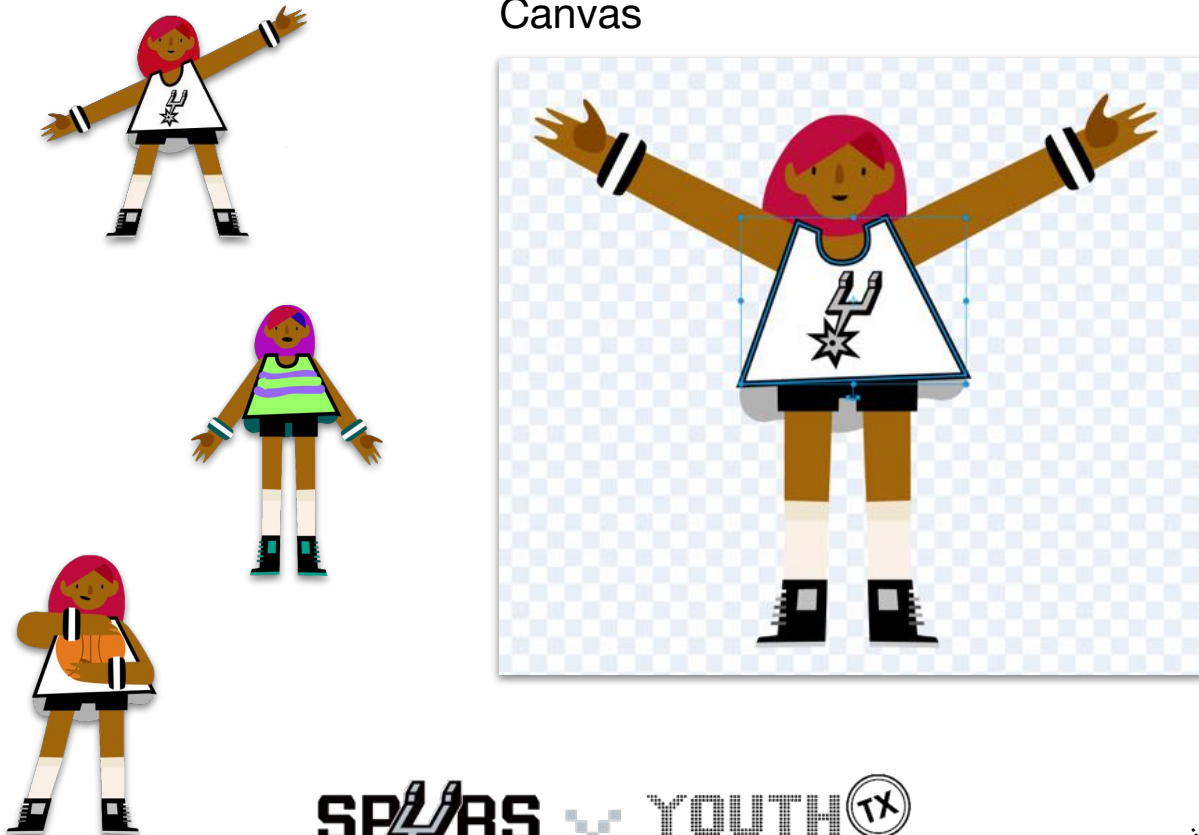
Properties



Tools



Canvas

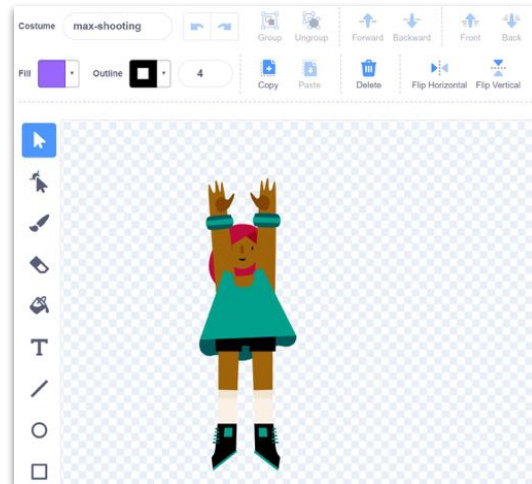


3

Catch and shoot.

- Press the spacebar a couple seconds after catching a rebound to shoot the ball for more points.
- Animate the ball to look like it's traveling from the player to the hoop.
- Animate the player to look like they're shooting the ball when you press the spacebar.
- Add a new variable to store the points you get from shooting the ball and increase every time you make a basket.

a Make a new costume for the player:



b New code for the player:

```

when clicked
  go to x: 0 y: -133
  set rotation style left-right
  forever
    if on edge, bounce
    if touching Basketball and not costume number = 5 then
      rebound
  
```

Hint: Right click a costume and duplicate. Then change the arms to make them look like the player is shooting the basketball.

```

define animateReboundShot
  switch costume to max-shooting
  change y by 10
  wait .3 seconds
  change y by -10
  switch costume to max-b
  
```

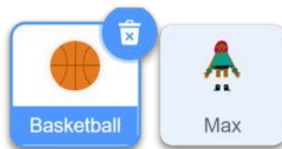
```

define reboundShot
  create clone of Basketball
  animateReboundShot
  
```

```

when space key pressed
  if costume number = 4 then
    set max_Xpos to x position
    reboundShot
  
```


C New code for the ball:



```

define shoot
  go to x: max_Xpos y: -25
  show
  glide 0.7 secs to x: 7 y: 124
  start sound basketball bounce
  change points by 1
  delete this clone

when I start as a clone
  if key space pressed? then
    shoot
  else
    point towards Max
    brick
  
```

4

Enter player 2.

- Add another player to play against someone locally.
- The other player can control their sprite with the 'a' and 'd' keys.
- Make a new variable to store the score for player 2.



```

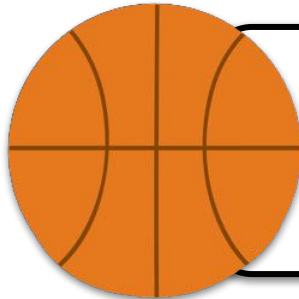
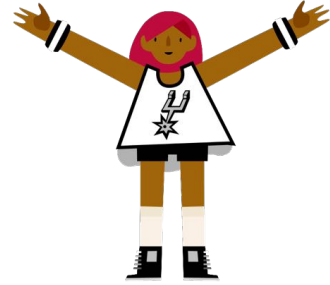
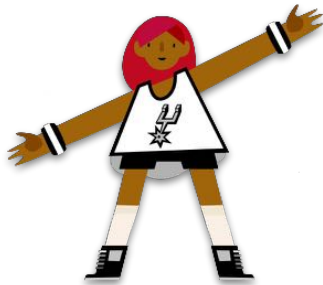
when clicked
  forever
    if key a pressed? then
      point in direction 90
      change x by -10
    if key d pressed? then
      point in direction 90
      change x by 10

when clicked
  set score to 0
  go to x: 0 y: -90
  set rotation style left-right
  forever
    if on edge, bounce
    if touching Basketball ? then
      broadcast delete clone
      change score by 1
  
```

5

Make your own adventure.

- What would **YOU** like to add to your game? Playing the game can help you understand what you would like to improve!
- Make a list of steps that you need to take to complete your own adventure mode.
- Don't have a computer with a keyboard? You can improve your game to work on your own device.
- Remember that if you get stuck, you can always take a break and come back with a fresh brain.
- Have **FUN!**



Post a screen capture of your project, or a picture of you coding and use **#spursgivecoding**

Example Projects

You can find examples projects of the different adventure modes by using these links:

Change the difficulty - <https://scratch.mit.edu/projects/404113576>

Customize your character - <https://scratch.mit.edu/projects/403337137>

Catch and shoot - <https://scratch.mit.edu/projects/397893368>

Enter player 2 - <https://scratch.mit.edu/projects/397860767>

Comment on the projects if you have any suggestions or find any bugs!