TUTORIAL FOR SCRATCH

Tron

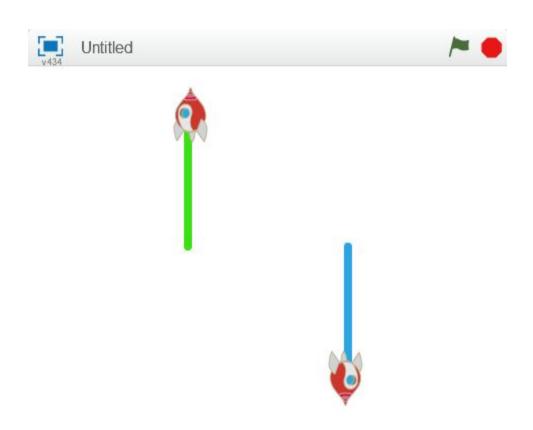


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Disclaimer

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For the Best Viewing Experience

1. Turn off Print Outline:

In the top menu, click on **View** and **uncheck Print Layout.** There should not be any gap between the pages now.

2. Show Document Outline:

In the top menu, click on **View** and **check Show document outline** or press Ctrl + Alt + A.

Introduction

In this Tutorial, we will cover how to make a Tron game in Scratch. No programming experience is required.

Have fun learning and welcome to Lavner Camps!

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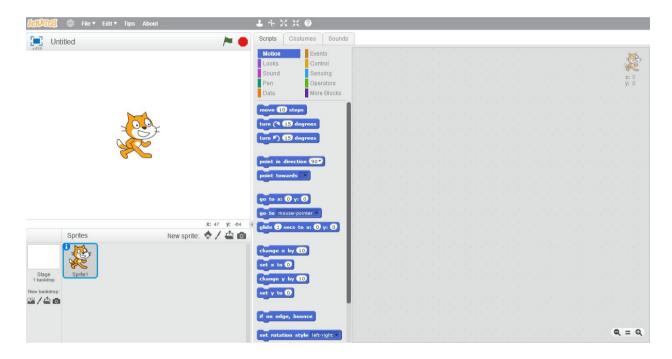
Phone: (610) 200 6264

Making a Tron Game

We will make a game called Tron Game. This is a two player game. There are 2 spaceships going around in different directions. When they move, they leave a trail behind in their color. If a spaceship touches the other spaceship's trail, they lose the game.

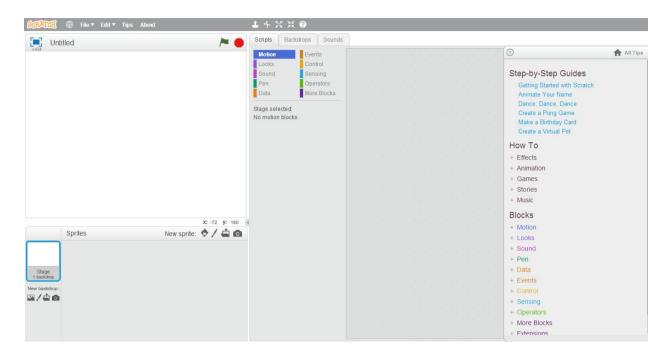
Start the game with "File" - "New"

You should have the usual blank template.

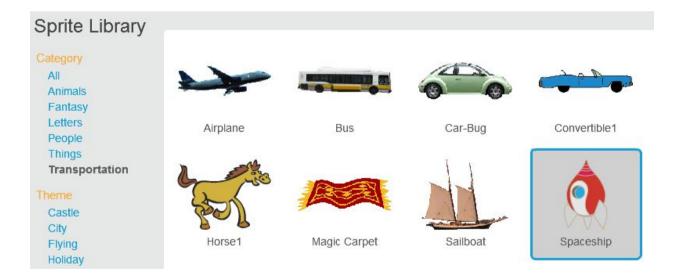


Now save your game. Saving often should become a habit.

We won't need the Cat in our game so go ahead and use the Scissor tool to delete it.



Next, click on Choose sprite from library. Select Transportation and then Spaceship

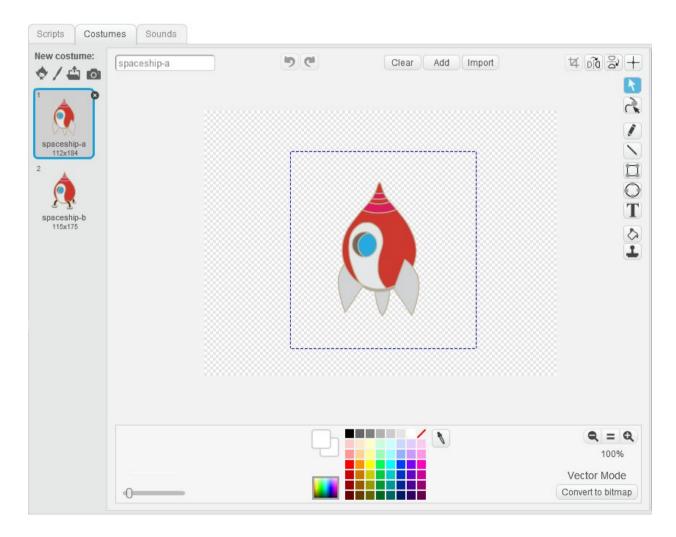


Your Sprite list should be like this



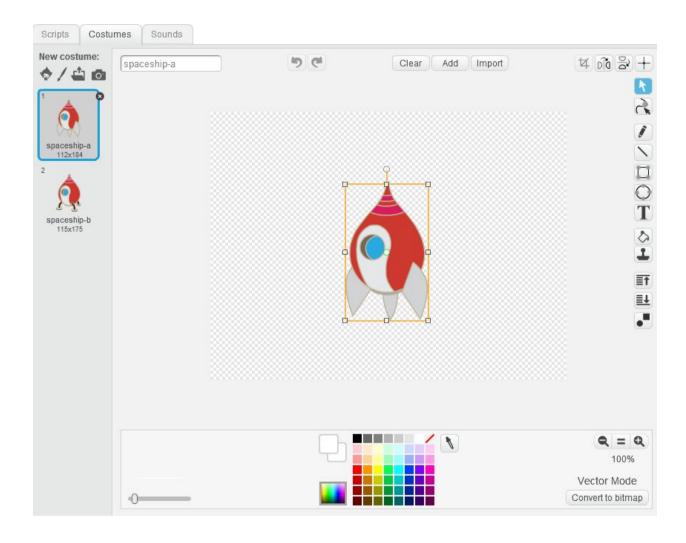
Now click on Costumes tab on the top of the screen

Draw a rectangle surrounding all the Spaceship like this



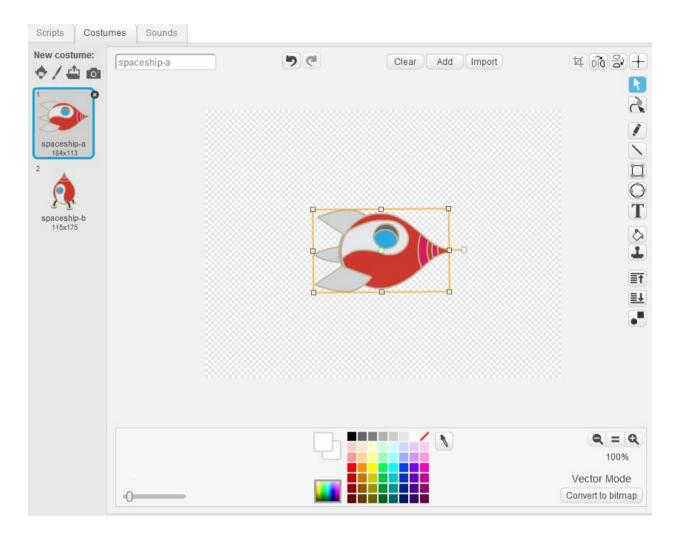


You should have this





Now click on the tip on top of the Spaceship and rotate the ship 90 degrees to the right. You will know when the mouse cursor changes its shape.



Now your Sprite list should be like this



Coding Tron

In this game we will learn to use the **Pen tool.** The Pen tool allows sprites to draw paths on the screen. But before we add any code, let's go to "Data" and make a new variable called "game running".

```
Make a Variable

game running

set game running to 0

change game running by 1

show variable game running

hide variable game running

Make a List
```

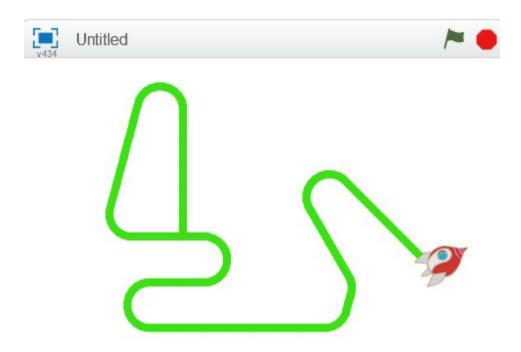
Now go ahead and add in the following code

```
when 🦊 clicked
set size to 30 %
go to x: (-80) y: (0
point in direction 07
set pen color to
set pen size to 8
pen down
        game running = true ther
    move 6 steps
        key a pressed?
      turn 🖹 15 degrees
        key d pressed?
                            ther
      turn (* 15 degrees
         touching color
      broadcast player 2 wins
```

Let's take a look at this from top to bottom. When the green flag is clicked, we will set the ship size to 30%, move it to its original position, point it upward, set pen color to "Green", set pen size to 8 and have the pen down (drawing mode). Then we will start the forever loop, in the loop we will check if the game is running using variable "game running". If it is, we will have the ship move 6 steps. If player 1 moves left (pressing 'a') or right (pressing 'd'), we will rotate the ship accordingly. If the ship touches the color "Blue" (from player 2), we will broadcast the event "player 2 wins".

You can try running the game to test this out a little. Obviously there is only one ship right now, but it's good to test your game often as you work.

You should see something like this:



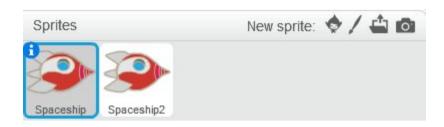
Now let's add some messages for winning and losing!

```
when I receive player 2 wins very set game running very to False say Armmuning very for 2 secs stop all very when I receive player 1 wins very say I win! for 2 secs
```

Feel free to customize these however you want.



Great, now let's make another spaceship. We can just duplicate the Spaceship.

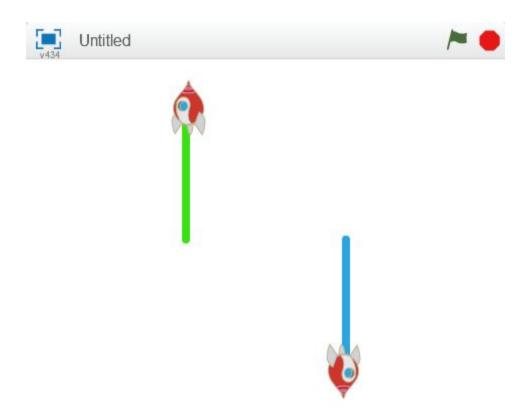


Make sure you change the **color**, **starting position & direction**, **and the key assignments** for spaceship2 as well..

Your code should look like this

```
when 🏴 clicked
                                              when I receive player 1 wins 🔻
set size to 30 %
                                              set game running 🔻 to false
go to x: 80 y: 0
                                              say Arrrrrrrrrrrrrrrrrrrgh for 2 secs
point in direction 1807
                                              stop all 🔻
set pen color to
set pen size to 8
                                               when I receive player 2 wins 🔻
pen down
                                               say I win! for 2 secs
        game running = true then
    move 6 steps
        key left arrow pressed? then
       turn 🔊 15 degrees
        key right arrow pressed?
       turn (* 15 degrees
        touching color ? then
       broadcast player 1 wins
         (ك
```

Your screen should be similar to this when started



Now, click on the "Stage" and add in the following code



Great, now you're done with the Tron Game. Congratulations!

Addons for Tron

Now that you have completed Tron, it is the time for some addons to your game to make it more interesting and challenging.

You can try some suggestions below or make up your own. The possibilities are endless.

Some suggestions for addons:

- Add boost up sprites. For example, something that will give you extra speed or allow you to move through your opponents lines temporarily
- Add a third rocket with a different color
- Add Sounds, Music to your game

Always remember: have fun!

Extra Levels for Tron

To create extra levels, you just need to make new backdrops and reset the pens and the rocket positions.

You should make at least 3 extra levels. Be creative!