

# 3. Shoot and Health

## Series

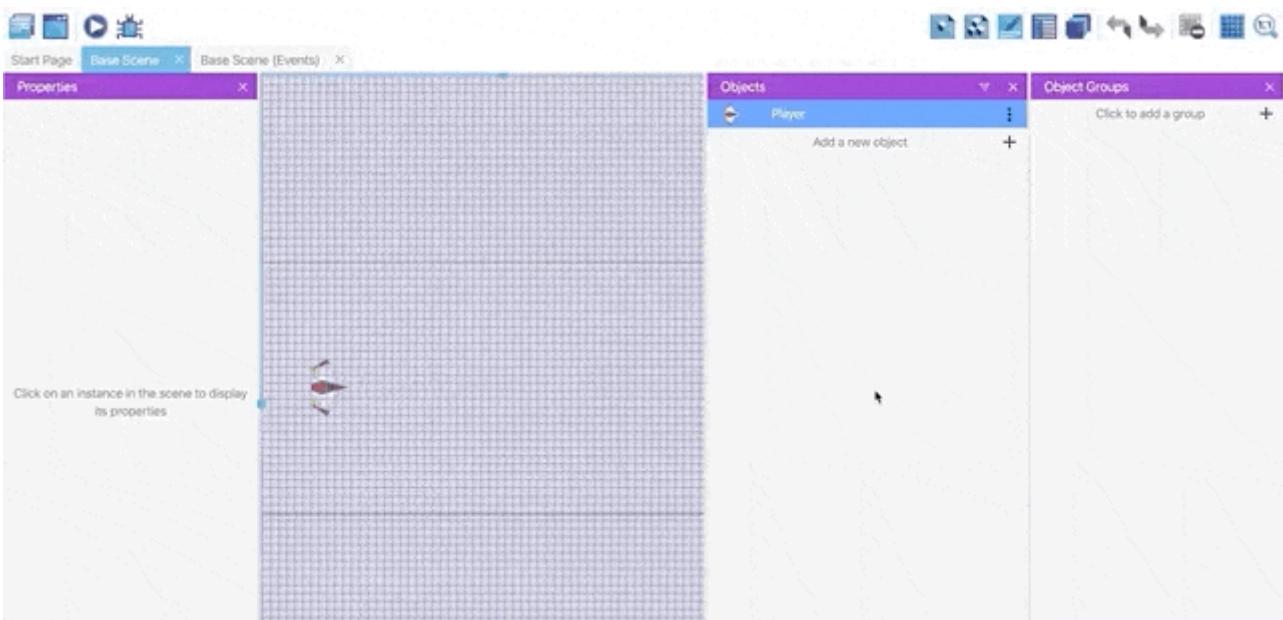
You are reading **Part 3** of the [Space Shooter Tutorial](#).

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In this chapter, we will learn how to use **Behaviours** in our game. You can read the [Behaviors](#) page to learn more about them. Behaviors add extra capabilities to objects. All objects can have one or more behaviors attached to it.

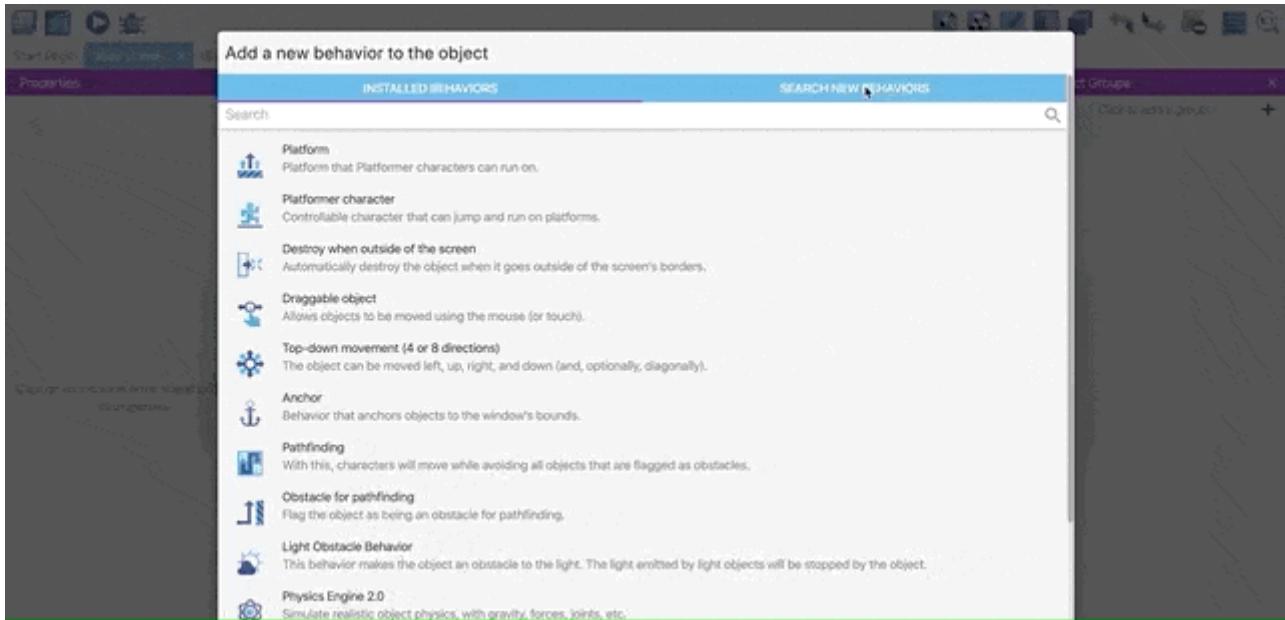
## Install health and fire behaviors

Select the three dots next to the Player object and click **Edit object**. Then, click the **Behaviors** tab.

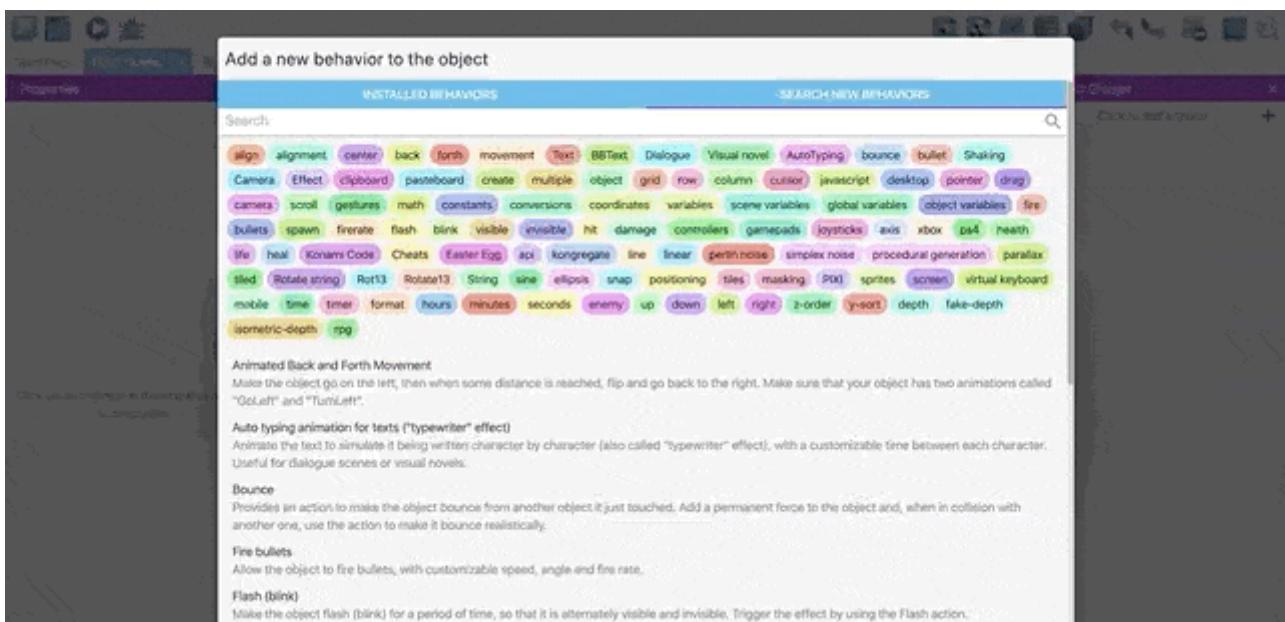


Click on the **Add a new behavior to the object** and select **Search new**

**behaviors** tab. Now you can type “**Health**” on the search bar to find our behavior. Select the **Health** behavior and install it. By doing that, we will be able to use this behavior in the future without downloading it again.



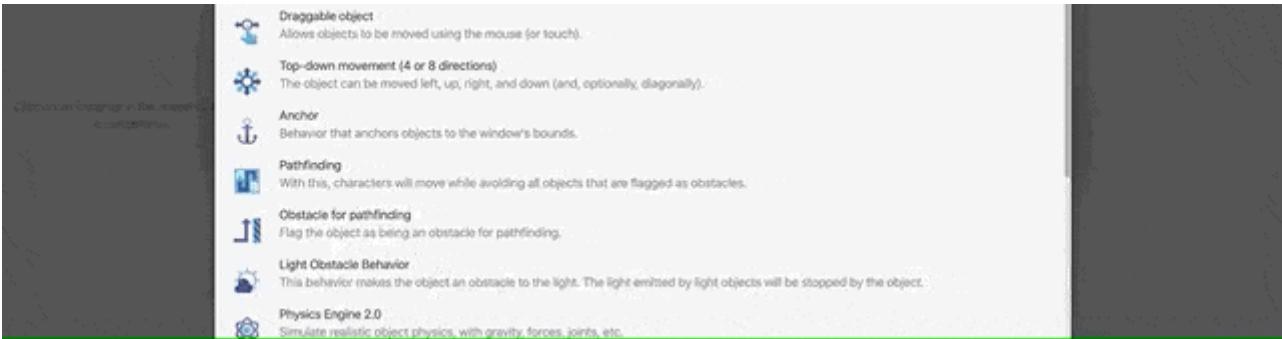
Repeat the same step to install **Fire Bullets** behavior.



## Add health and fire capability to the player

On the player's edit view, click on **Add a new behavior to the object** and search “**fire**” on **Installed Behaviors**. Then, select **Fire Bullets**. We'll now be able to fire bullets using an action that we'll add in the next steps.





Set cooldown to **0.3**.

## PROPERTIES

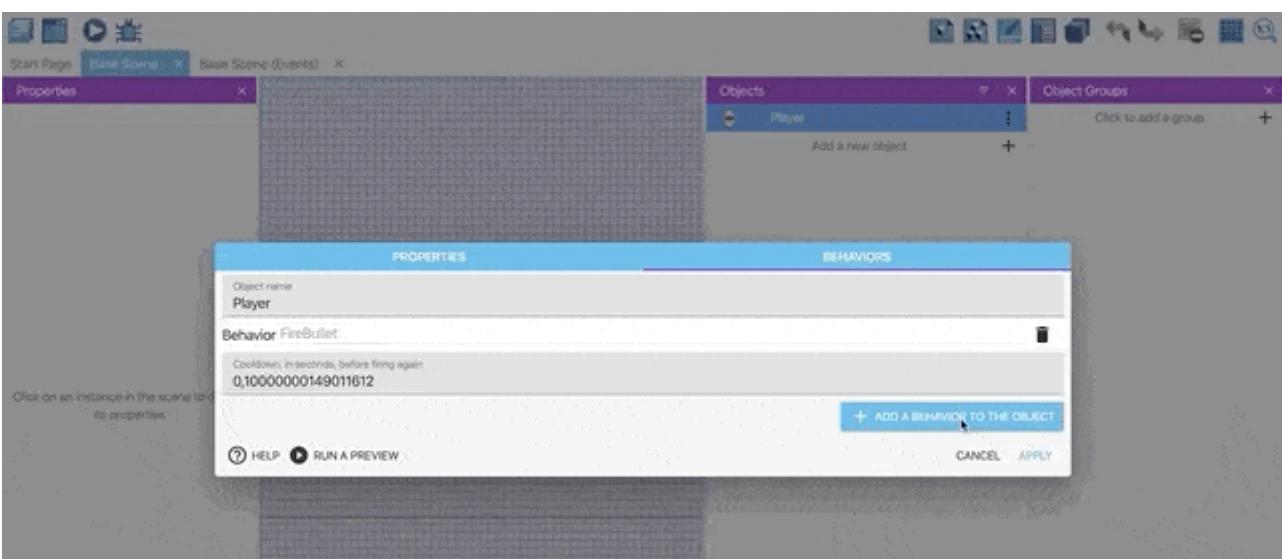
Object name  
**Player**

Behavior **FireBullet**

Cooldown, in seconds, before firing again  
**0.3**

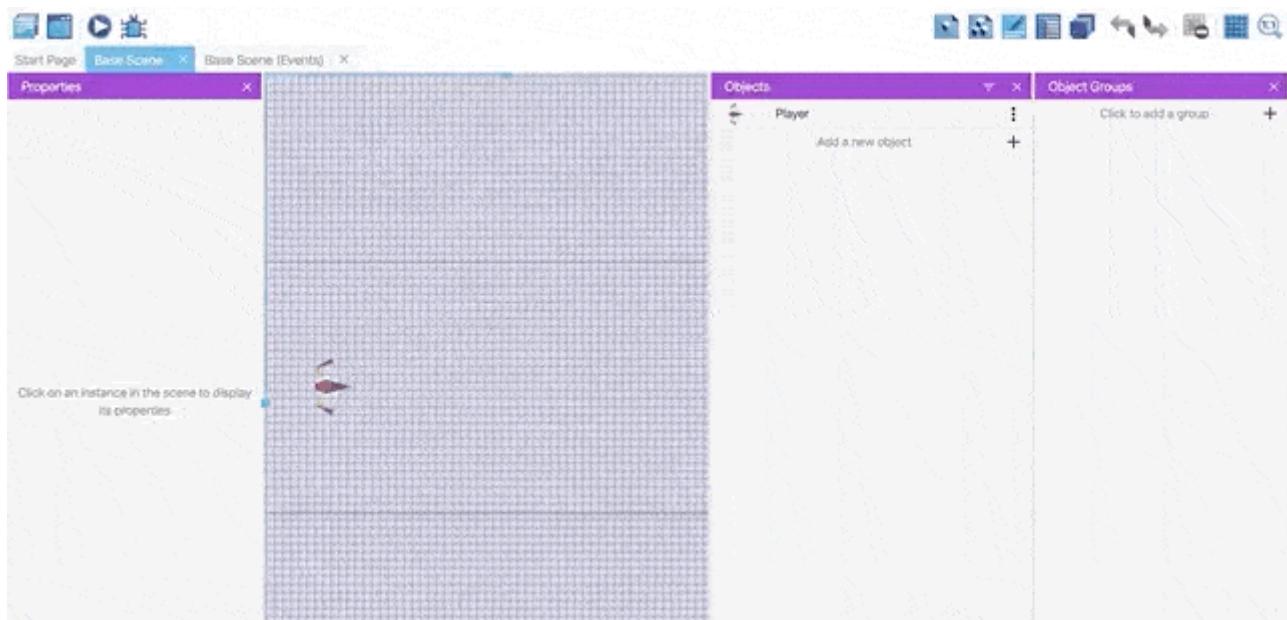
Repeat the same process to add **Health** ability to the player. Change **Maximum health** from 100 to **0**, since we do not want to limit our player's maximum health.

In the next chapters, we will add some powerups to increase the player's health.



# Shooting bullets from the player spaceship

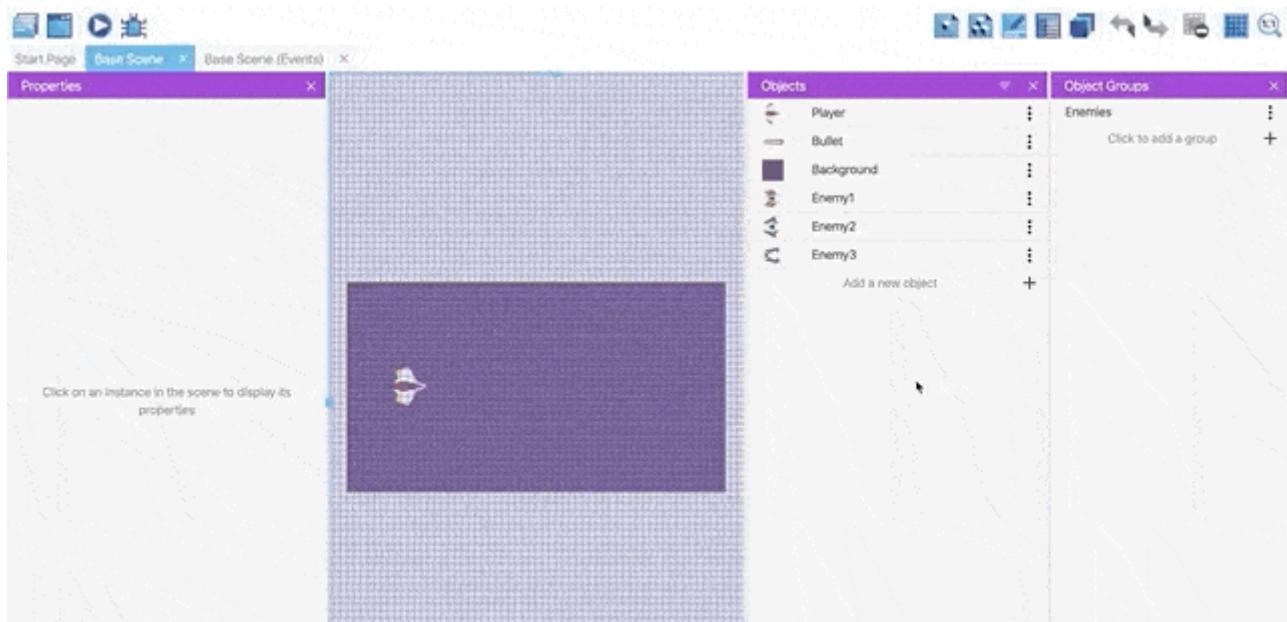
Firstly, we need to add a bullet object. Follow the steps in the previous episode and add a sprite object. Use the name **Bullet** and add “**laser\_player.png**” image for the object.



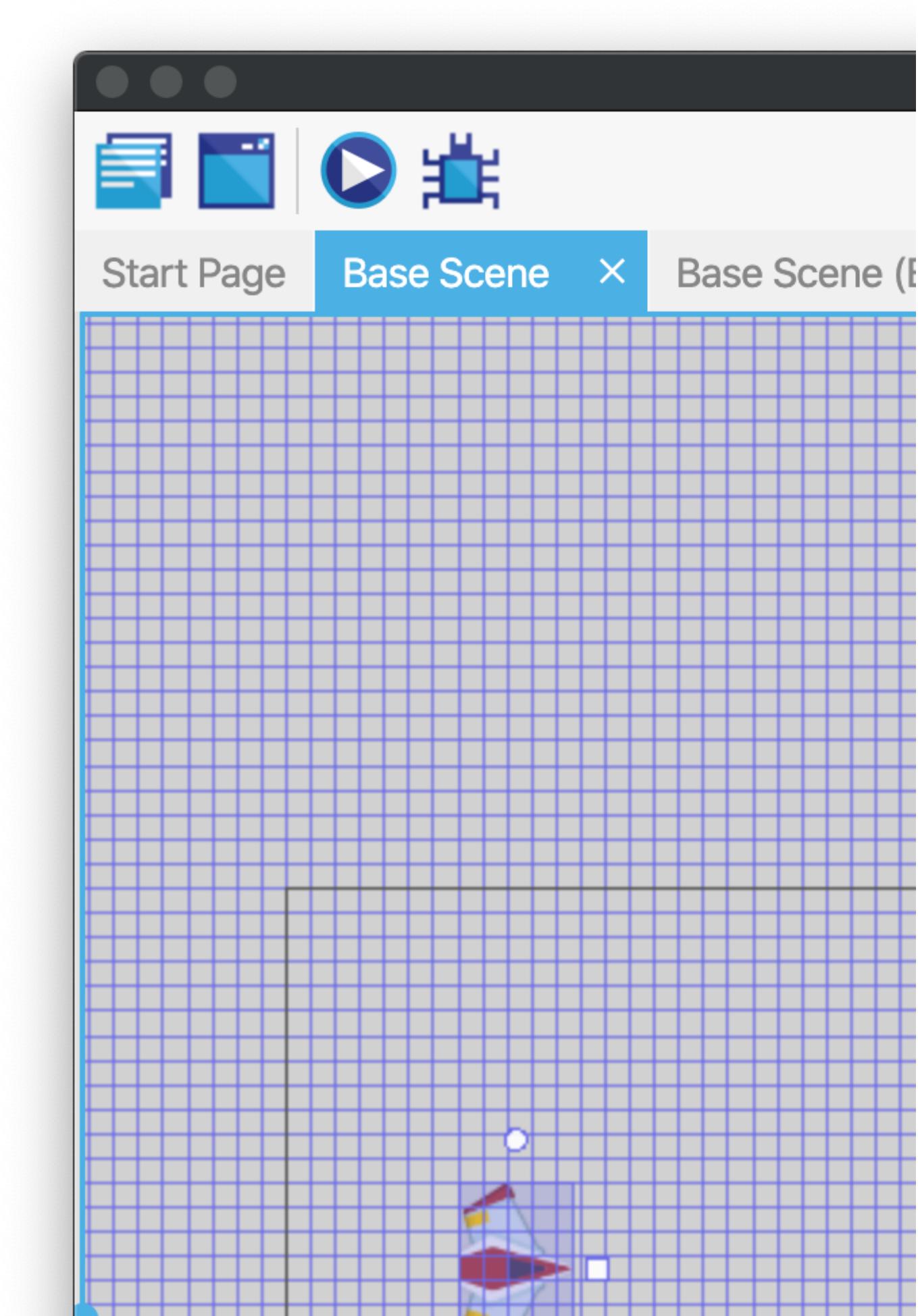
We will add a new behavior, called **Destroy when outside of the screen**, to the Bullet object, because we want to delete the objects that are not on the screen.

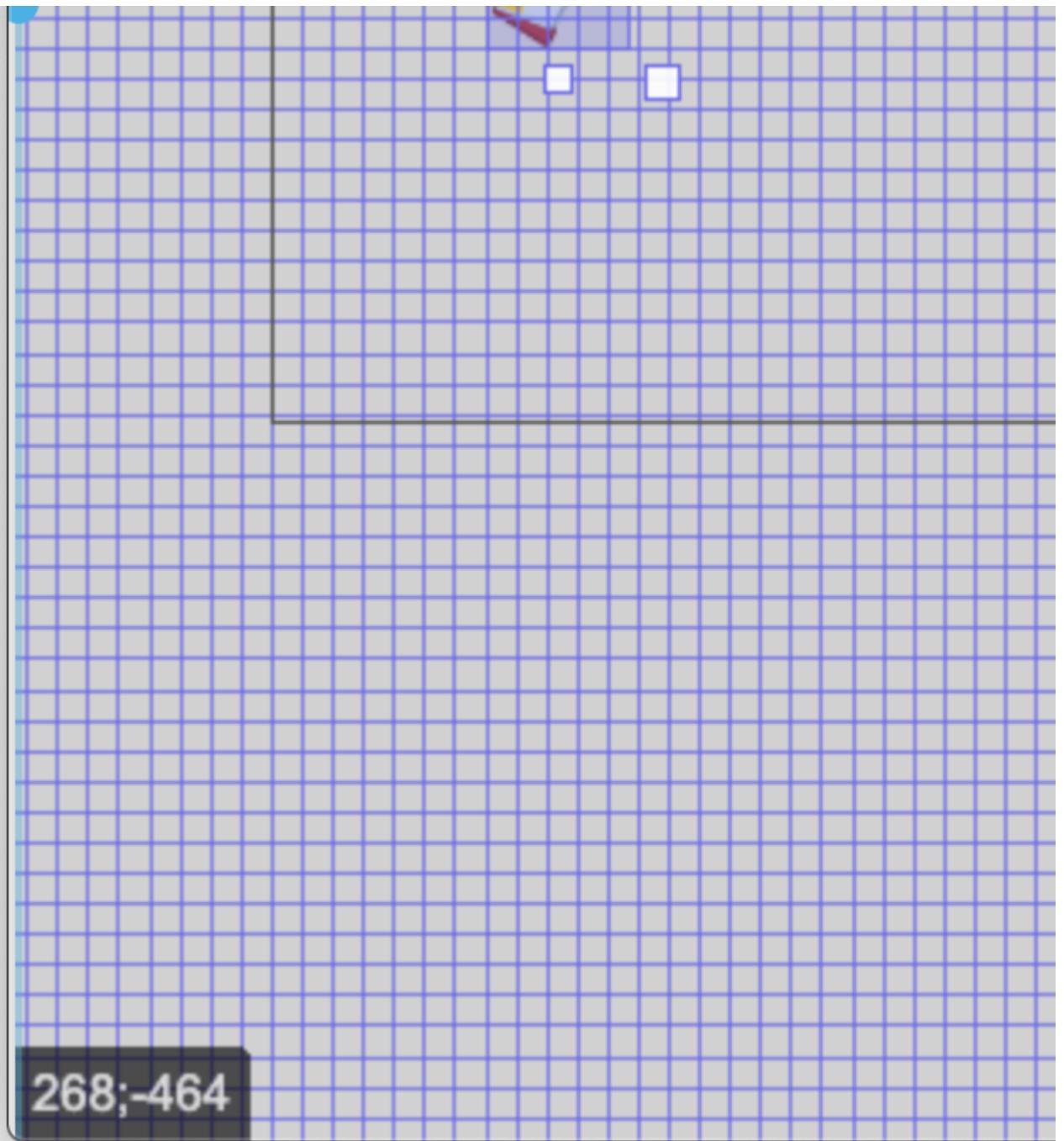
The **Destroy when outside of the screen** behavior allows us to prevent shooting the outside of the camera by deleting objects outside of the screen.

Add “Destroy when outside of the screen” behavior to the **Bullet** object.

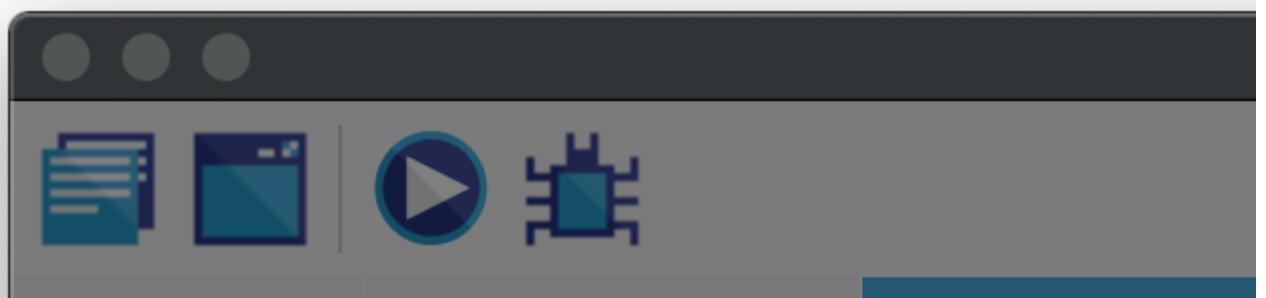


You can see your new **Bullet** object under the Player object.





Then, open the **Events** page. Add a new event. Click on **add a condition** and type “**key**” to check whether the **Space** key is pressed or not.



## Controls

 Right key is pressed

Add condition

 Left key is pressed

key

## NON-OBJECTS AND OTHER CONDITIONS



Any key pressed

Keyboard



Key pressed (text expression)

Keyboard



Key released (text expression)

Keyboard



Key pressed

Keyboard



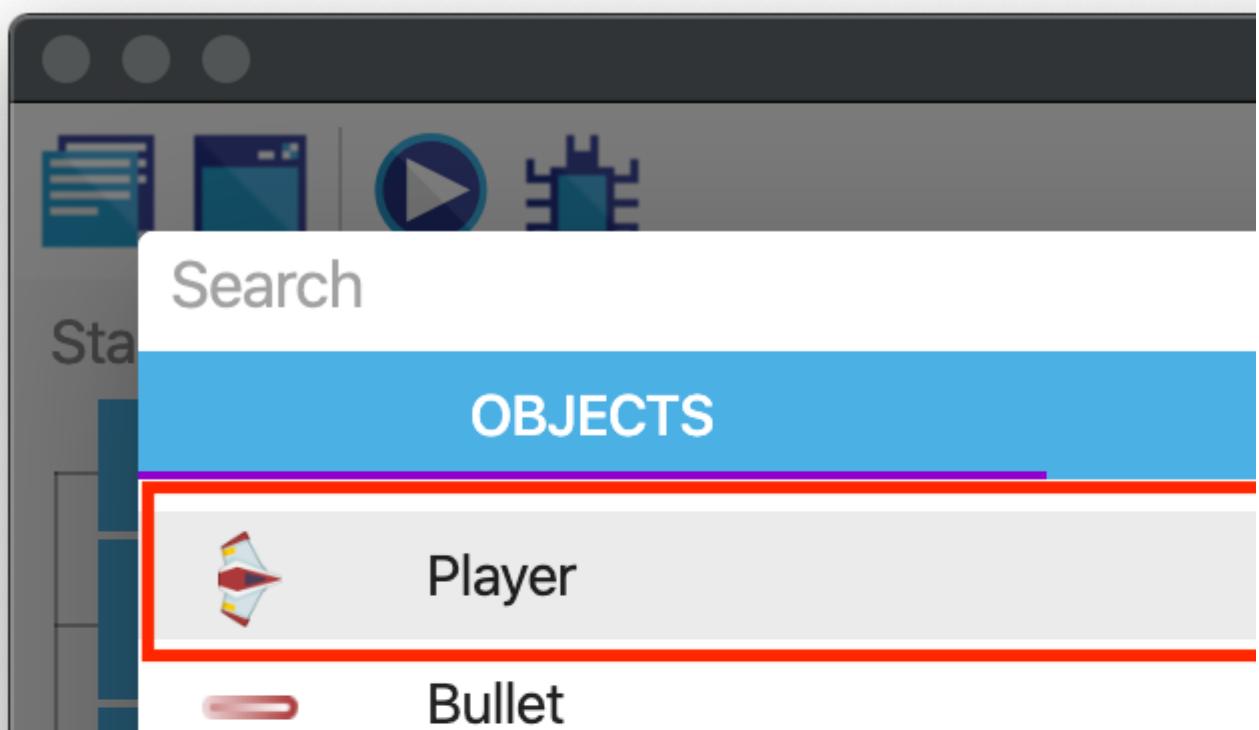
Key released

Keyboard



## HELP FOR THIS CONDITION

Now, we will add the shooting action. Click on add action in the same event, and select **Player**. Then, on the top, you can see the new actions coming from our behaviors. Select **Fire a bullet** and fill out the requirements like below:





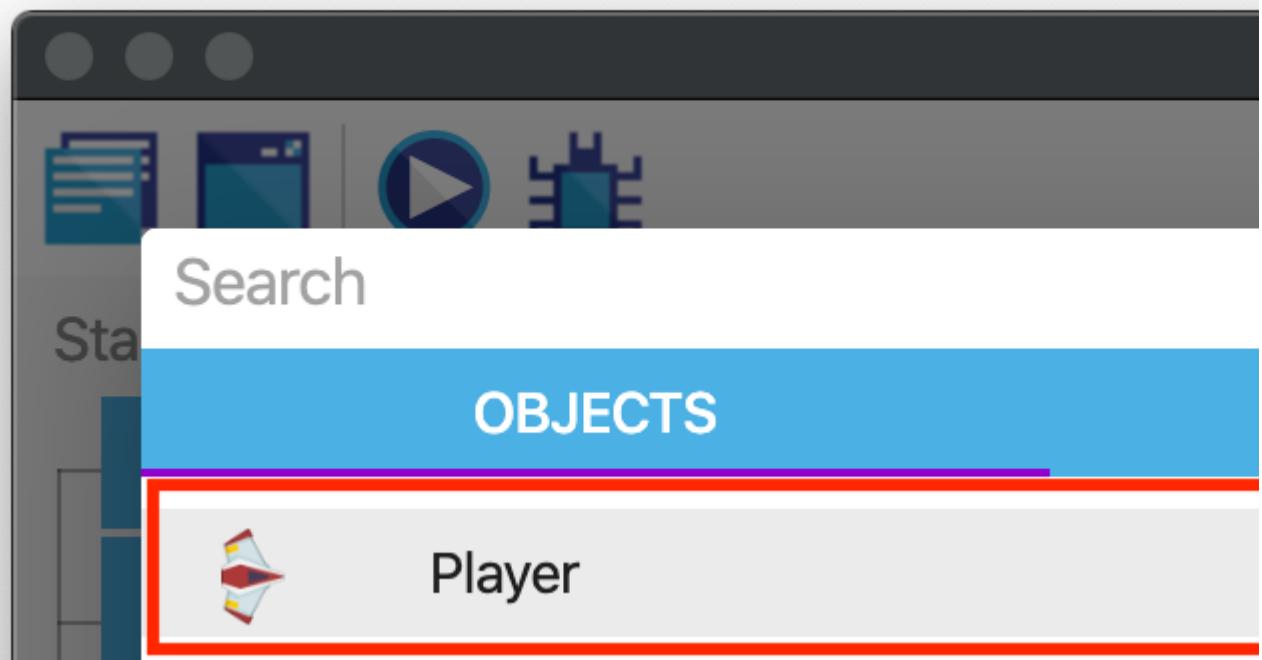


Player.X() is an expression that will be replaced by the position on the player's X-axis. We add 50 to position the bullet at the right of the object. The same goes for the Y-axis. The other parameters indicate that we'll create a "Bullet" object and gives it some speed. The angle is 0 degrees, meaning the bullets will go on the right.

## Making the player a bit smaller

The player spaceship is a bit too big. We could resize it in the scene editor, but for this tutorial we'll use events. Click on **Add a new action** to change the scale of the player. Then, select the **Player** and **Scale**. Fill the value with **0.6**.

Make sure that modification sign is **= (set to)**.





Bullet



## HELP FOR THIS ACTION

You can add a “**Player**” comment to separate the actions. Your events page should look like this:

The image shows the Scratch events editor. At the top, there are four icons: a script icon, a stage icon, a play button, and a microchip icon. Below the icons, the title bar shows "Start Page", "Base Scene", and "Base Scene (B)". The main area is titled "Controls". There are four conditions listed, each starting with "[A]":

- [A] Right key is pressed
- [A] Left key is pressed
- [A] Up key is pressed
- [A] Down key is pressed

Each condition has a faint "Add condition" link next to it.

Add condition

A Space key is pressed

Add condition

Player

Add condition

Add a new event

## Testing our shoot ability

Save and run the game. Try pressing **Space** to see how you can shoot.



We will add some **health** actions later, after creating our enemies.

## Next step

In the next chapter, we'll add a background and make the camera move: [Space Shooter, Part 4](#)