

Zombies Are Here

Top-down Shooting Game

Today's Game

Goal: Build a top-down shooting game using physics, 8-direction, events, and shooting.

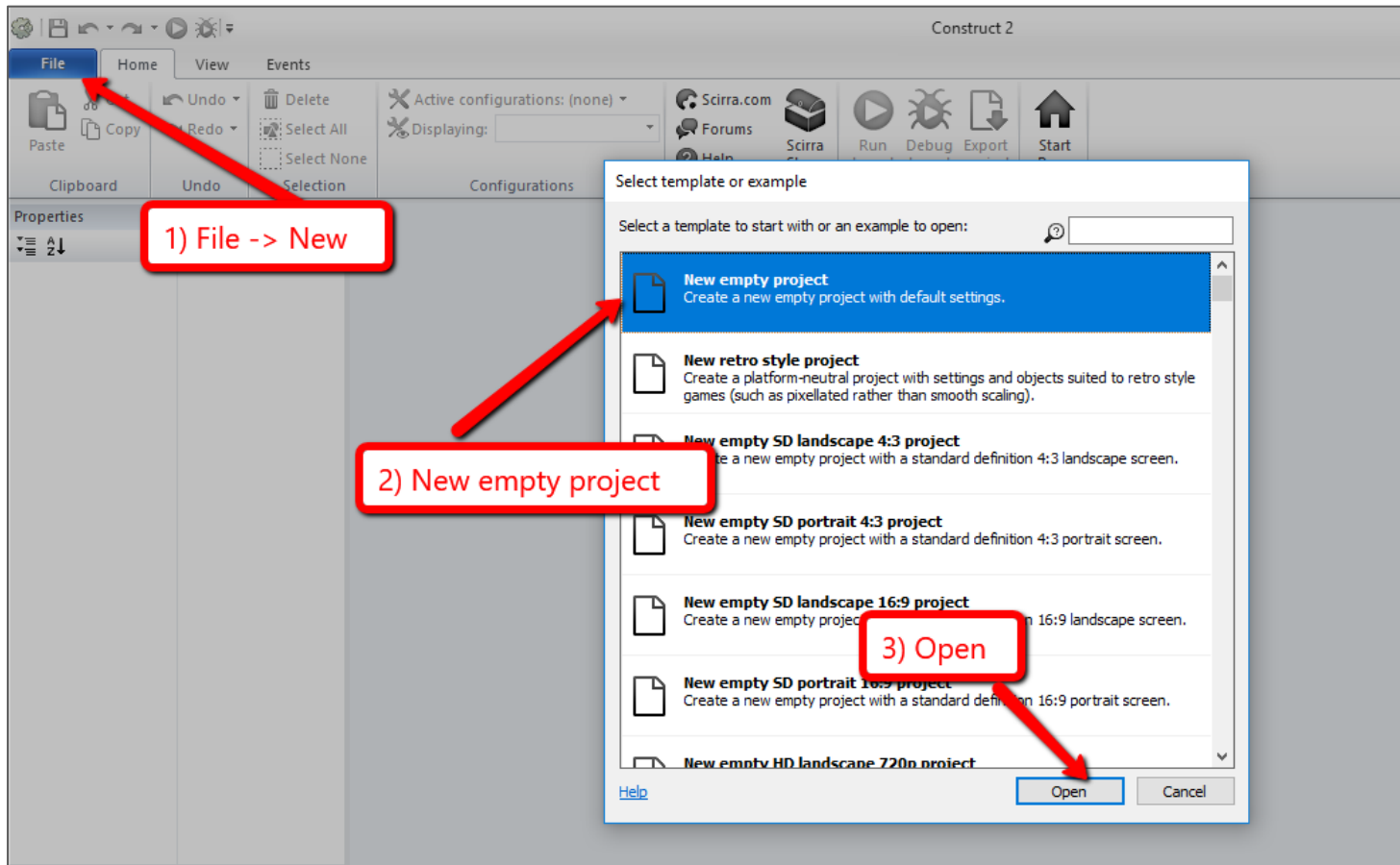
Game Features:

- A hero that moves left & right
- Enemies that come down from the top
- Shooting & explosions

Play Today's Game

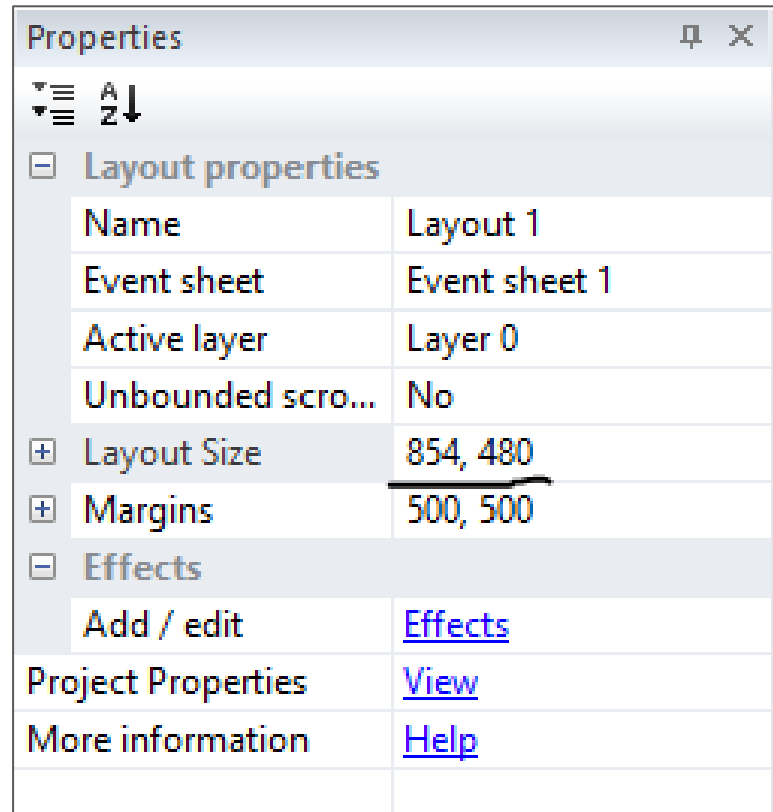
[click](#)

New Project

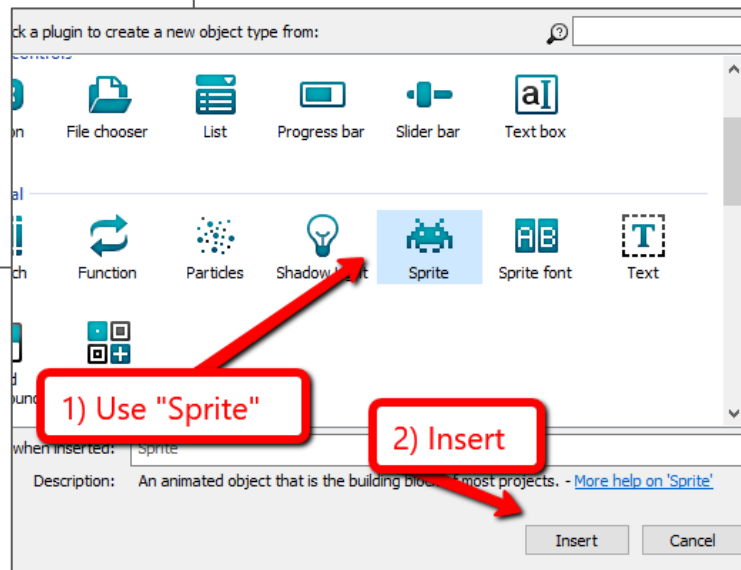
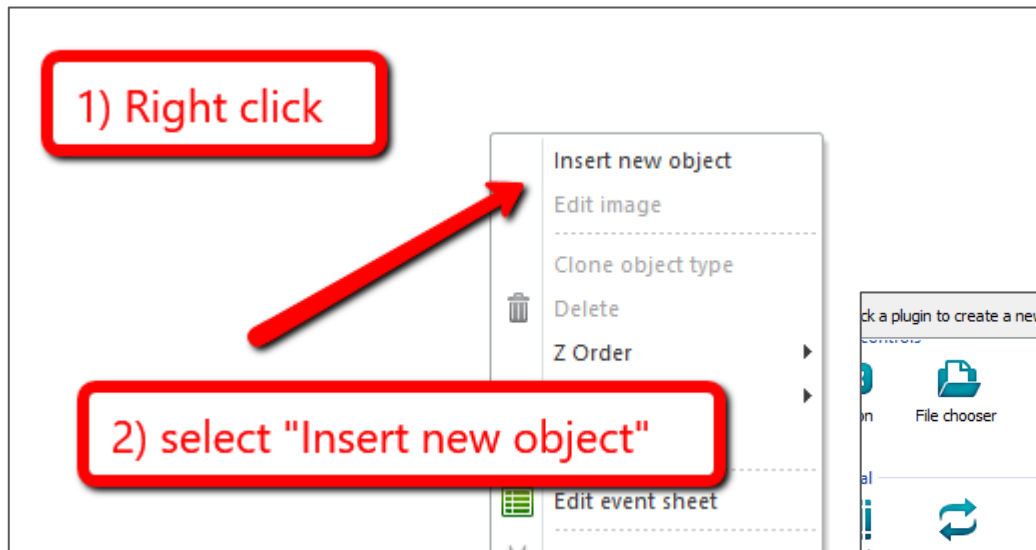


New Project & Layout Size

- Click on Layout
- Set Layout Size:
 - 854, 480

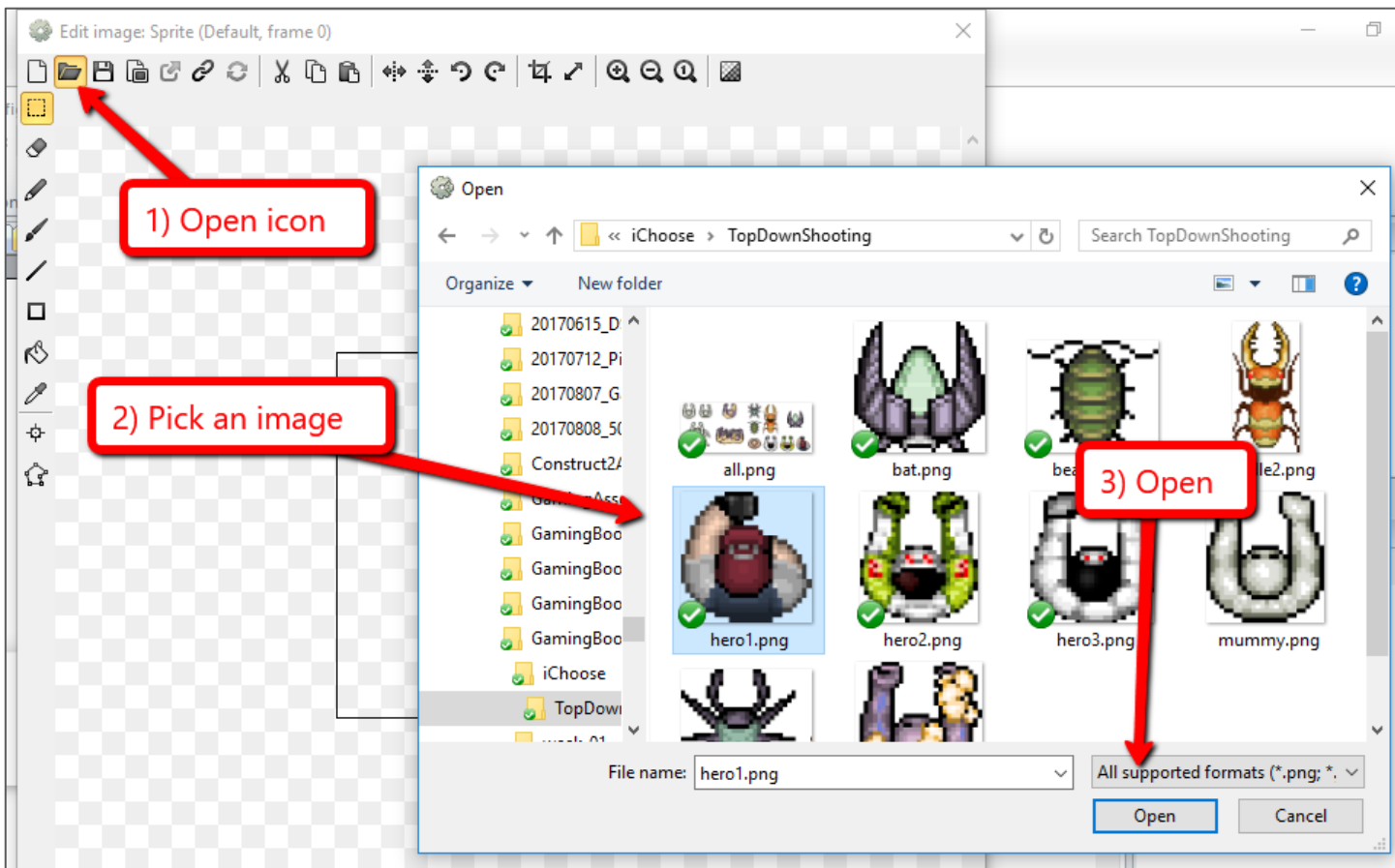


Create Two Sprites



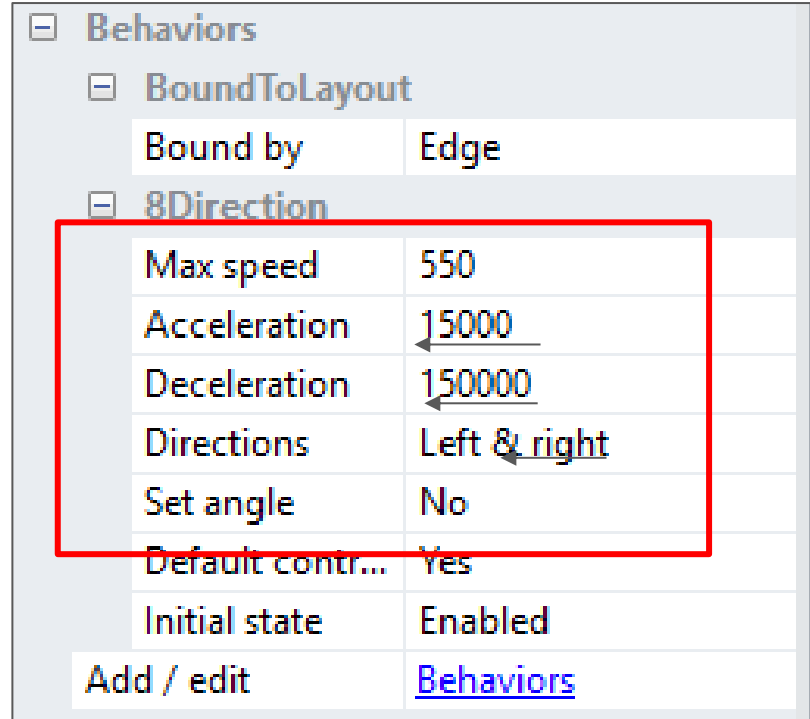
- 1) Hero
- 2) Enemy

Load an Image



Hero Behaviors & Properties

- Behaviors:
 - 8Direction & BoundToLayout
- 8Direction Properties
 - Max speed: 550
 - Acceleration: 15000
 - Deceleration: 15000
 - Directions: Left & Right
 - Set Angle: No

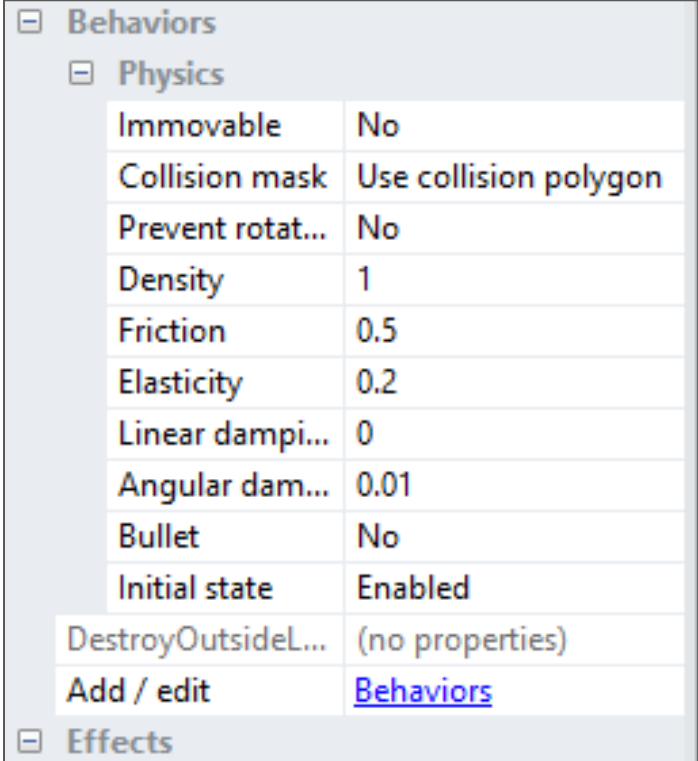


The screenshot shows a hierarchical menu structure for behaviors. The '8Direction' behavior is selected and its properties are displayed in a table. A red box highlights the '8Direction' section.

Behaviors	
[-] BoundToLayout	
Bound by	Edge
[-] 8Direction	
Max speed	550
Acceleration	<u>15000</u>
Deceleration	<u>15000</u>
Directions	<u>Left & right</u>
Set angle	No
Default contr...	Yes
Initial state	Enabled
Add / edit	Behaviors

Enemy Behaviors & Properties

- Behaviours
 - **Physics** and **DestroyOutsideLayout**
- Do not change anything else!
 - *(unless you want to)*



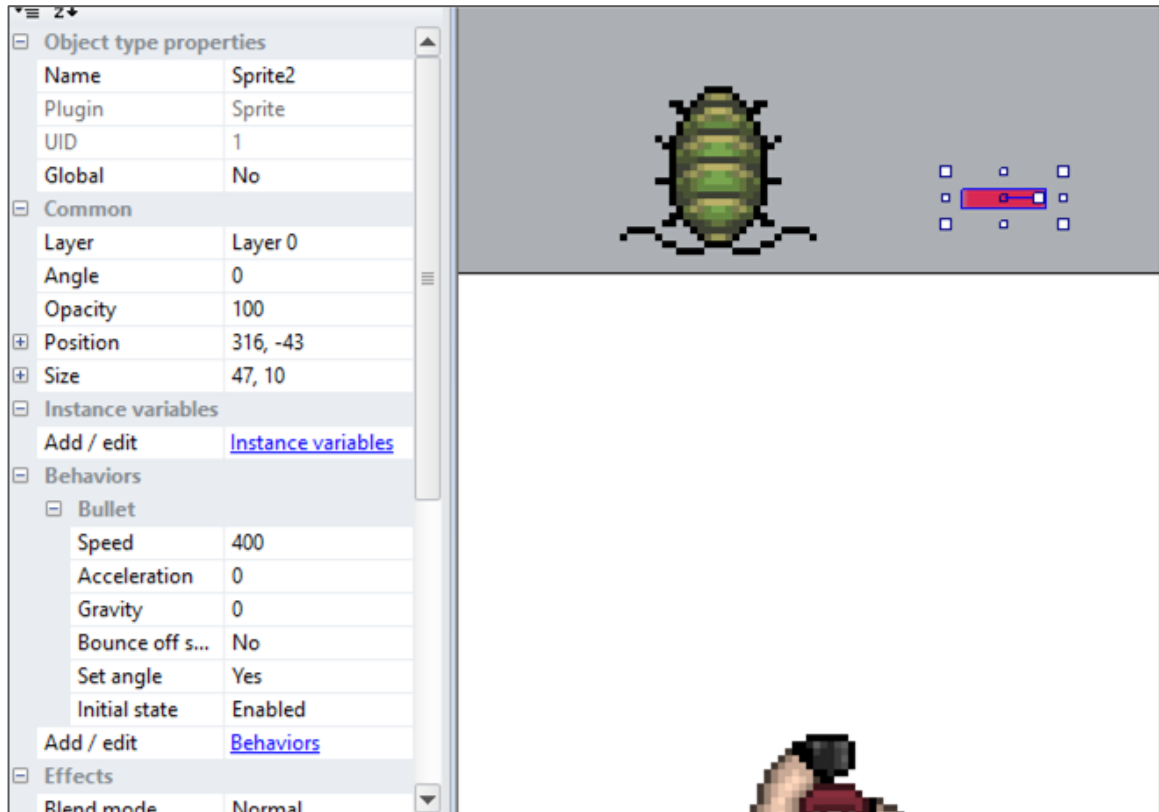
The screenshot shows the Unity Inspector for an enemy object. The 'Behaviors' component is expanded, showing the 'Physics' sub-component. The 'Physics' component has the following properties:

Immovable	No
Collision mask	Use collision polygon
Prevent rotat...	No
Density	1
Friction	0.5
Elasticity	0.2
Linear dampi...	0
Angular dam...	0.01
Bullet	No
Initial state	Enabled
DestroyOutsideL...	(no properties)
Add / edit	Behaviors

The 'Effects' component is also visible at the bottom of the Inspector.

Bullet

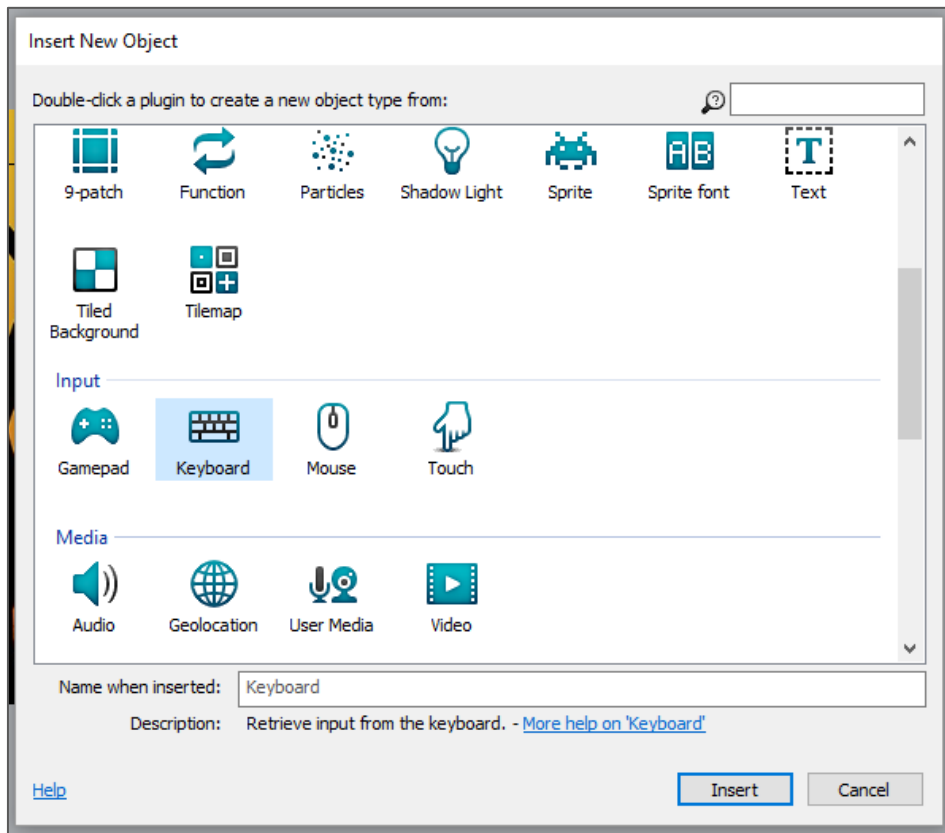
- Insert “New Object”
- Place anywhere
- Fill in the object with a color
- Add “**Bullet**” behavior
- **NOTE:** Make sure it is pointing ‘right’. Do not rotate.



Add Keyboard

- Add keyboard input for later

hint: “Insert New Object”




The Events

Automatically Spawn Enemy!

- Event: “System”, “Every X seconds”
- Action: “System”, “Create Object”
 - “X”: `random(50,800)`
 - “Y”: 10

Parameters for System: Create object

Choose the object type of the new instance to create.




Object to create  Sprite3

Layer

X

Y

[Cancel](#) [Help on expressions](#) [Back](#) [Done](#)





1  System Every 1.0 seconds  System Create object  Sprite3 on layer 0 at `(random(50,800), 10)`

[Add action](#)

Shoot Enemy

- Event:
 - “Keyboard”, “On Key Pressed”
- Action:
 - “hero”, “Spawn another object” (bullet)
 - “Bullet”, “Set angle of motion”, “270” degrees

The screenshot shows a software interface with a timeline on the left and an action list on the right. The timeline has a blue bar with a green arrow icon and a keyboard icon, labeled 'Keybo...' and 'On Space pressed'. The number '2' is visible on the left side of the timeline. The action list on the right contains two entries for 'Sprite2':

 Sprite2	Spawn  Sprite2 on layer 0 (<i>image point 0</i>)
 Sprite2	Set  Bullet angle of motion to 270 degrees

Below the action list is a button labeled 'Add action'.

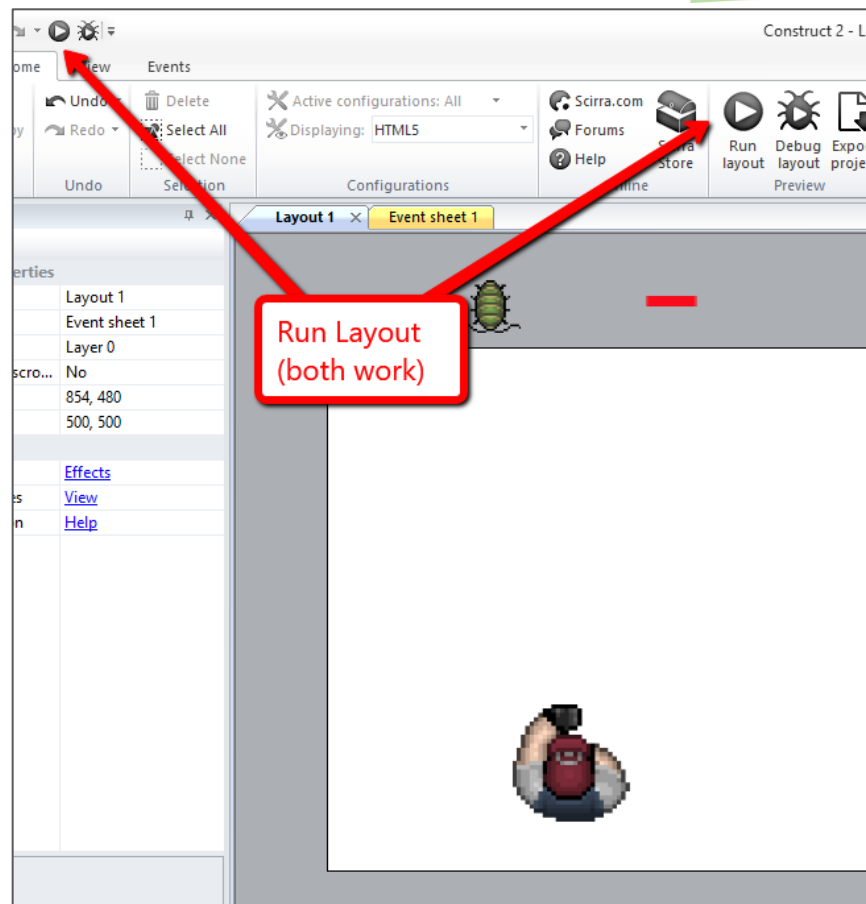
Kill Enemy

- Event:
 - “Bullet”, “On collision with”, “Enemy”
- Actions:
 - Enemy Destroy

The screenshot shows a software interface for creating an event-action sequence. On the left, a vertical axis is labeled with the number '3'. A blue bar with a green arrow points to a red square labeled 'Sprite2'. To the right of this is a text field containing 'On collision with' and a small beetle icon followed by 'Sprite3'. Further right, another beetle icon is followed by 'Sprite3' and the word 'Destroy'. Below the main interface, the text 'Add event' is visible in a light blue font. At the top of the interface, the text 'Add action' is visible in a light blue font.

Test Your Game

- Run a preview of your game to see if it runs A-okay!



Additional Challenges

- Add obstacles for the bugs to bounce off
- Add multiple bugs
- Add a bomb that drops