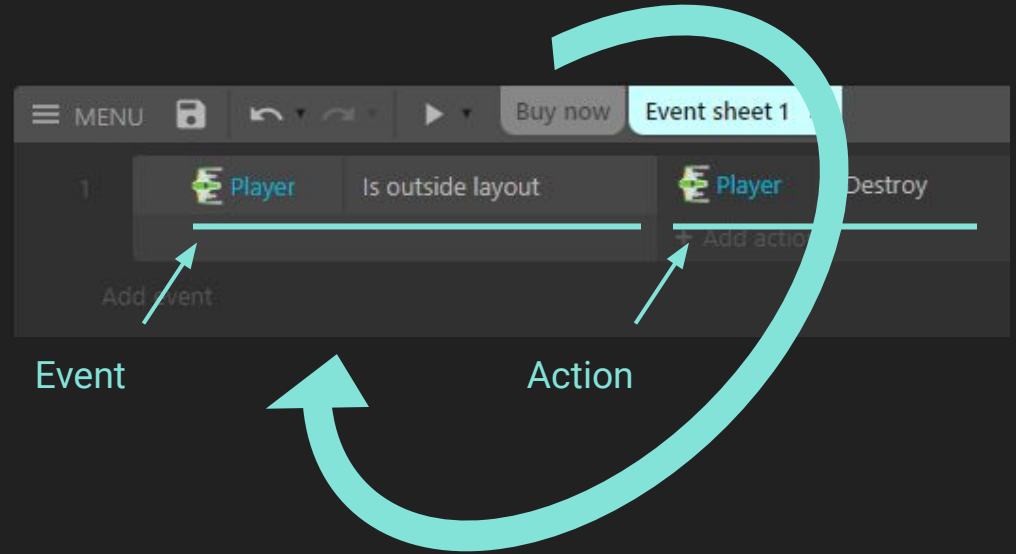# Events and Interactions

Event Sheets

Event Sheets are the code in Construct 3. Like **Behaviours**, they also control objects in more complex ways.

Code-blocks contain **Events** and **Actions**.

Event Sheets runs over and over until the game ends (an endless loop). Loops last milliseconds and game developers call each loop a **tick**.

Event

Action

Challenge - Mouse Movement

1. Open the Event Sheet and add a System Event that runs on **Every Tick**.
2. Give it a Player Action **Set Angle Towards Position**.
3. Set the Action's position to (Mouse.x, Mouse.y).
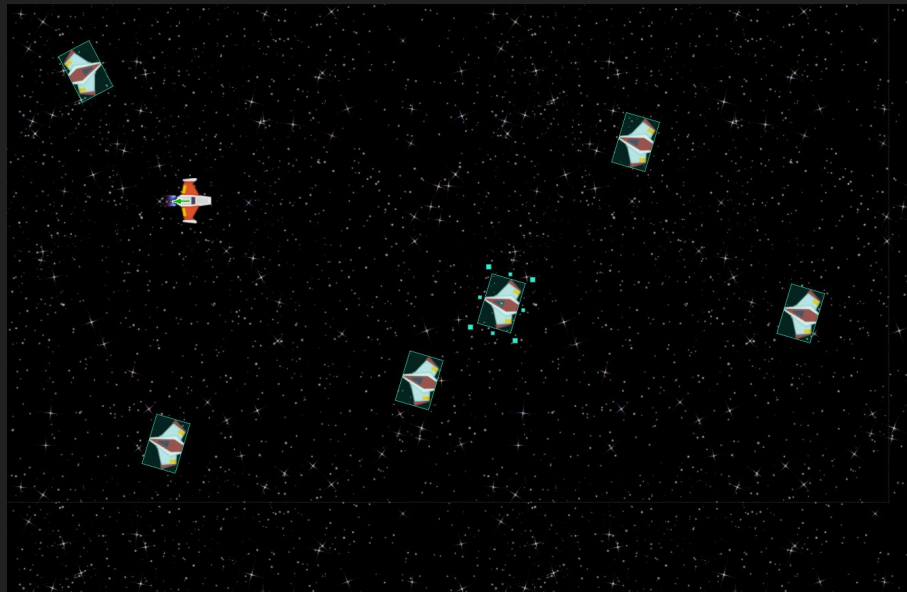4. Play-test.

Challenge - Fire on Mouse Button

1. Find your own laser fire sound online.
   Trim it with Audacity if necessary.
2. Add a **Mouse On Click** Event and Action that **spawns** a laser object.
   Use an **Image Points** on the Player sprite to fire it from a specific spot.
3. Add an Audio object to your project.
4. Import the laser Sound to your project.
5. Add another Action to the Mouse On Click Event that plays the laser sound.
6. Play-test.

Conditions and Instances

An **instance** is one copy of an object.

In Construct, **conditions** filter (select) an object **instance** (a single copy).

Once a condition is met, the **Actions** will happen to the selected **instance** only.

→	EnemyRed	On collision with → Laser	EnemyRed	Destroy
				+ Add action

Condition Filtering Example

Which EnemyRed **instance** would be selected by the code below?

What will happen to the Enemy?

Challenge - Enemy Explosions

1. Find an explosion sound online.
   Import the sound to your project.
2. Add an **EnemyRed On Collision** with Laser Event and Action that **spawns** an explosion object.
3. Add another Action that plays the explosion sound.
4. Add another Action that destroys the enemy object.
5. Add another Action that destroys the laser object.
6. Play-test and adjust the volume if necessary.

Stretch Challenge - Player explosions

1. Add a **Player On Collision** with Enemy Event and Actions that make the player explode.
   Use the same explosion animation and sound as before.
2. If you previously implemented obstacles like an asteroid, make the player explode when it hits obstacles too.
3. Play-test.

Stretch Challenge - Bounce lasers off obstacles

1. If you previously implemented obstacles like an asteroid, try this.
2. Check that the obstacle has a **Solid Behaviour**.
3. In the lasers' **Bullet Behaviour**, enable the "**Bounce off Solids**" setting.
4. Play-test and see whether the laser rebounds.
5. Optionally, make the player explode when lasers hit it.

Stretch Challenge - Alternative fire on right-click

1. Find a secondary projectile for the Player, like a missile or mine.
2. Add a **Mouse On Click Event** for the right mouse button and an action that fires the projectile.
3. Find a sound for the projectile, import it and add an Action that plays it in the **Mouse On Click Event**.
4. Optionally, add an alternative explosion and sound effect for the projectile.