

Intermediate Game Production

using Scratch 1.4

Two Players

By the end of each task I should know how to...

Task 1 - control a sprite's movement using the keyboard

Task 2 - control a sprite's movement using the keyboard and store two players' scores.

Two Players

Our game can be adapted easily for two players in a variety of ways. We could have:

- two sharks chasing the fish
- one player playing the fish and another playing the shark
- one player trying to block the shark from getting the fish and so on....

No matter which game we decide to create, we have to use the keyboard to control the fish or shark as we can only have one mouse.



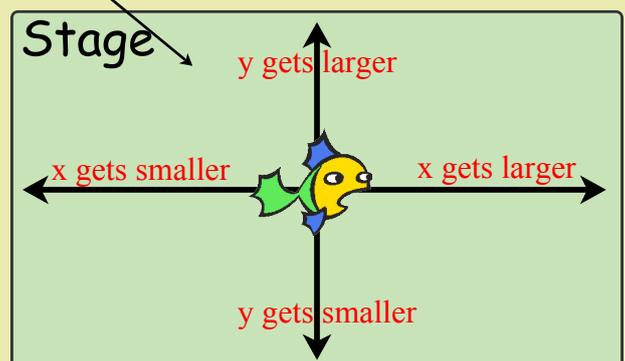
change x by 10 change y by 23

change x by -5 change y by -3

If you look at the **Motion** category you will see that we can change the position of a sprite on the screen by changing its x and y coordinate.

If we use these with **key up arrow pressed?** the block we can move a sprite in one direction when a key is pressed.

```
if key up arrow pressed?
  change y by 1
```



You should attempt **one** of the tasks below. Remember - these tasks are designed to make you solve problems yourself. Do not look at the solutions unless you absolutely have to!

Task 1 - Delete the script that makes the fish move randomly and use the information above to make the 4 cursor (arrow) keys control the fish.

Task 2 - Add another shark to the game that is controlled by the 4 cursor (arrow) keys. Add another variable to store player two's score (like the above example) when the second shark catches the fish.

Two Players (solutions)

Task 1

In this task, we simply have to change some of the script we created in the Basic Game sheets.

Change the fish script as shown below.

Before

```

when clicked
go to x: 0 y: 0
forever
  turn pick random 1 to 359 degrees
  repeat 20
    move 5 steps
    if on edge, bounce
    
```

After

```

when clicked
go to x: 0 y: 0
forever
  if key up arrow pressed?
    change y by 1
  if key down arrow pressed?
    change y by -1
  if key right arrow pressed?
    change x by 1
  if key left arrow pressed?
    change x by -1
  if on edge, bounce
    
```

Note that four IF blocks are needed (one for each cursor key).

To change the speed the fish moves at, simply make the x and y coordinates change by a larger amount when each key is pressed.

```
change x by 5
```

Task 2

Start by adding another shark sprite to the Game.    You should change the colour of the second shark using the edit button in costumes.

Delete the original Score variable and make two new variables for each player.

```

Make a variable
Delete a variable
 Player One
 Player Two
    
```

On the stage script set both variables to zero when the green flag is clicked.

```

when clicked
set Player One to 0
set Player Two to 0
    
```

Now create the script for the second shark. Note, it must be controlled by the keyboard.

Finally, change the variable used to keep score in the first shark's script.

```

if touching Sprite2?
  change Player One by 1
  switch to costume shark1-b
  wait 1 secs
  switch to costume shark1-a
    
```

```

when clicked
forever
  if key up arrow pressed?
    change y by 3
  if key down arrow pressed?
    change y by -3
  if key right arrow pressed?
    change x by 3
  if key left arrow pressed?
    change x by -3
  if touching Sprite2?
    change Player Two by 1
    switch to costume shark1-b
    wait 1 secs
    switch to costume shark1-a
  if on edge, bounce
    
```