Phaser HTML5 Game Tutorial: Build A Pong Game 4: Adding the Game Mode

July 7, 2015 By Leave a Comment

Now that we've got our ball moving back in part 3[1], let's work on adding the game mode and get both our paddles moving.

Let's add a few more functions after the `startDemo` function:

```
startDemofunction

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall

startGamefunction

resetBallfunction

startBallfunction

enablePaddlesfunctionenabled
```

The `startGame` function will be used to reset the ball, paddles and scores. It will also be used to enable paddle controls and collision detection.

The `resetBall` function will be used to reset our ball when a point is scored, when the game begins and when the game ends.

The `startBall` function will be used to get our ball moving after it has been reset.

There is also a slight delay before the ball starts moving.

The `enablePaddles` function will be used to hide/show our paddles, enable player controls, and enable collision detection.

When the game is first launched in demo mode, the paddles are supposed to be hidden. So we'll add the following code in the end of the `enablePaddles` function:

```
enablePaddlesfunctionenabled

paddleLeftSpritevisibleenabled

paddleRightSpritevisibleenabled
```

Notice we have one function parameter: `enabled`. The value we pass into the function will be used wherever the `enabled` parameter is mentioned. In this case, we are setting the `visible` property for
both the `paddleLeftSprite` and the `paddleRightSprite` using the `enabled` parameter.

At the end of the `startDemo` function, add the following line:

```
startDemofunction

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall

enablePaddlesfalse
```

This will call the `enablePaddles` function and set the `visible` property of both paddles to `false`. to hide both paddles. Test it out and you should see both paddles hidden.

For the game to start, we want the player to click on the game world and call our `startGame` function to switch to our game mode. To do that, we need to add an event listener. An event listener basically waits for a specific event to happen and calls a function that is assigned to the event. Again, we'll add it at the end of the `startDemo` function:

```
startDemofunction

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall

enablePaddlesfalse

inputonDownstartGame
```

The `game.input.onDown` event listens for when the player presses the left mouse button when the mouse cursor is over the game world. The `add` function adds a listener to the event. Notice there are two arguments:

- The first argument is the function to call when this event is triggered.
- The second argument is the context of the object.

Before we test this out, let's just add the following code to our `startGame` function:

```
startGamefunction

inputonDownremovestartGame

enablePaddles
```

Here, we use the `game.input.onDown` event again but this time, we are removing the event by calling the `remove` function. This is to prevent the `startGame` function from being executed if the player accidentally clicks on the game world when it is in game mode.

We show the paddles by calling the `enablePaddles` function and passing `true` as the argument.

At this point, you should be able to click on the game world and see the paddles appearing. Here's what our current progress looks like:

Click here[2] to download the source files up to this point.

Resetting the ball

If you have played the full version of the game, you will notice that the ball needs to be reset regularly. By resetting our ball, we need to do the following:

1. Move the ball to the horizontal centre (the x-position) of the game world
2. Randomly place the ball somewhere along the vertical centre (the y-position) of the game world
3. Start the ball moving after X number of seconds. We will want to give the player a few seconds to breath before starting the next round.

Also, there are three instances where the ball needs to be reset:

1. When demo mode begins
2. When game mode begins
3. After a point is scored by either player

First, let's make some changes to the `startDemo` function. Move the highlighted lines of code below to the `resetBall` function:

```
startDemofunction

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall

enablePaddlesfalse

inputonDownstartGame
```

Here's what our `resetBall` function should look like:

```
resetBallfunction

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall
```

Next, we need to call our `resetBall` function from the `startDemo` function. Add the following highlighted code:

```
startDemofunction

resetBall

enablePaddlesfalse

inputonDownstartGame
```

Now to reset the ball's position to the centre of our game world. Add the following code to the `resetBall` function:

```
resetBallfunction

ballSpriteresetworldcenterXbetweengamePropertiesscreenHeight

ballSpritevisiblefalse

eventsPhaserTimerSECONDgamePropertiesballStartDelaystartBall
```

The ball sprite `reset` function moves the sprite to the given x/y world coordinates and resets the physics body so the object stops moving. It requires two arguments:

- The first argument places the ball at the horizontal centre of the game world.
- The second argument randomly places the ball somewhere between the top and bottom edges of the game world.

Notice we put the sprite `reset` function at the top of the function before the `visible` property. The reason being the sprite `reset` function will set the `visible` property to `true`.

We’ll also need to call the `resetBall` function in the startGame function:

```
startGamefunction

inputonDownremovestartGame

enablePaddles

resetBall
```

Here is our current work in progress:

Download the source files for here[3].

We’ll look at moving the paddles and adding collisions to bounce the ball in part 5[4].

1. http://zekechan.net/getting-started-html5-game-development-pong3/
2. https://github.com/zekechan/phaser-html5-tutorial-pong/releases/download/1.0/4a-Adding_the_game_mode.zip
3. https://github.com/zekechan/phaser-html5-tutorial-pong/releases/download/1.0/4b-Resetting_the_ball.zip
4. http://zekechan.net/getting-started-html5-game-development-pong5/