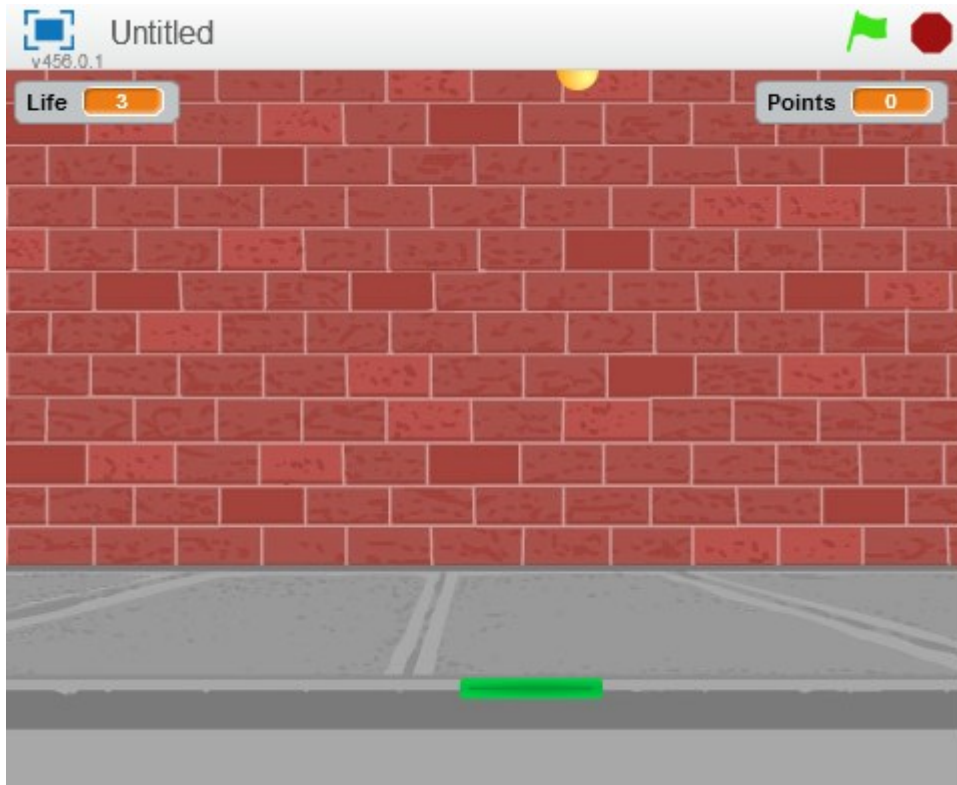# Lesson 4. Ping-Pong

Task: Create a classic version of a Ping-Pong computer game.

Step 1: Preparation

1. Create a new project ("Create" -> menu "File" -> "New");

2. Delete default sprite (right-click, "delete");

3. Add new backdrop ("New backdrop:" -> Choose any backdrop you like);

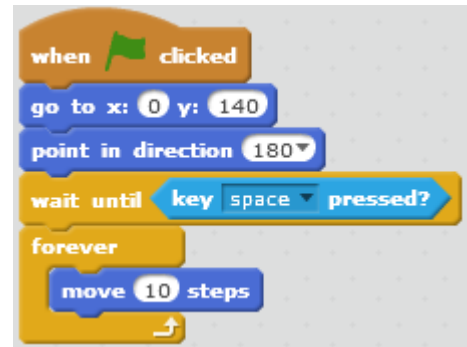4. Delete default backdrop (right-click, "delete").

Step 2: Paddle follows the mouse pointer

1. Add a new sprite (Open sprite library,

category "Things", sprite "Paddle");

2. Create a script for the paddle in order to

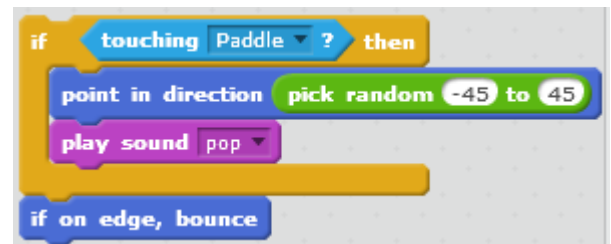make it follow mouse pointer, but only

horizontally

Step 3. The ball bounces off the edges and the paddle

1. Add a new sprite (Open sprite library, category "Things", sprite "Ball");

2. Shrink the size of the ball;

3. Create a script that moves the ball in the top and in the center of the scene with a speed of 10 steps. The game begins once the "Space" button is pressed;

4. Add a script which makes the ball bounce off the edges of the scene and the paddle.

```
when [flag] clicked
go to x: 0 y: 140
point in direction 180
wait until < key space pressed? >
forever
    move 10 steps
```

```
if < touching Paddle ? > then
    point in direction (pick random -45 to 45)
    play sound pop
if on edge, bounce
```

Step 4. Create life and points counter

1. Create two variables: "Life" and "Points", which are "3" and "0" in the beginning of the game correspondingly;

2. Add losing condition in the ball's script;

3. Add notification about points increasing and losing into ball touching conditions with the paddle and losing conditions correspondingly;

4. Add commands to increase the "Points" if the ball touches the paddle and to decrease the "Life" counter if lost;

5. Add a condition – when the "Life" counter is lower than one, the game is over.

```
if < y position < -130 > then
    go to x: 0 y: 140
    wait until < key space pressed? >
```

```
when I receive Increase the points
change Points by 1
```

```
when I receive Lost
change Life by -1
```

```
when [flag] clicked
set Life to 3
set Points to 0
forever
    if < Life < 1 > then
        stop all
```

Step 5. Set ball speed increasing condition each 20 points and paddle size decreasing condition each 50 points

1. In order to complete this task we will be using

remainder checkup. First of all let us create a new

variable "Speed" which will define the speed of the ball;

2. Add a command to the ball's script which will set

 its speed to 10 steps in the beginning of the game,

and in the "Move" command we will insert our

variable instead of the numerical value;
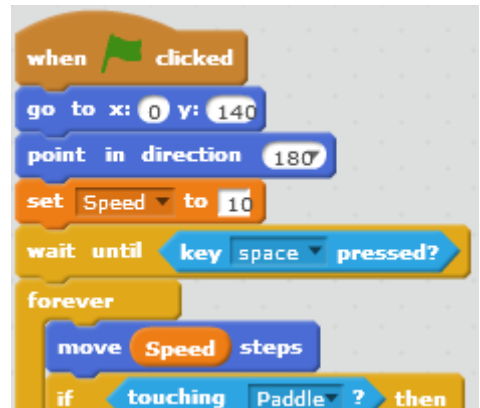
3. Add a condition – the speed of the ball will be increasing if the remainder after dividing of the variable "Points" by 20 will be equal to 0. Note that the checkup takes place during the informing of the points increasing;
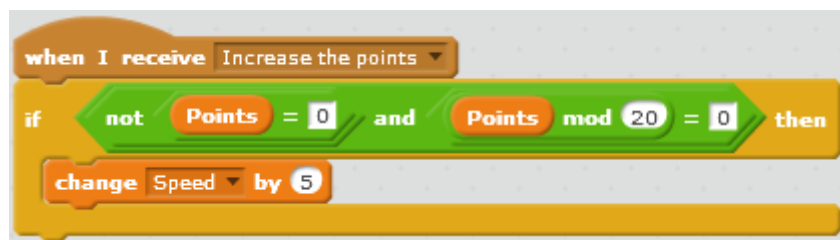
4. Make a similar condition for decreasing of the paddle's size each 50 points.