



Simple lessons of Scratch programs to make understand easier programming basics

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Lesson 1 "Animated card"

Lesson 2 "Maze"

Lesson 3 "Jumping dinosaur"

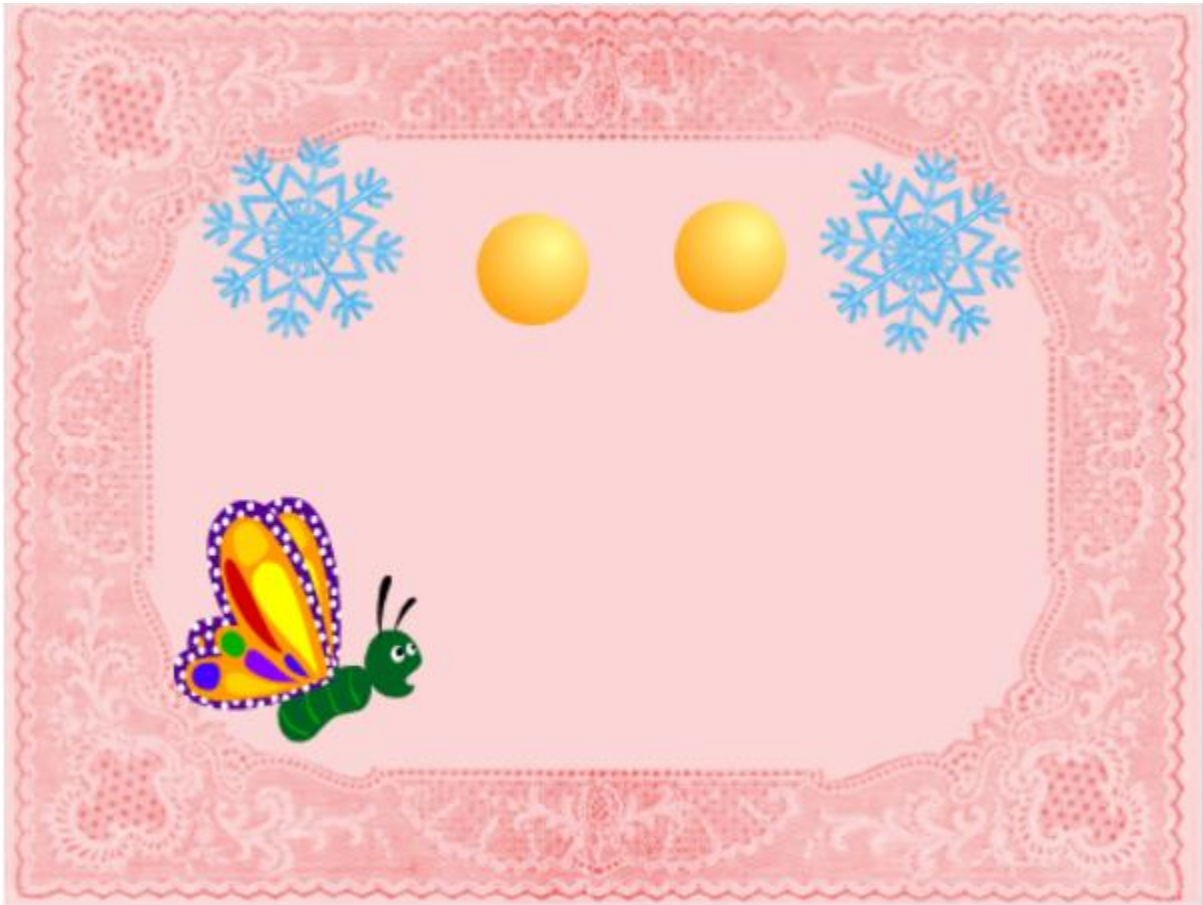
Lesson 4 "Ghost catch-up"

Lesson 5 "Spider hunter"

Lesson 6 "Climbing monkey"

Lesson 1

Animated card





```
when green flag clicked
  forever loop
    move 10 steps
    if on edge, bounce
    say Happy to be your friend!
```



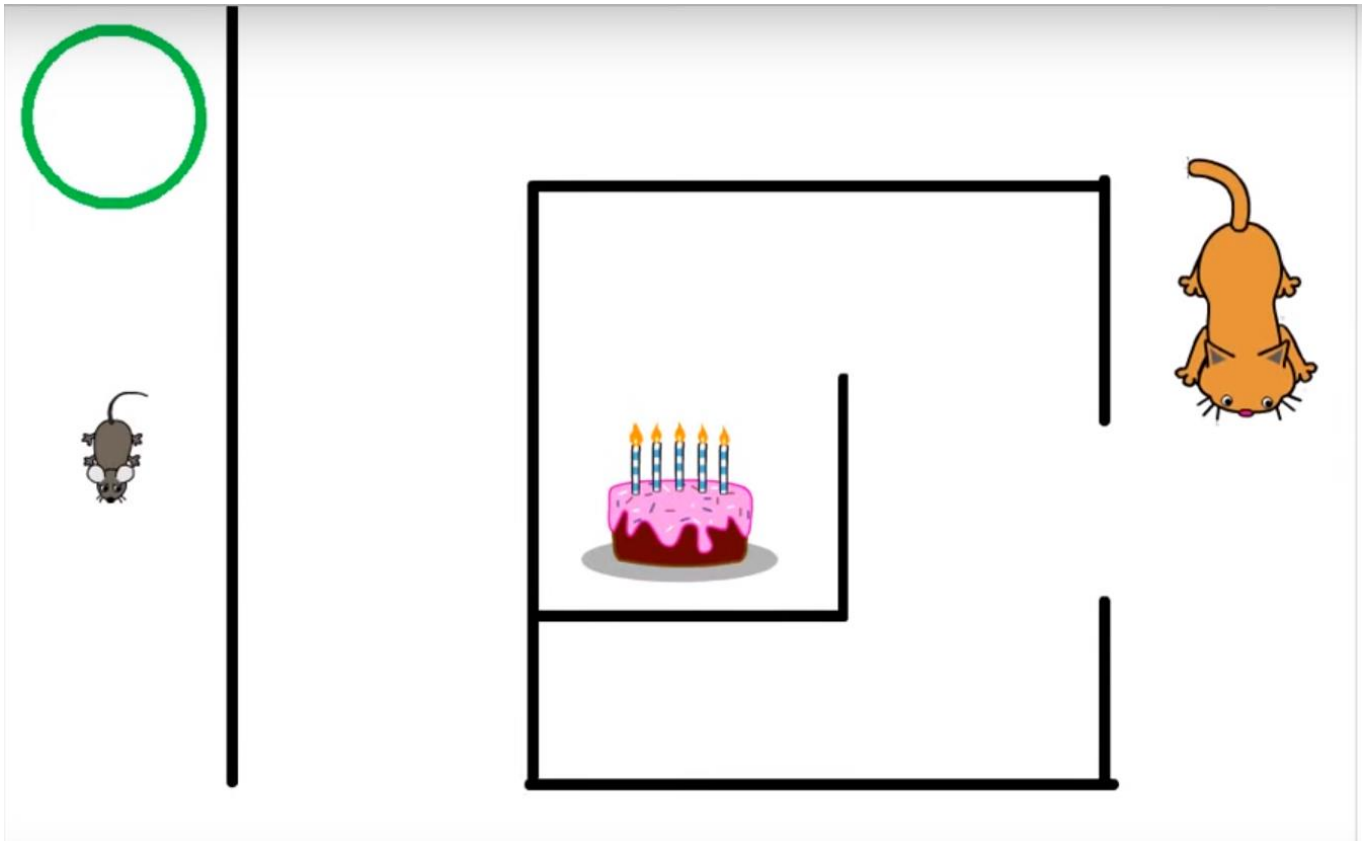
```
when green flag clicked
  forever loop
    change color effect by 25
```

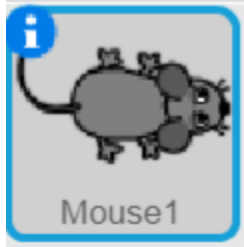


```
when green flag clicked
  forever loop
    change color effect by 3
    turn 5 degrees
```

Lesson 2

MAZE





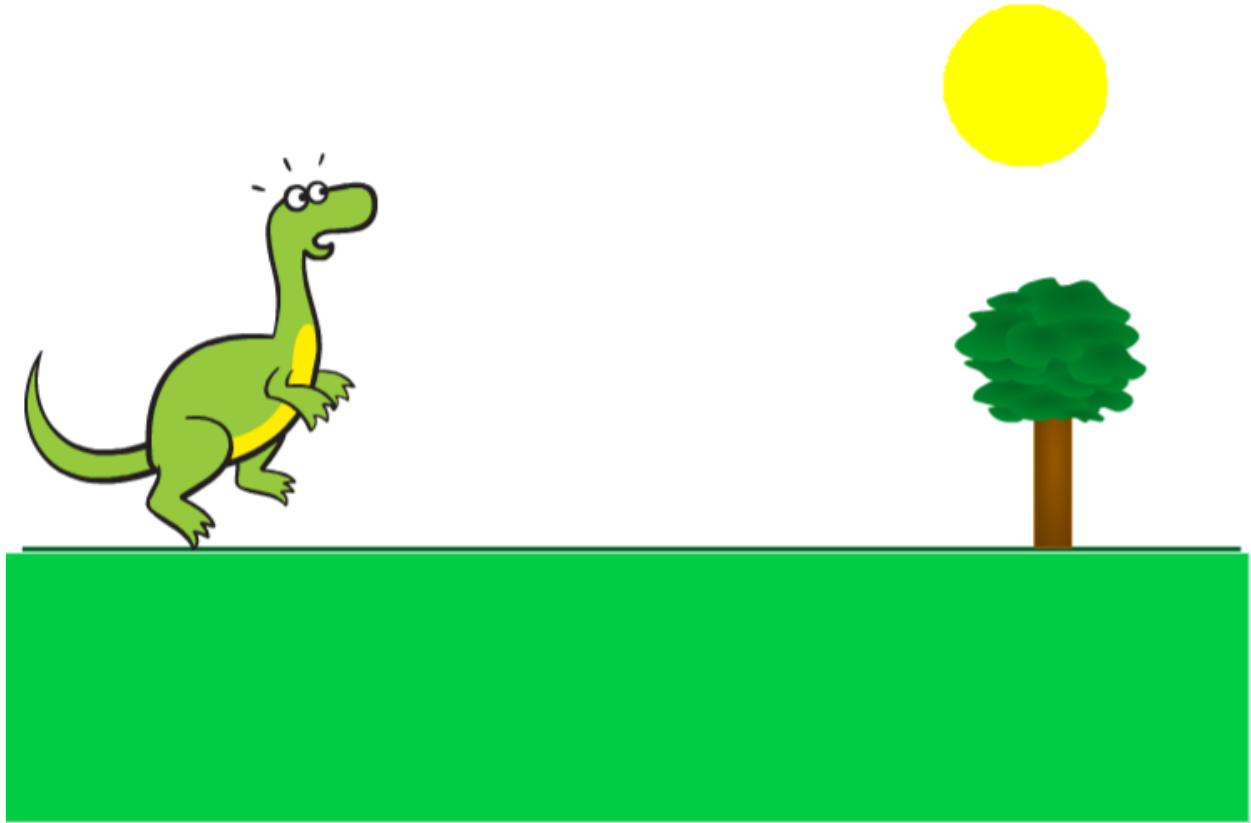
```
when green flag clicked
  forever loop
    if key up arrow pressed? then
      point in direction 0
      move 7 steps
    if key down arrow pressed? then
      point in direction 180
      move 7 steps
    if key right arrow pressed? then
      point in direction 90
      move 7 steps
    if key left arrow pressed? then
      point in direction -90
      move 7 steps
    if touching color black? then
      go to x: -212 y: 149
```



```
when clicked
  forever
    glide 2 secs to x: 144 y: 164
    turn 180 degrees
    glide 2 secs to x: 144 y: -164
    turn -180 degrees
```

Lesson 3

Jumping dinosaur





when  clicked

go to x: -164 y: 0

forever

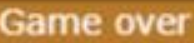
if  up arrow  then

go to x: -164 y: 100

wait 0.5 secs

go to x: -164 y: 0

if  Tree1  then

broadcast 

when I receive 

say Bye!

wait 0.5 secs

stop 



```
when clicked
hide
forever
  create clone of myself
  wait 1 secs
when I start as a clone
show
go to x: 210 y: -40
repeat until x position < -210
  change x by -15
delete this clone
```

Lesson 4

Ghost catch-up





```
when clicked
  forever
    point towards mouse-pointer
    move 10 steps
    if touching Ghost2 ? then
      say Bye
      wait 1 secs
      stop all
    else
      change color effect by 10
```



```
when green flag clicked
hide
forever
  create clone of myself
  wait 1 secs
  if touching Ghost1 ? then
    stop all
  else
    turn -180 degrees

when I start as a clone
show
go to x: pick random -230 to 220 y: 150
repeat until x position < -230 and y position < -210
  change x by 3
  change y by -10
delete this clone
```

Lesson 5

Spider hunter





Hunter

The image displays two Scratch code blocks for a character named 'Hunter'.

Main Code Block:

- when green flag clicked
- forever loop:
 - if key right arrow pressed? then: turn 5 degrees
 - if key left arrow pressed? then: turn 5 degrees
 - if key up arrow pressed? then: move 5 steps
 - if key down arrow pressed? then: move -5 steps

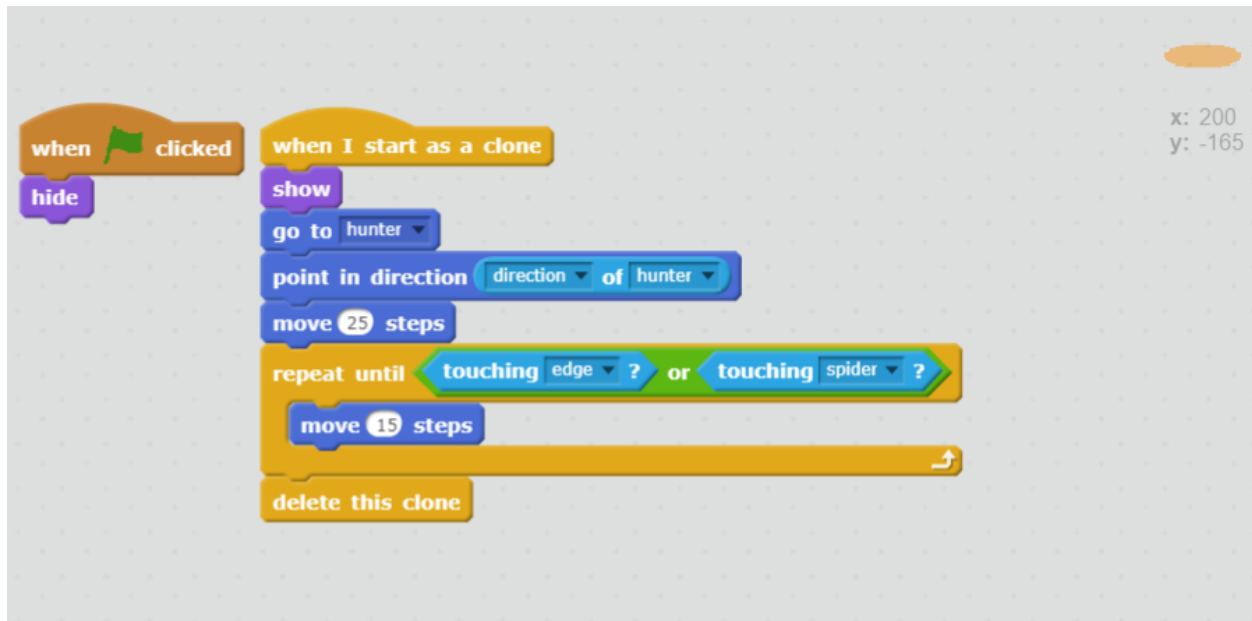
Secondary Code Block:

- when green flag clicked
- forever loop:
 - create clone of bullet
 - wait 0.3 secs

Coordinates for the secondary code block: x: 28, y: -141.



Bullet



The image shows a Scratch script for a bullet object. The script is composed of the following blocks:

- when clicked** (orange block):
 - hide** (purple block)
- when I start as a clone** (yellow block):
 - show** (purple block)
 - go to** (blue block) with target set to **hunter**
 - point in direction** (blue block) with **direction** and **of hunter** selected
 - move 25 steps** (blue block)
 - repeat until** (yellow block) with conditions **touching edge ?** or **touching spider ?**
 - move 15 steps** (blue block) inside the repeat loop
 - delete this clone** (yellow block)

Coordinates: x: 200, y: -165



SPIDER

The image displays a Scratch code editor with the following logic for a spider character:

- when clicked:** hide, then a forever loop containing: wait 2 secs, create clone of myself.
- when I start as a clone:** show, go to x: 250 y: pick random -170 to 170, then a forever loop containing:
 - point towards hunter
 - move 3 steps
 - if touching bullet?: then wait 0.1 secs, delete this clone.
 - if touching hunter?: then stop all.

In the top right corner, a small spider icon is shown with its coordinates: x: 208, y: -140.

Lesson 6

Climbing monkey





```
when clicked
  go to x: 205 y: 170
  set down speed to 0
  forever
    change down speed by -1
    change y by down speed
    climb
    if key right arrow pressed? then
      point in direction 90
      move 15 steps
    if key left arrow pressed? then
      point in direction -90
      move 15 steps
    if touching ground? then
      stop all
```

```
define climb
  if down speed < 0 then
    repeat until touching liana?
      set down speed to 15
      change y by -2
```



x: -56
y: -49



The image shows a Scratch script for a dragon clone. The main script starts with a 'when clicked' event, followed by a 'hide' block, and a 'forever' loop containing 'create clone of myself', 'wait 0.4 secs', and a loop arrow. The clone's script starts with 'when I start as a clone', followed by 'show', 'go to x: pick random -50 to 240 y: 160', a 'repeat until' loop where 'y position < -150' and 'change y by -5' are nested, and finally 'delete this clone'. A small dragon icon is shown in the top right with coordinates x: 110 and y: 72.

```
when clicked
hide
forever
  create clone of myself
  wait 0.4 secs
  loop arrow

when I start as a clone
show
go to x: pick random -50 to 240 y: 160
repeat until y position < -150
  change y by -5
delete this clone
```

x: 110
y: 72