CoderDojo®

Simple lessons of Scratch programs to make understand easier programming basics

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Lesson 1 "Animated card"

Lesson 2 "Maze"
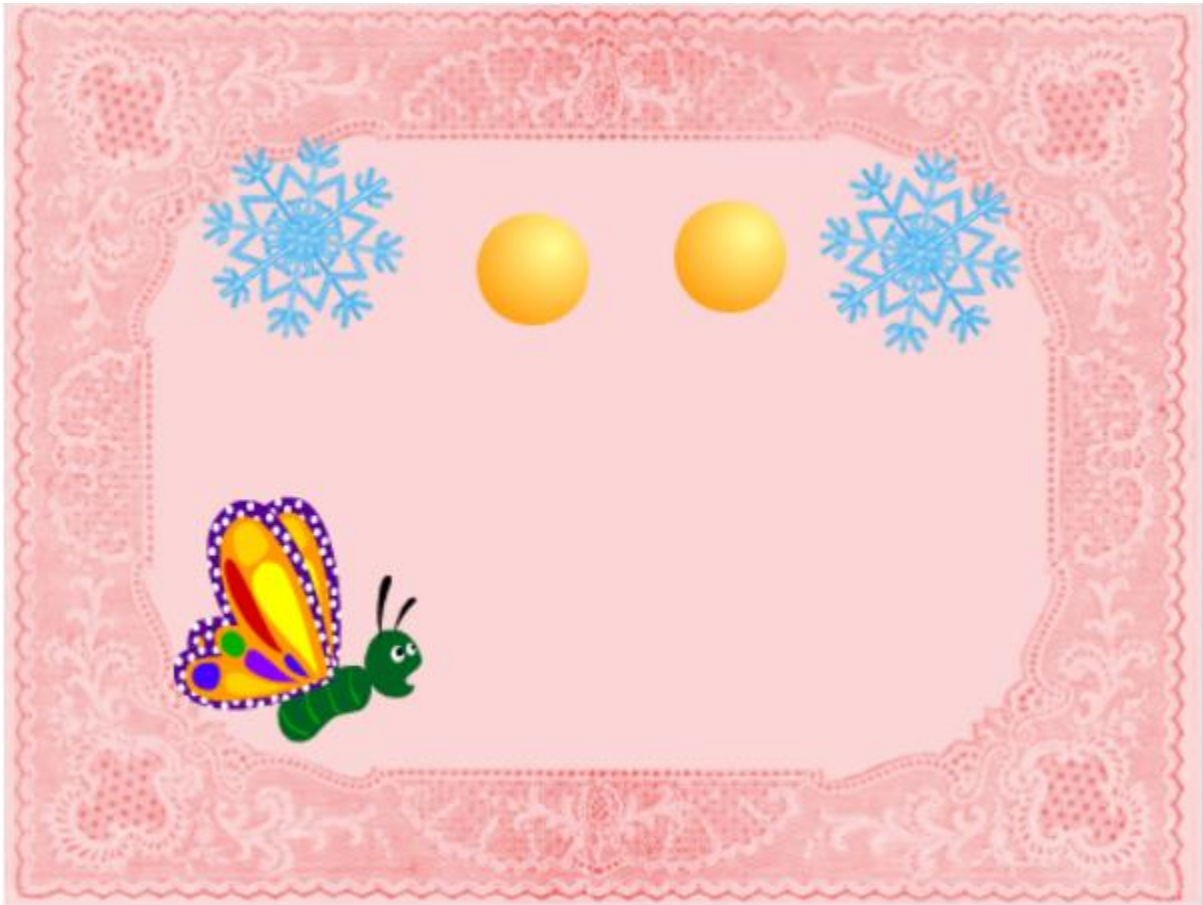
Lesson 3 "Jumping dinosaur"

Lesson 4 "Ghost catch-up"

Lesson 5 "Spider hunter"

Lesson 6 "Climbing monkey"

Lesson 1

Animated card

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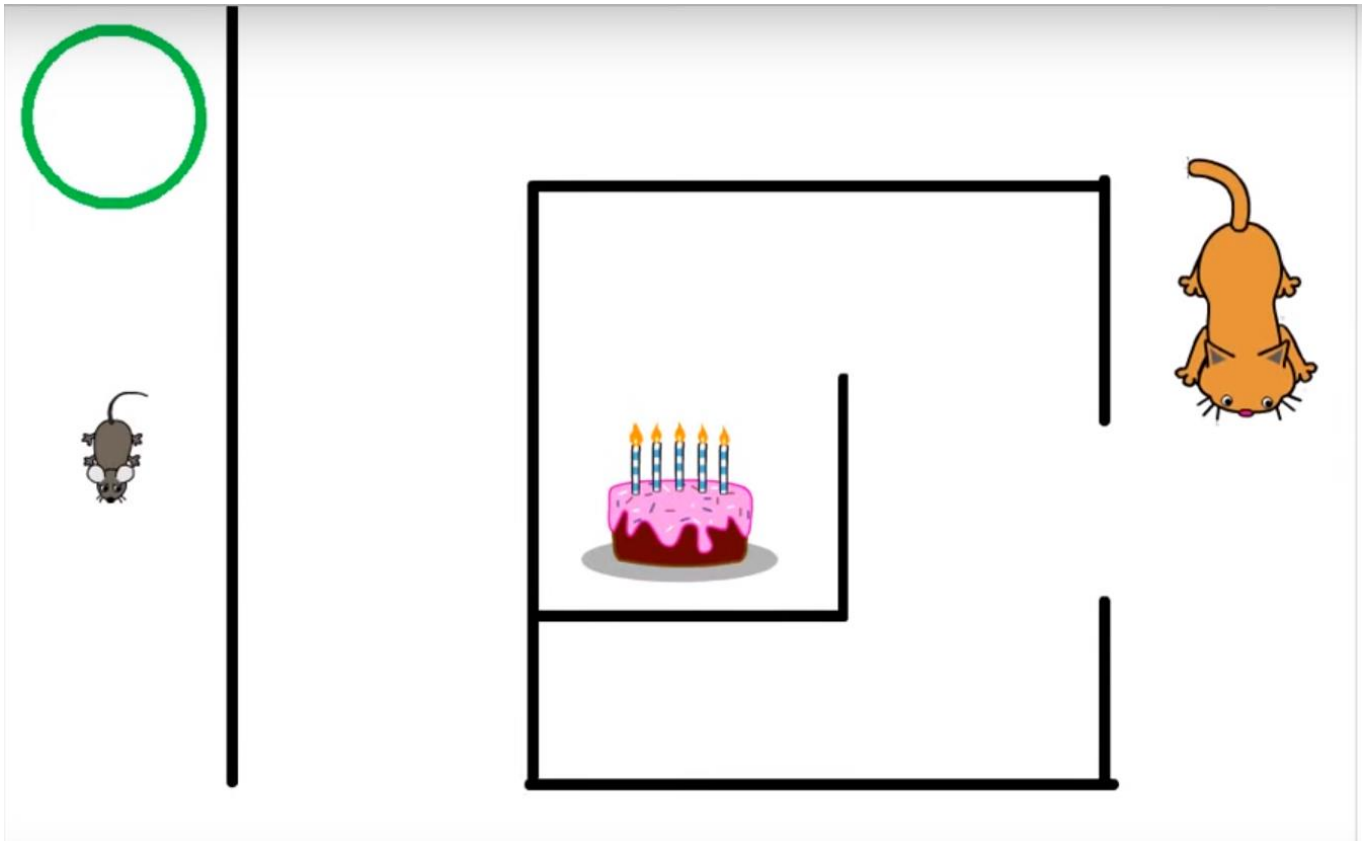


```
when [flag] clicked
forever
    change color effect by 25
```
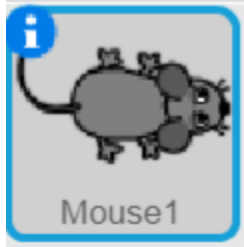


```
when [flag] clicked
forever
    change color effect by 3
    turn 5 degrees
```

Lesson 2

# MAZE

Mouse1

when 🚩 clicked

forever

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 ■ ? then

go to x: -212 y: 149

when [green flag] 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
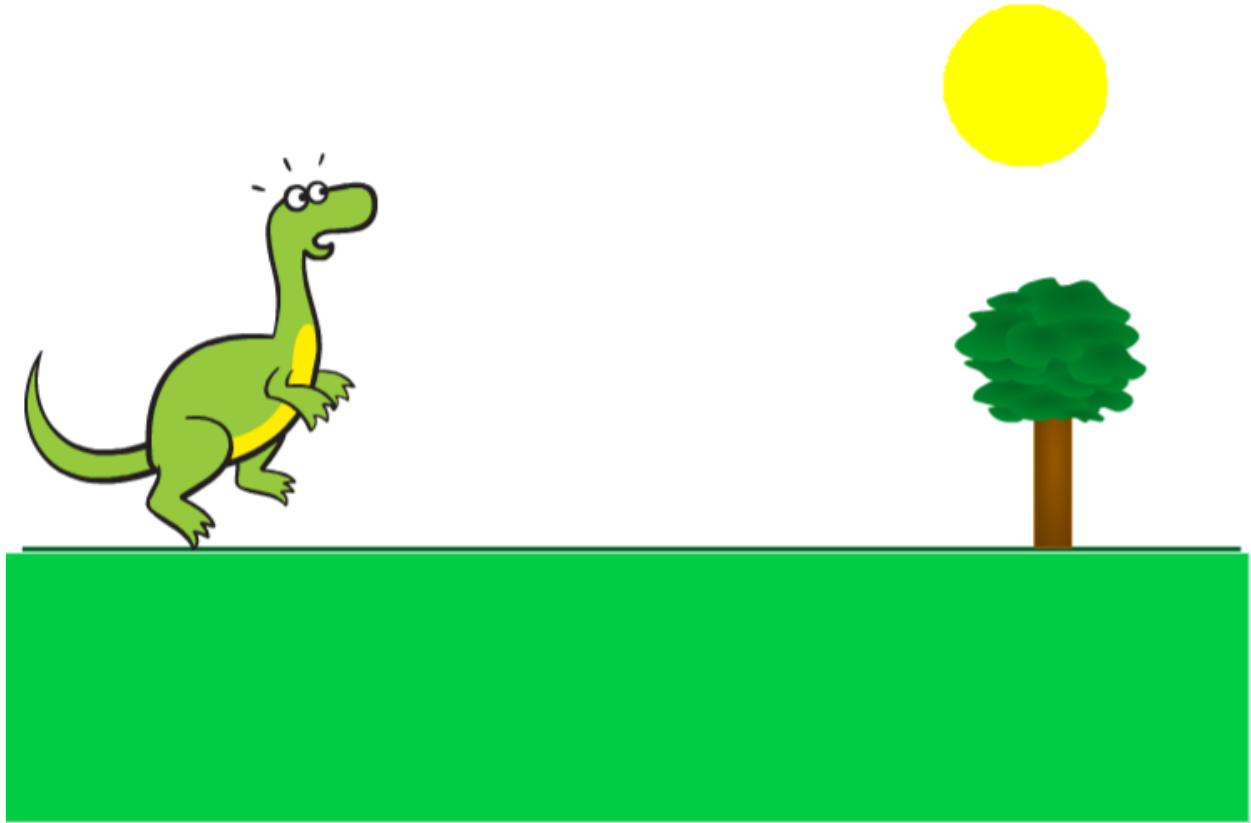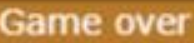
```
when [flag] clicked
go to x: -164 y: 0
forever
    if < key [up arrow ▼] pressed? > then
        go to x: -164 y: 100
        wait 0.5 secs
        go to x: -164 y: 0
    if < touching [Tree1 ▼] ? > then
        broadcast [Game over ▼]
```

```
when I receive [Game over ▼]
say [Bye!]
wait 0.5 secs
stop [all ▼]
```

```
when [flag] 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 [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


```
when [flag] clicked
forever
    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
```

```
when [flag] clicked
forever
    create clone of [bullet ▾]
    wait (0.3) secs
```

x: 28
y: -141

Bullet

```
when [flag] clicked
hide

when I start as a clone
show
go to [hunter ▼]
point in direction (direction ▼ of [hunter ▼])
move (25) steps
repeat until < touching [edge ▼] ? > or < touching [spider ▼] ? >
    move (15) steps
delete this clone
```

x: 200
y: -165

SPIDER


```
when [flag] clicked
hide
forever
    wait 2 secs
    create clone of myself

when I start as a clone
show
go to x: 250 y: pick random -170 to 170
forever
    point towards hunter
    move 3 steps
    if touching bullet ? then
        wait 0.1 secs
        delete this clone
    if touching hunter ? then
        stop all
```

x: 208
y: -140

Lesson 6
Climbing monkey

```
when [flag] 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

when 🚩 clicked
hide
forever
  create clone of myself ▾
  wait 0.4 secs

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