

Computing

Lesson 3: Improving a Game

Variables in Games

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¹ Materials from the Teach Computing Curriculum created by the National Centre for Computing Education

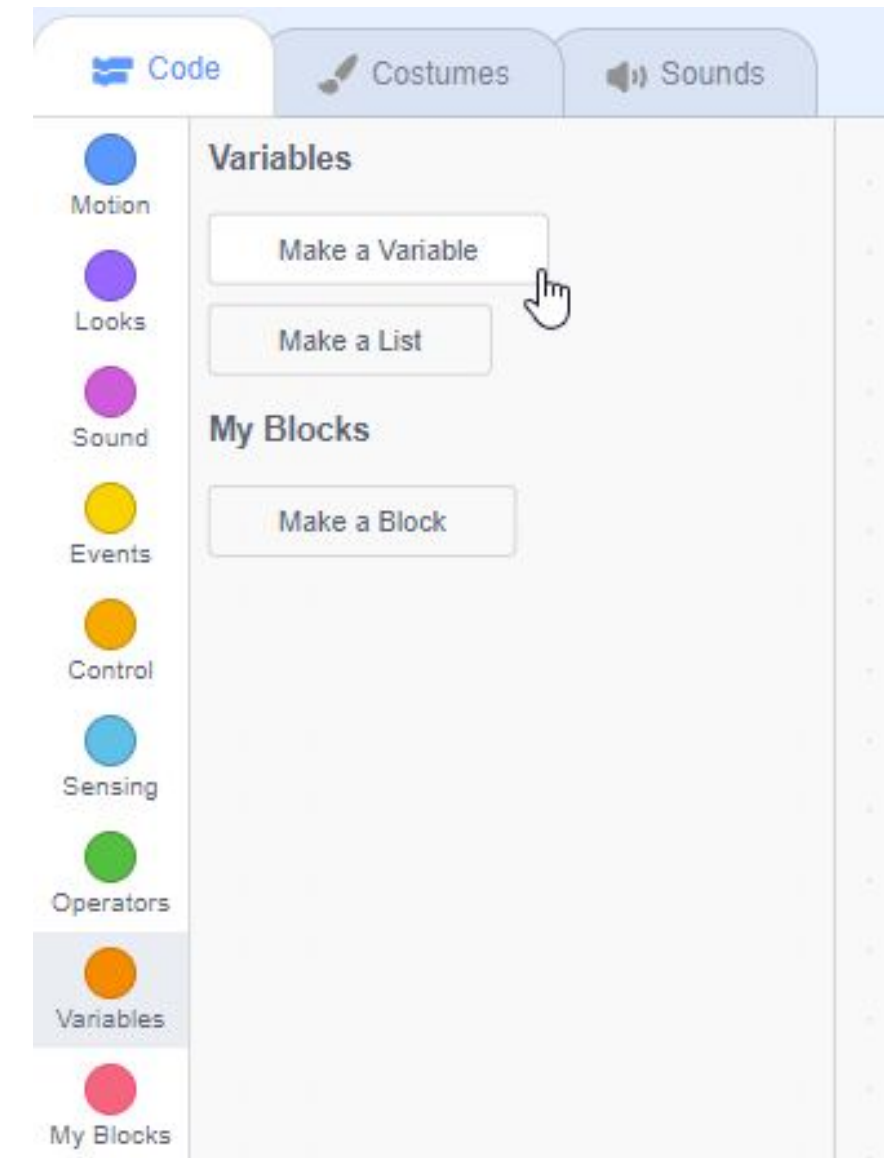


Task 1 - Make a variable

Go to ncce.io/p6a3-1

Make variable.

Name the variable 'score'.



Score

Source: Scratch



Task 2 - Experimenting with 'score'

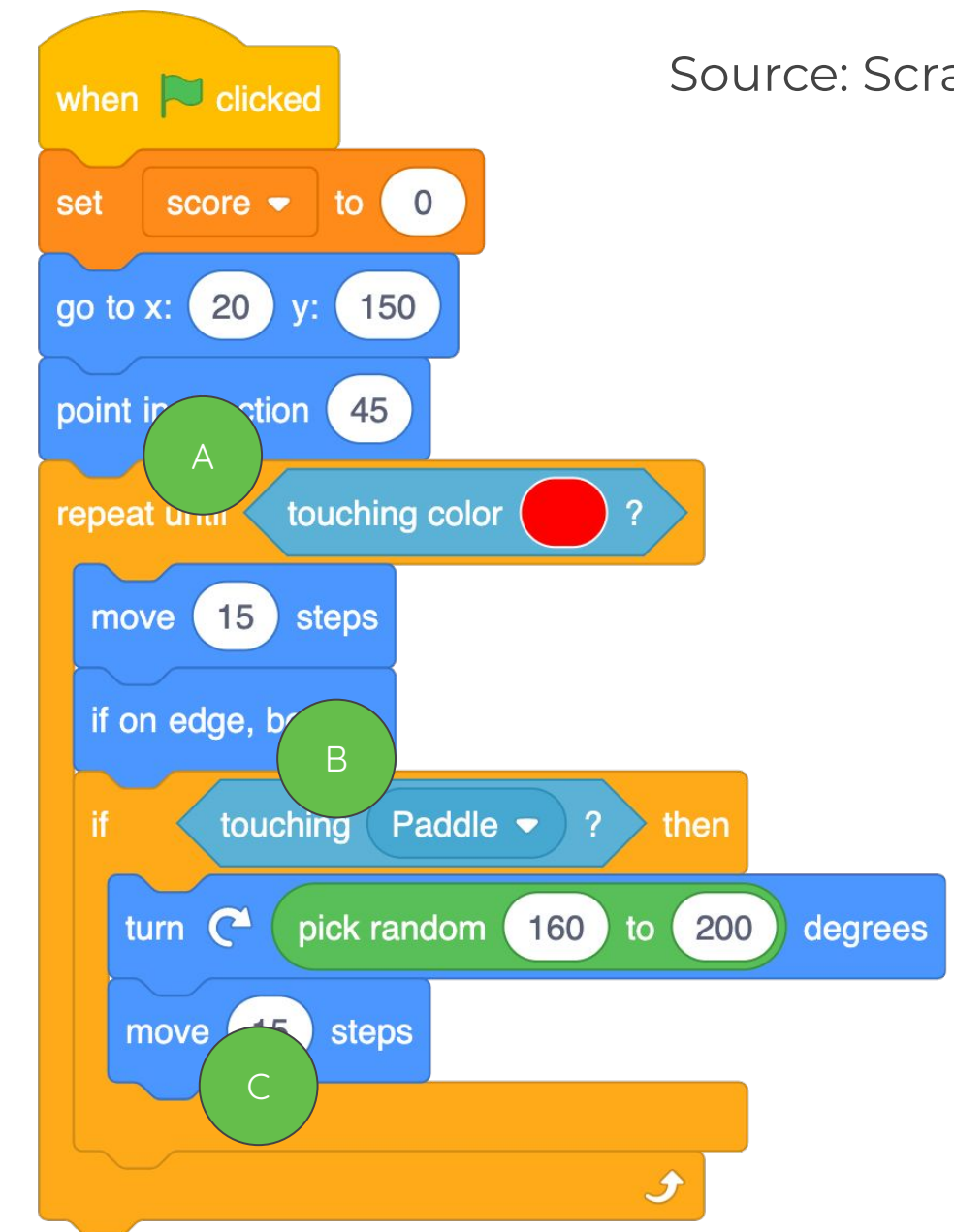
Go to back to the code.

Place  in position A. Read the code through.

Note down how you think the score will change.

Run the program and note down how the score changes.

Repeat the above, trying position B and then C.



Task 2 - Experimenting with 'score'

A

```
when green flag clicked
  set score to 0
  go to x: 20 y: 150
  point in direction 45
  change score by 1
  repeat until touching color red
    move 15 steps
    if on edge, bounce
    if touching Paddle then
      turn pick random 160 to 200 degrees
      move 15 steps
```

B

```
when green flag clicked
  set score to 0
  go to x: 20 y: 150
  point in direction 45
  repeat until touching color red
    move 15 steps
    if on edge, bounce
    change score by 1
    if touching Paddle then
      turn pick random 160 to 200 degrees
      move 15 steps
```

C

```
when green flag clicked
  set score to 0
  go to x: 20 y: 150
  point in direction 45
  repeat until touching color red
    move 15 steps
    if on edge, bounce
    if touching Paddle then
      turn pick random 160 to 200 degrees
      move 15 steps
      change score by 1
```

Source: Scratch



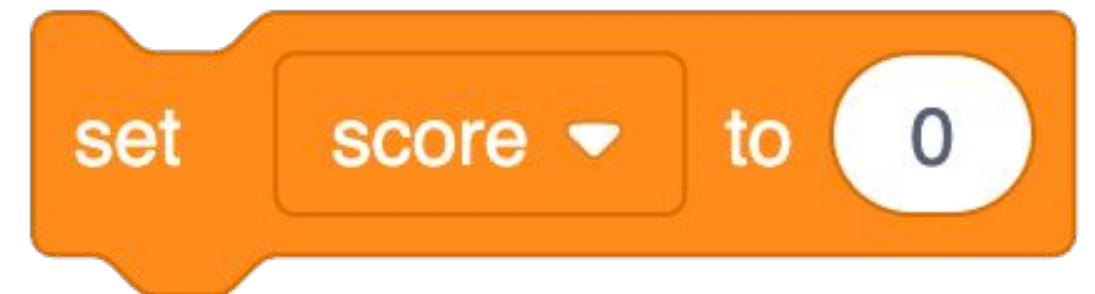
Task 3 - Experimenting with the value of the variable

Place the change block in position B or C (Task 2)

Try changing by score 2, 5, or 10.

What happens if you use a negative number?

Do you always have to **set** the variable to 0?



Source: Scratch

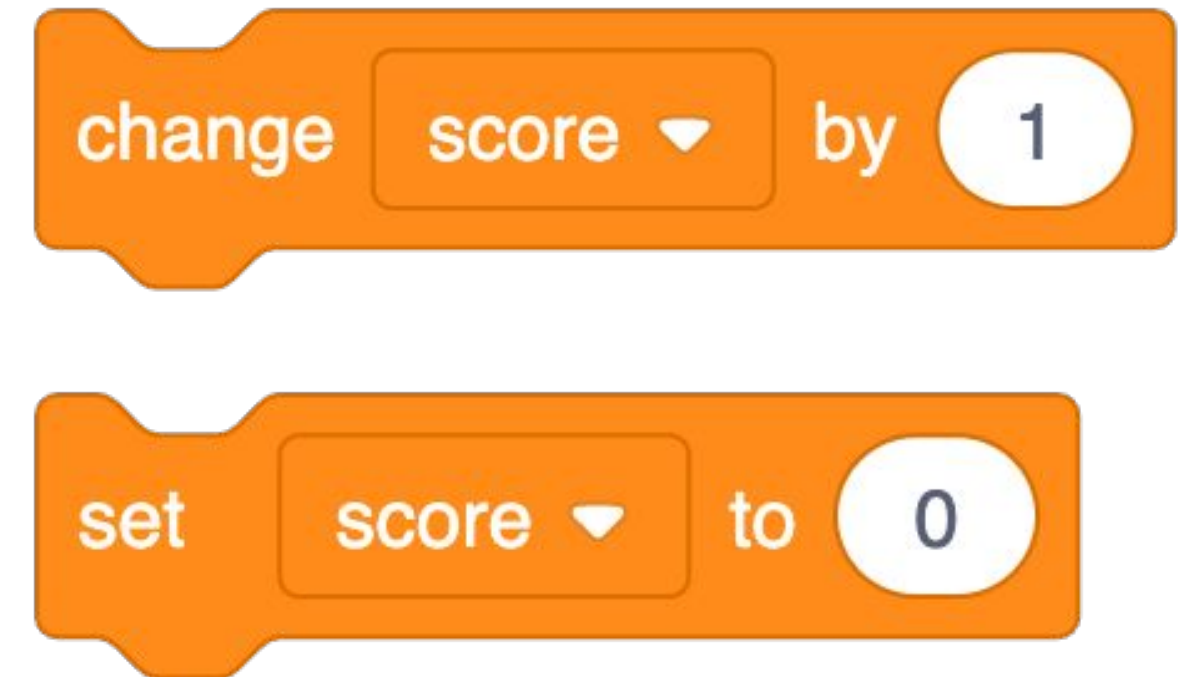


Task 4 - Changing a variable more than once

Try adding two change score variables to your code in different places.

What happens?

You might need to change the values.



Source: Scratch

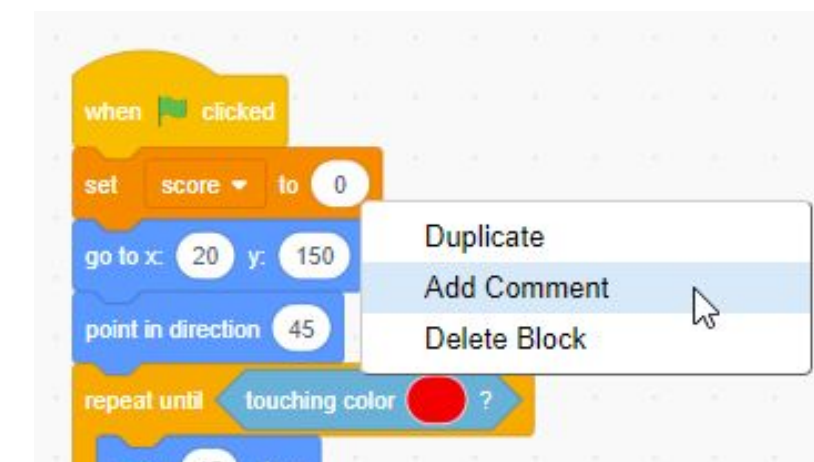
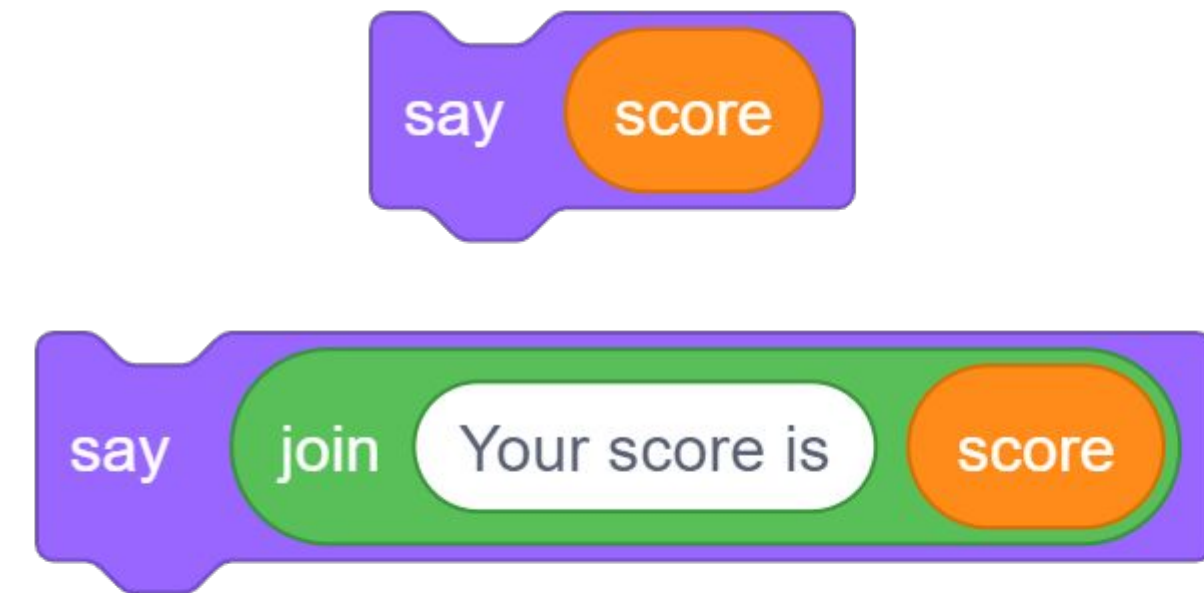


Task 5 - Changing a variable more than once

In the Variables area, untick score to stop it being displayed. 

Add code so the score is said at the end of the game.

Add comments to your program indicating where variables change and why.



Source: Scratch

