Dashboard | Khan Academy   ×   CSC106 JTerm Notes - Google   ×   Week 2B Course Material - CS   ×   Using while loops (practice   ×   +

khanacademy.org/computing/computer-programming/programming/looping/e/review-loops

Courses ▾   Search   🔍   Khan Academy   Donate   edwinzanella

Computer programming

< / UNIT 1: LESSON 13 >
Looping

Intro to While Loops

Using while loops
100%

Challenge: A Loopy Ruler

More While Loops: Balloon Hopper

Challenge: A Loopy Landscape

For Loops! A New Kind of Loop

Challenge: Lined Paper

Using while loops
🖥 Google Classroom

Keep going. Keep growing. 💪

6/6 correct · 550 energy pts

🔄 Try again

Up next: challenge

1.

Dashboard | Khan Academy   ×   CSC106 JTerm Notes - Google   ×   Week 2B Course Material - CS   ×   Challenge: A Loopy Ruler | Loo   ×   +

khanacademy.org/computing/computer-programming/programming/looping/pc/challenge-a-loopy-ruler

Courses ▾   Search   🔍   Khan Academy   Donate   edwinzanella

Computer programming

< UNIT 1: LESSON 13 >
Looping

Intro to While Loops

Using while loops
100%

Challenge: A Loopy Ruler

More While Loops: Balloon Hopper

Challenge: A Loopy Landscape

For Loops! A New Kind of Loop

Challenge: Lined Paper

Now let's do the same for y, so that we have a ruler going down the left side of our canvas too! It should be very similar to the loop you have for the x.

```
var     = 0;
while (     <      ) {
    text(    , 0,     );
         +=     ;
}
```

```
1    fill(17, 0, 255);
2
3    // a handy dandy ruler across the top
4    var x = 0;
5    var y = 0;
6
7    while(x <= 350) {
8        text(x, x, 10);
9        x += 50;
10   }
11   while(y <= 350) {
12        text(y, 0, y);
13        y += 50;
14   }
15
```

0   50   100   150   200   250   300   350
50
100
150
200
250
300
350

Congratulations!
You earned
1500 points!

Undo   Start over   😊   Step 2/2   Spin-off

Up next: talkthrough

2.

3.

Dashboard | Khan Academy × | CSC106 JTerm Notes - Google × | Week 2B Course Material - CS × | Challenge: A Loopy Landscape × | More While Loops: Balloon Hop × | +

khanacademy.org/computing/computer-programming/programming/looping/pc/challenge-a-loopy-landscape

Courses ▾   Search   🔍   🟦 Khan Academy   Donate   edwinzanella

Computer programming

‹ UNIT 1: LESSON 13 ›
Looping

▶ Intro to While Loops

✎ Using while loops
100%

★ Challenge: A Loopy Ruler

▶ More While Loops: Balloon Hopper

★ Challenge: A Loopy Landscape

▶ For Loops! A New Kind of Loop

★ Challenge: Lined Paper

to right:
- Start off by making a while loop that draws the tree and the grass;
- Make sure your variable starts close to the left edge of the canvas;
- Increment the variable, so that each tree and grass patch is drawn close to the last;
- It should keep drawing while the x position variable is inside the canvas;

Tip: Be careful with the condition of your while loop, and make sure you increment the variable properly inside it. Otherwise, your while loop will run forever and ever and ever...

```
while ( ____ < ____ ) {
    image(grass, ____, 270);
    image(tree, ____, 200);

    ____ += ____;
}
```

```
1  background(144, 240, 234);
2  var x = 0;
3  // Draw the sun
4  noStroke();
5  fill(255, 140, 0);
6  ellipse(335, 66, 70, 70);
7
8  // Get images from library and remember in
   variables
9  var grass = getImage("cute/GrassBlock");
10 var tree = getImage("cute/TreeUgly");
11
12 // Draw the tree and grass once
13 while(x < 400) {
14     image(grass, x, 270);
15     image(tree, x, 200);
16     x+=80;
17 }
18
```

Congratulations!
You earned
2100 points!

Up next: talkthrough

4.

Dashboard | Khan Aca × | CSC106 JTerm Notes × | Week 2B Course Mate × | Challenge: Lined Pap × | VALORANT VODS - Y × | Showmatch! DRX vs × | YouTube × | +

khanacademy.org/computing/computer-programming/programming/looping/pc/challenge-lined-paper   Update

Courses ▾   Search   🔍   🟦 Khan Academy   Donate   edwinzanella

Computer programming

‹ UNIT 1: LESSON 13 ›
Looping

▶ Intro to While Loops

✎ Using while loops
100%

★ Challenge: A Loopy Ruler

▶ More While Loops: Balloon Hopper

★ Challenge: A Loopy Landscape

▶ For Loops! A New Kind of Loop

★ Challenge: Lined Paper

Make it graph paper

Now, add a for loop that draws 20 evenly spaced vertical lines (lines that go from top to bottom) to turn the lined paper into grid paper. The first vertical line should have an x coordinate of 20, and the last vertical line should have an x coordinate of 400.

Report a problem

Hint What's this?

```
for (var j = 0; j < 20; j++) {
    var ____ = 20 + (j * 20);
    line(____, ____, ____, ____);
}
```

```
1  background(255, 255, 247);
2  stroke(173, 222, 237);
3
4  for(var i = 0; i < 20; i++) {
5      var lineY = 20 + (i * 20);
6      line(0, lineY, 400, lineY);
7  }
8
9  for(var x = 0; x < 20; x++) {
10     var lineX = 20 + (x * 20);
11     line(lineX, 0, lineX, 400);
12 }
13 /*while (i < 20) {
14     var lineY = 20 + (i * 20);
15     line(0, lineY, 400, lineY);
16     i++;
17 }
18 */
19
```

Congratulations!
You earned
2100 points!

Undo   Start over

Step 2/2   Spin-off

Up next: talkthrough

5.

Dashboard | Khan Academy | CSC106 JTerm Notes - Go | Week 2B Course Material | Writing clean code (practic | VALORANT VODS - YouTub | Showmatch! DRX vs North

khanacademy.org/computing/computer-programming/programming/writing-clean-code/e/quiz--clean-code   Update

Courses ▾   Search   Khan Academy   Donate   edwinzanella

Computer programming

‹   UNIT 1: LESSON 14   ›
Writing clean code

▶ Readable Code

▶ Clarifying with Comments

✎ Writing clean code
   100%

Computing > Computer programming > Intro to JS: Drawing & Animation > Writing clean code

© 2023 Khan Academy
Terms of use   Privacy Policy   Cookie Notice

Writing clean code
⊞ Google Classroom

Keep going. Keep growing. 💪

9/9 correct · 775 energy pts

↻ Try again   Up next: Lesson 15

6.

Dashboard | Khan Academy | CSC106 JTerm Notes - Go | Week 2B Course Material | Challenge: Favorite Fruits | | VALORANT VODS - YouTub | Showmatch! DRX vs North

khanacademy.org/computing/computer-programming/programming/arrays/pc/challenge-favorite-fruits   Update

Courses ▾   Search   Khan Academy   Donate   edwinzanella

Computer programming

‹   UNIT 1: LESSON 15   ›
Arrays

▶ Intro to Arrays

★ Challenge: Favorite Fruits

▶ Looping through Arrays

★ Challenge: Favorite Animals

▶ Modifying Arrays

★ Challenge: Constellation Maker

▣ Review: Arrays

Show the length!

Now display a header that says 'My top 3 favorite fruits', anywhere!

Hint What's this?   Report a problem

text("My top " + ▭ + " favorite fruits", ▭, ▭);

```
1   var fruits = ["mango", "grapes", "orange"];
2   fill(0, 0, 0);
3   text(fruits[0], 25, 25);
4   text(fruits[1], 25, 50);
5   text(fruits[2], 25, 75);
6   text("My top " + fruits.length + " favorite fruits"
    , 25, 100);
```

mango
grapes
orange
My top 3 favorite fruits

Congratulations!
You earned
1050 points!

Undo   Start over   Step 3/3   Spin-off

Up next: talkthrough

Dashboard | Khan Academy | CSC106 JTerm Notes – Goo | Week 2B Course Material | Challenge: Favorite Animal | VALORANT VODS - YouTub | Showmatch! DRX vs North

khanacademy.org/computing/computer-programming/programming/arrays/pc/challenge-favorite-animals   Update

Courses ▾   Search   Khan Academy   Donate   edwinzanella

Computer programming

UNIT 1: LESSON 15
Arrays

Intro to Arrays

Challenge: Favorite Fruits

Looping through Arrays

Challenge: Favorite Animals

Modifying Arrays

Challenge: Constellation Maker

Review: Arrays

Add more animals!

Now that you have a loop to display your array of animals, test it out by adding at least 2 more animals (5 total).

Hint What's this?
var [, , , ,];

```
1  var animals = ["penguin", "bunny", "capybara",
   "bear", "walrus"];
2  var i = 0;
3
4  while(i < animals.length) {
5      fill(0, 0, 0);
6      text(animals[i], 25, 30 + i * 30);
7      i++;
8  }
9
```

penguin
bunny
capybara
bear
walrus

Congratulations!
You earned
2100 points!

Undo   Start over   Step 3/3   Spin-off

Up next: talkthrough

7.

Dashboard | Khan Academy | CSC106 JTerm Notes – Goo | Week 2B Course Material | Challenge: Constellation M | VALORANT VODS - YouTub | Showmatch! DRX vs North

khanacademy.org/computing/computer-programming/programming/arrays/pc/challenge-constellation-maker   Update

Courses ▾   Search   Khan Academy   Donate   edwinzanella

Computer programming

UNIT 1: LESSON 15
Arrays

Intro to Arrays

Challenge: Favorite Fruits

Looping through Arrays

Challenge: Favorite Animals

Modifying Arrays

Challenge: Constellation Maker

Review: Arrays

Add stars on click

Make this program more dynamic, by making it add stars when the user clicks the mouse.

Add a mouseClicked function at the end of the program that should:
- push a new x and y position onto the arrays based on the current mouse position (mouseX and mouseY);
- redraw the stars, using the drawStars function.

Time to check that it works - click anywhere on the canvas to make new stars.
I would like to see a beautiful night sky * . *

Hint What's this?
```
mouseClicked = function() {
    xPositions.push( );
    yPositions.push( );
    drawStars();
};
```

```
1  var xPositions = [100, 200];
2  var yPositions = [200, 100];
3
4  var drawStars = function() {
5      background(9, 5, 59);
6      imageMode(CENTER);
7      for (var i = 0; i < yPositions.length; i++) {
8          image(getImage("space/star"), xPositions[i
   ], yPositions[i], 30, 30);
9      }
10 };
11
12 drawStars();
13
14 mouseClicked = function() {
15     xPositions.push(mouseX);
16     yPositions.push(mouseY);
17     drawStars();
18 };
```

Congratulations!
You earned
2100 points!

Up next: article

8.

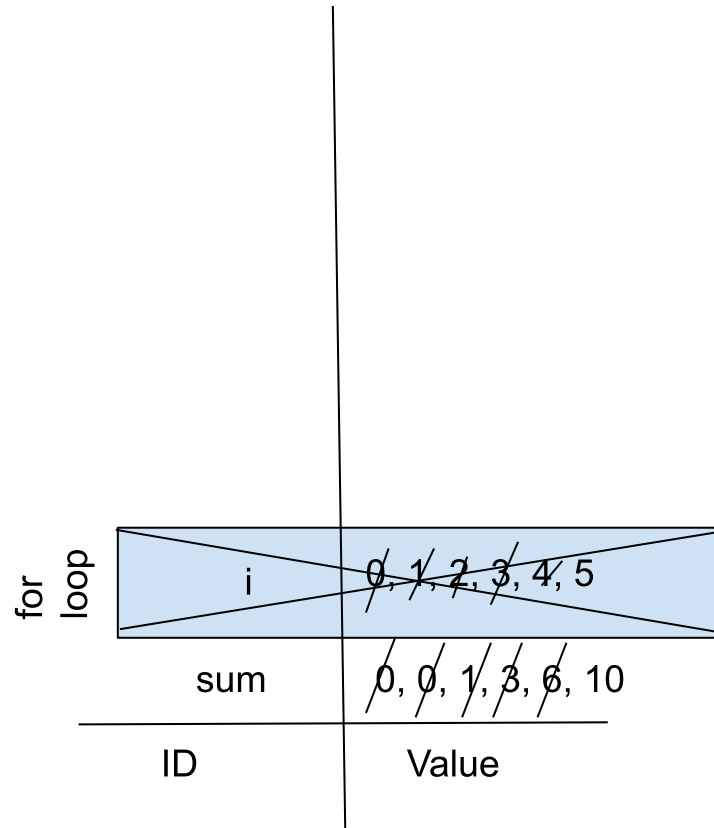Question 6: D

Question 7: A

Question 8: B

Question 9: D

Question 10: C

Question 11: C

Question 12: A

9. https://www.khanacademy.org/computer-programming/hernandez-zanella_multiplication/6291400920711168

10. https://youtu.be/7mpGXQNetFk

11. https://www.khanacademy.org/computer-programming/new-program/4794229645950976

12. https://www.khanacademy.org/computer-programming/spin-off-of-project-make-it-rain/4578826332192768

13. https://youtu.be/7pB0PVcs5Qc

for loop

i   0, 1, 2, 3, 4, 5

sum   0, 0, 1, 3, 6, 10

ID   Value

14.

15. https://docs.google.com/document/d/1hbFmhHIxLGEEooj-I4qgJnQ-Pce19zezxy4FucUHMT4/edit