

Project 57

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DP
EDUCATION

Coding School

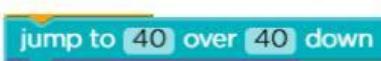
How It Works

Start Here

Built on Code Studio ▾

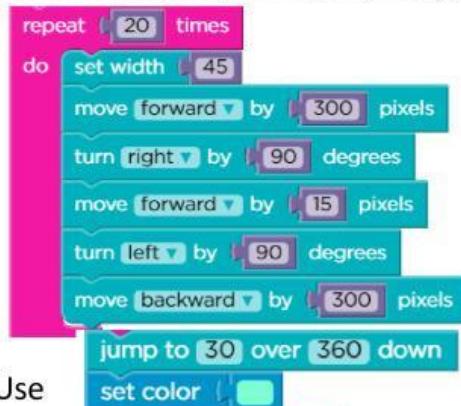
Let's create the logo of code.org.

- ❖ Let's position the artist so that X= 40 and Y= 40 by the "Jump to over down" block.

jump to [40 v] over [40 v] down

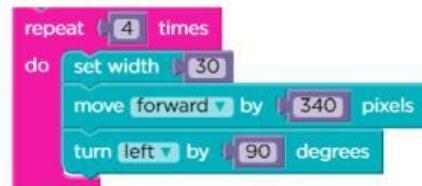
- ❖ To make the screen completely black, first adjust the size of the brush to 45 with the "set width" block. Then, with the "move forward" block, move forward 300 pixels, turn right by 90 degrees,

move forward again by 15 pixels and turn 90 degrees. 300 pixels should be moved back and left. Use the "repeat do" block to repeat the process 20 times

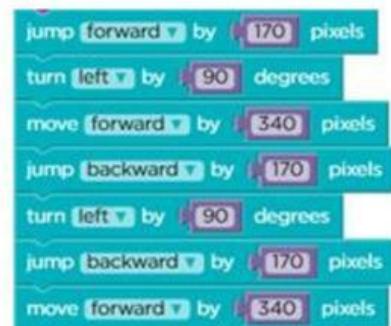
repeat (20) [set width [45 v] : move [forward [300 v] pixels : turn [right [90 v] degrees : move [forward [15 v] pixels : turn [left [90 v] degrees : move [backward [300 v] pixels : jump to [30 v] over [360 v] down : set color [blue v]]]

- ❖ Use the "Jump to over down" block to position the artist so that X=30 and Y=360 and select the blue colour. Use the "set color" block for that.

- ❖ To create the light blue frame, first set the size of the brush to 30 using the "set width" block. Then, use the "move forward" block to move forward 340 pixels and move 90 degrees to the left. This process is done 4 times. Also use the "repeat do" block.

repeat (4) [set width [30 v] : move [forward [340 v] pixels : turn [left [90 v] degrees]]]

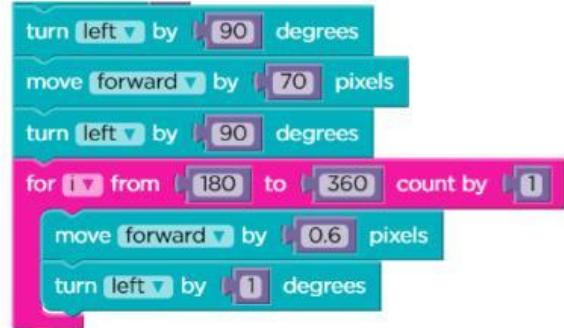
- ❖ Then, by the "jump forward" block, move forward 170 pixels and turn left by 90 degrees, again by using the "move forward" block, move forward by 340 pixels, and by using the "jump backward" block, jump backward by 170 pixels and turn left by 90 degrees. Harry jumps back 170 pixels again and moves forward 340 pixels using the "move forward" block.

jump [forward [170 v] pixels : turn [left [90 v] degrees : move [forward [340 v] pixels : jump [backward [170 v] pixels : turn [left [90 v] degrees : jump [backward [170 v] pixels : move [forward [340 v] pixels]]]

- ❖ Choose the colour white. Use the "set color" block for that. Adjust the size of the brush to 5 using the "set width" block.



- ❖ First let's create the letter "D". The artist turns 90 degrees to the left with the "move forward" block, moves forward 70 pixels and turns left by 90 degrees, and the "move forward" block moves 0.6 pixels forward and turns left by 1 degree. Here, use the for loop block to create a semicircle as follows. The blocks related to the creation of the letter "D" are as follows



- ❖ Use the "Jump to over down" block to position the artist so that X=30 and Y=360.



- ❖ To create the letter "C", the "move forward" block moves forward by 0.6 pixels and turns to the left by 1 degree. Here, use the for loop block as follows. The blocks related to creating the letter "C" are as follows.



- ❖ Turn right by 90 degrees and use the "Jump to over down" block to position the artist so that X=250 and Y=120.



- ❖ To create the letter "O", the "move forward" block moves forward 0.6 pixels and turns left by 1 degree. Here, use the for loop block as follows. The blocks related to creating the letter "O" are as follows.



- ❖ Use the "Jump to over down" block to position the artist so that X=30 and Y=360.

jump to 250 over 250 down

- ❖ Let's create the letter "E". The artist moves forward 70 pixels by the "move forward" block, turning 90 degrees to the right, and moving 35 pixels forward by the "move backward" block, turning 90 degrees to the left by the "move forward" block, then moving 35 pixels backward by the "jump backward" block. Then turn left by 90 degrees and move forward 35 pixels by the "jump forward" block and turn right by 90 degrees. The "move forward" block moves forward 35 pixels and turns 90 degrees to the left. The "jump forward" block jumps forward 35 pixels and turns left 90 degrees. When the letter "E" is created

```

turn right by 24 degrees
move forward by 70 pixels
turn left by 90 degrees
move forward by 35 pixels
jump backward by 35 pixels
turn left by 90 degrees
jump forward by 35 pixels
turn right by 90 degrees
move forward by 35 pixels
turn left by 90 degrees
jump forward by 35 pixels
turn left by 90 degrees
move forward by 35 pixels

```

Choose the correct answer.



1. What blocks should be used to achieve this design?

```

jump to 30 over 360 down
repeat [4 times
  do [set width to 30
    move forward by 340 pixels
    turn right by 90 degrees
    turn right by 45 degrees
    move forward by 450 pixels]

```

```

jump to 30 over 360 down
repeat [4 times
  do [set width to 30
    move forward by 340 pixels
    turn right by 90 degrees
    turn left by 45 degrees
    move forward by 450 pixels]

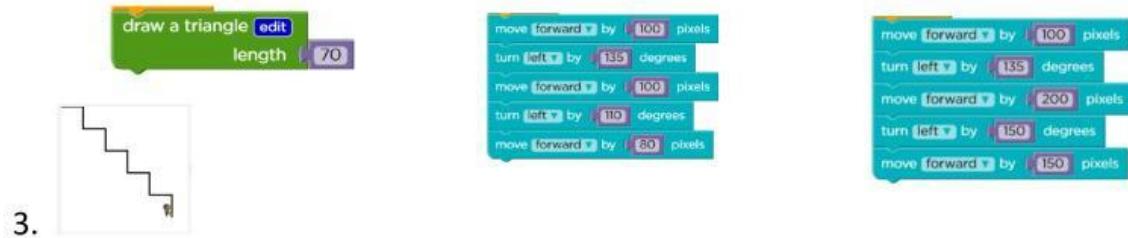
```

```

jump to 30 over 360 down
repeat [4 times
  do [set width to 30
    move forward by 340 pixels
    turn left by 90 degrees
    turn left by 45 degrees
    move forward by 450 pixels]

```

2. What blocks should be used to create an isosceles triangle?

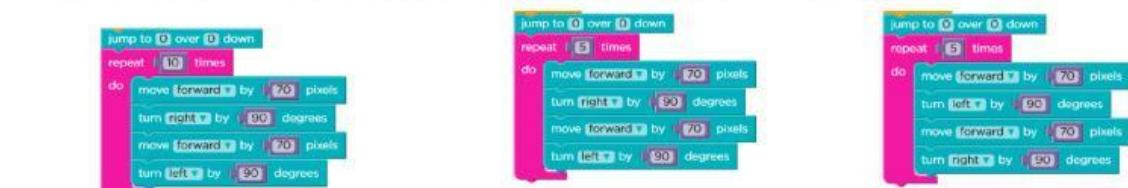


Scratch script for a right-angled triangle:

- Green flag script: `draw a triangle [edit]` with `length 70`.
- Scratch script: `move [forward v by 100 pixels]`, `turn [left v by 135 degrees]`, `move [forward v by 100 pixels]`, `turn [left v by 110 degrees]`, `move [forward v by 80 pixels]`.
- Scratch script: `move [forward v by 100 pixels]`, `turn [left v by 135 degrees]`, `move [forward v by 200 pixels]`, `turn [left v by 150 degrees]`, `move [forward v by 150 pixels]`.

3.

What blocks should be applied to get a design like this image?



Scratch script for a square spiral:

- Scratch script: `jump to [0 over 0 down]`, `repeat [10 times]`, `do [move [forward v by 70 pixels]`, `turn [right v by 90 degrees]`, `move [forward v by 70 pixels]`, `turn [left v by 90 degrees]`]
- Scratch script: `jump to [0 over 0 down]`, `repeat [5 times]`, `do [move [forward v by 70 pixels]`, `turn [right v by 90 degrees]`, `move [forward v by 70 pixels]`, `turn [left v by 90 degrees]`]
- Scratch script: `jump to [0 over 0 down]`, `repeat [5 times]`, `do [move [forward v by 70 pixels]`, `turn [left v by 90 degrees]`, `move [forward v by 70 pixels]`, `turn [right v by 90 degrees]`]

4.

`jump to the [bottom right v position]`

What does this block do?

Artist moves to the upper right corner of the screen.

Artist moves to the lower right corner of the screen.

Artist moves to the top left corner of the screen.

5.

What blocks should be used to achieve this type of design?



Scratch script for a five-pointed star:

- Scratch script: `jump to [100 over 70 down]`, `draw a star [edit]` with `points 5` and `length 30`.
- Scratch script: `jump to [100 over 70 down]`, `draw a star [edit]` with `points 10` and `length 30`.
- Scratch script: `jump to [200 over 200 down]`, `draw a star [edit]` with `points 5` and `length 30`.