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Unit 2 - Week 1

Course outline

How does an NPTEL online course work?

Week 1

- Introduction to Programming
- Why Programming?
- Programming for Everybody
- Any Prerequisites?
- Where to start?
- Why do we have so many languages?
- How to go about programming?
- Why to learn programming?
- What is programming?
- How to give instructions?
- Introduction to Scratch
- Introduction to Loops
- More about Loops
- Solution to Looping Problem
- Scratch : Animation 1

Assignment 1

Your last recorded submission was on 2020-09-30, 22:12 IST

Due date: 2020-09-30, 23:59 IST.

1) Which of the following is true about a computer program? *1 point*

- (•) It is a sequence of instructions
- ( ) Instructions that are written in simple english
- ( ) There is only one universal programming language
- ( ) It is meant for only software developers

2) Assume you are given two images, each displaying two basic positions of situps. Identify the set of commands to perform an exercise with both images. *1 point*

- ( ) Turn clockwise 90 degree / Turn clockwise -90 degrees
- ( ) Move 10 steps / Move -10 steps
- (•) Hide / Show
- ( ) point in direction 90 / point in direction -90

3) Choose the best command to be used at the start of your code, to locate the sprite at an initial position every time you play the animation. *1 point*

- ( ) change x to val
- (•) set x to val / set y to val
- ( ) point in direction 90
- ( ) point towards mouse pointer

4) Assume the sprite is a ball and predict the output of the following control structure. *1 point*

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More about Loops
Solution to Looping Problem
Scratch : Animation 1
Scratch : Animation 2
Scratch : Animation 3
More on Scratch
Quiz : Assignment 1
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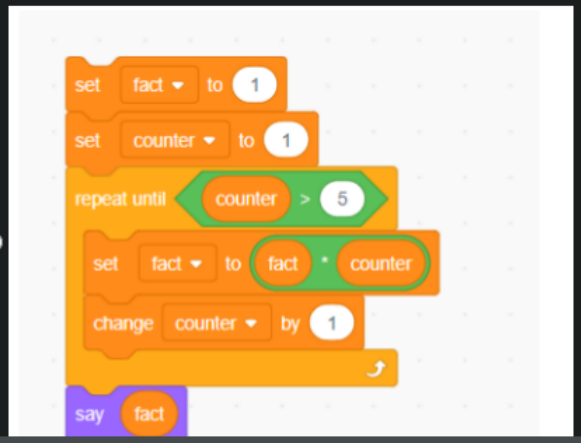
4) Assume the sprite is a ball and predict the output of the following control structure. *1 point*

- The ball glides to a random position in 1 second
- The ball glides to 10 random positions taking 1 second to reach each position
- The ball glides to a random position and waits there for 10 seconds
- The ball glides to 10 random positions within 1 second

5) Pick the snippet that helps the sprite to find the factorial of 5 as output. *1 point*

Given:
Factorial (n)=1 x 2 x 3 x .. x (n-1) x n



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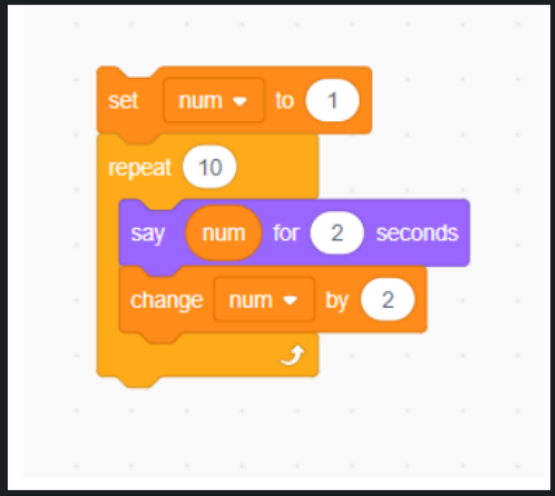
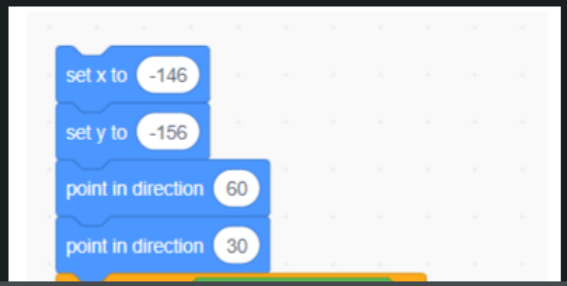
6) Predict the sequence of numbers that the sprite recites: *1 point*



- 1, 2, 3, . . , 19
- 1, 3, 5, . . , 19
- 3, 5, 7, . . , 19
- 1, 2, 3, . . , 20

7) Consider a road inclined at an angle of 30° and we have a car sprite to be driven over this road. Pick the code that helps to perform the same. *1 point*
Hint: The initial direction of the sprite is 90° .



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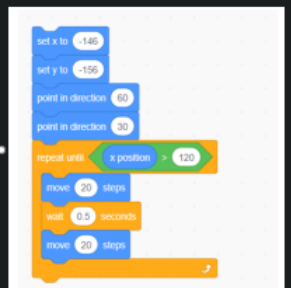
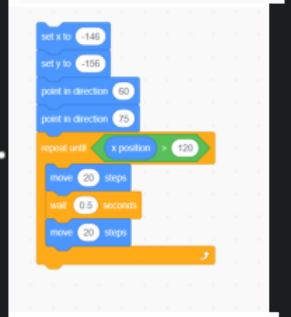
7) Consider a road inclined at an angle of and we have a car sprite to be driven over this road. Pick the code that helps to perform the same. 1 point
Hint: the initial direction of the sprite is .





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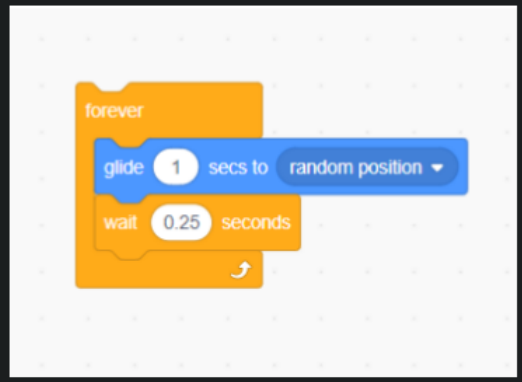
8) Identify the command to communicate across multiple sprites. *1 point*

- say message
- play sound
- Broadcast message
- touching color

9) Pick out the scratch library that provides the functionality to switch backdrop? *1 point*

- Motion
- Control
- Looks
- Sensing

10) Imagine a Magic wand sprite and predict the output for the following set of instructions. *1 point*



- The Magic wand flies to a random position takes 1 sec pause and then reaches another random position.
- The Magic wand flies to a random position in 1 sec and after a 0.25 sec pause, it repeats the same until it is stopped.
- The Magic wand reaches all edges of the screen in a uniform pattern
- The Magic wand flies between the top and bottom edges repeatedly.

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers

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