CS pathshala
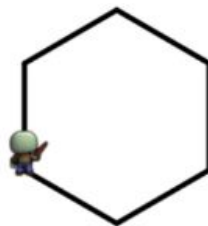Bringing computational thinking to schools

Introduction:

In this section, we would be learning to draw simple patterns using loops. Let us solve some simple questions related to loops ---> The action of doing something over and over again is called a loop. Drawing same picture for five times would be called as a loop of drawing same picture.

Questions:

1. Can you draw the following pattern using a loop? How?

<p align="center" style="color:blue">VVVVVVV</p>

2. How many lines are needed to draw the following pattern? Can it be drawn using a loop? Why and how?

3. Make two equal groups of students. Give one pattern to each group and ask them to study their respective pattern. Each group would have to come up with the following:

   a. What is a smallest possible action that can be repeated to draw a shape
   b. How many times this action should be repeated to draw a chosen shape
   c. How would you explain to someone how to draw that shape?
   d. How could you explain this using a loop?

Once they are done, both the groups would help another group to draw the pattern which only they have seen with the help of instructions – with and without loops. Variation: A group can be further split into two, where half of Group 1 can instruct half of Group 2 without using loops and other half of Group 1 can instruct other half of Group 2 using loops.
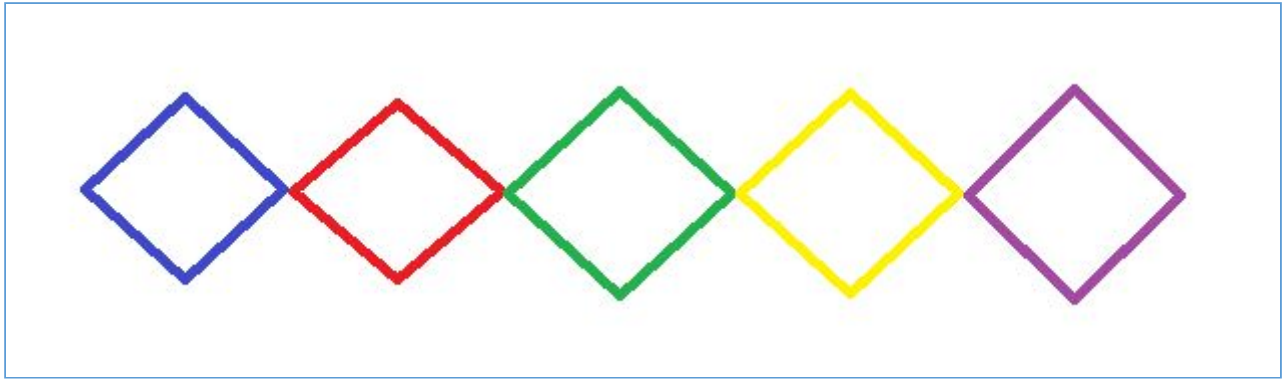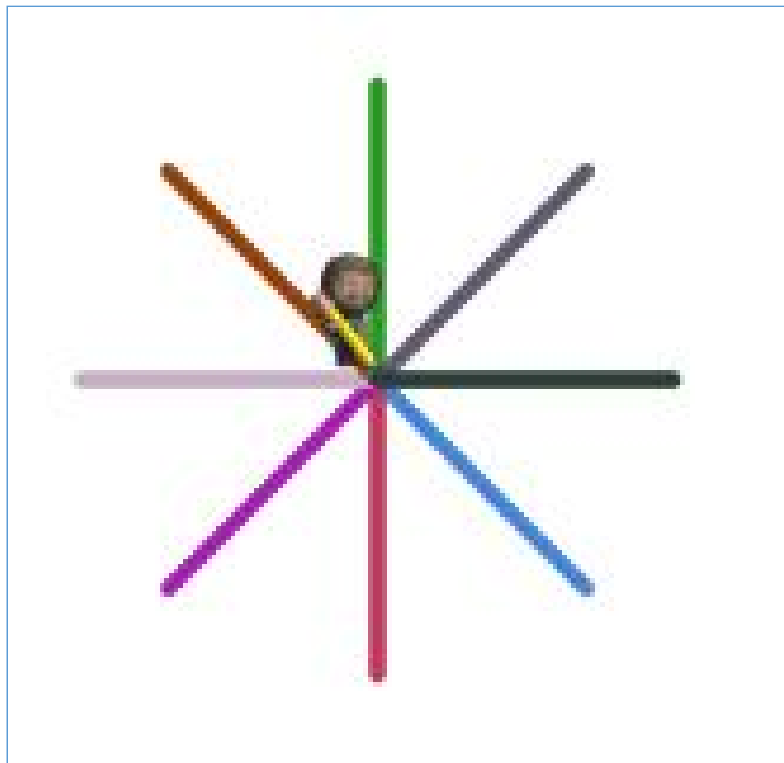
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Name: Class: Div: Roll. No:

Loops
Work Sheet: 03-ALG-10-WS

Group 1

Group 2

Name: **Class:**   **Div:**   **Roll. No:**