






Create a Program Using the Three Main Control Structures



In this activity, you will use Scratch to create a program that utilizes the three main programming control structures: sequence, selection and loop (iteration).

1. Using your web browser, go to <http://scratch.mit.edu/>.
2. Click the **Sign In** button in the top right.
3. Enter your user name and password, and then click **Sign in**.
4. Open the Scratch Editor window by clicking the **Create** link at the top-left of the page. Click the **File** menu and then click **New** to create a new project.
5. Start with a sprite of your choice positioned in the center of the stage. You can drag the  block to the scripts area and click it to reset the sprite's position back to center.
6. Change the stage background to an outdoor scene of your choice.
7. Create a script block that moves the sprite 50 steps until it hits an edge, then set it to bounce off in a new direction, wait .25 second, and repeat forever. 
8. Make the sprite rotate horizontally. Right-click the sprite and select **Info**. Within the Info section, click the  rotation style. Click the blue arrow to exit the Info section.
9. Test your program.
10. Next, create a new script block that sets an instrument of your choice to play three or four different notes for a variety of beats (such as play Note 64 for 3.5 beats, then play Note 69 for 2.5 beats, and so on).
11. Start with the volume at 50 percent, and change the volume at least twice within the script block.
12. End the script block with a Wait block set to .15 seconds.
13. Repeat forever.
14. Test your program.
15. Run both programs simultaneously by clicking the first one and then clicking the second one.

