# Lesson 5.03: Earsketch Control Flow ## Learning Objectives Students will be able to... * Define and identify: **modulo** * Demonstrate looping and control structures * Demonstrate the use of looping concepts in music making via EarSketch * Demonstrate using control structures to create music ## Materials/Preparation * [Do Now] * [Lab - EarSketch Control Flow] ([printable lab document]) ([editable lab document]) * [EarSketch Editor] * Associated Reading in EarSketch * Read through the do now, lesson, and lab so that you are familiar with the requirements and can assist students * Video Explanation of Modulo in Python (Visual Rhythms) [! [Video Explanation of Modulo in Python](https://img.youtube.com/vi/2Tg9FxIajho/0.jpg)] (https://youtu.be/2Tg9FxIajho) ## Pacing Guide | **Duration** | **Description** | | ---------- | ---------- | | 5 Minutes | Do Now | | 10 Minutes | Lesson | | 35 Minutes | Lab | | 5 Minutes | Debrief | ## Instructor's Notes ### 1. Do Now * Students should be given time to read unit 3 of the EarSketch documentation. * Students should answer the questions included in the do now and be prepared to discuss them as a class. ### 2. Lesson * Call on students to discuss the answers to the questions from the Do Now. * Review looping in Python. Look at the examples given in the EarSketch documentation and play them for the class. * Review if statements and control flow. As with looping go over examples (starting at section "Conditional Statements in Loops"). Focus on the **modulo** operator, reminding students that it is an operator that returns the remainder after division. ### 3. Lab * Students practice using looping to make a song a single track. Make sure that students use if statements and the modulo operator. * Ask the students to practice using looping, effects, and control flow structures while using 2-3 different tracks. ### 4. Debrief * Talk about any of the common issues that students had with loops and control flow. ## Accommodation/Differentiation Students that are moving quickly can read additional documentation on the EarSketch website in order to move ahead and expand their skills and understanding. ## Forum discussion [Lesson 5.03: Earsketch Control Flow (TEALS Discourse Account Required)] (https://forums.tealsk12.org/c/2nd-semester-unit-5-earsketch/lesson-5-03-earsketch-control-flow) [Do Now]: do_now.md.html [Lab - EarSketch Control Flow]: lab.md.html [EarSketch Editor]: http://earsketch.gatech.edu/earsketch2/ [printable lab document]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/5_unit/03_lesson/lab.pdf [editable lab document]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/5_unit/03_lesson/lab.docx