

4.1.2 Teacher Resource

Now that students have debugged some code and created a short script with a `fitMedia` function, let's define some programming terms using the EarSketch Quick Tour program.

1. Have students click on the `i` (information icon) in the top right corner of the EarSketch window and select Start Quick Tour. After the tour, the program code will be in the code editor. Students should be able to define the following terms while reviewing the `quick_tour` program.
 - Program – set of specific instructions or ordered operations for a computer to perform.
 - code segment – instructions or data
 - input – data entered into a program
 - behavior – the program's code that determines how the state changes as the program executes
2. Have students run the quick-tour program. They should be able to explain how the program functions and be able to describe what it does.

When the program is run, the Digital Audio Workstation plays a song. The user has interacted with EarSketch by clicking the play button. The behavior of this particular program is to execute the song playing. This is how EarSketch functions when the user interacts with it. The code segment demonstrates how to create a snare drum beat using the `makeBeat` function. `makeBeat` takes four arguments: the beat string, the track number, the starting measure, and the number of measures.

3. A program needs to work for a variety of inputs and situations. Ask students to name the four inputs of the `fitMedia` function.
4. Have students look at the program code and the Digital Audio Workstation. Have students explain how the DAW runs the code statements.
5. Ask students what would happen if the variable `fillA` was changed to all 0s? What would the beat sound like? The students need to understand that the input will affect the output.

```
1 from earsketch import *
2
3 setTempo(120)
4
5 # Add Sounds
6 fitMedia(RD_UK_HOUSE_MAINBEAT_8 ▶, 1, 1, 5)
7 fitMedia(RD_POP_SYNTHBASS_6 ▶, 2, 1, 9)
8 fitMedia(YG_RNB_TAMBOURINE_1 ▶, 4, 1, 9)
9 fitMedia(YG_FUNK_CONGAS_3 ▶, 5, 1, 5)
10 fitMedia(YG_FUNK_HIHAT_2 ▶, 6, 5, 9)
11 fitMedia(RD_POP_TB303LEAD_3 ▶, 7, 5, 9)
12
13 # Effects fade in
14 setEffect(2, VOLUME,GAIN, -20, 1, 6, 5)
15
16 # Fills
17 fillA = "0---0-0-00--0000"
18 fillB = "0--0--0--0-0-"
19 fillC = "--000-00-00-0-00"
20 makeBeat(OS_SNARE03 ▶, 3, 4, fillA)
21 makeBeat(COMMON_LOVE_DRUMBEAT_1 ▶, 3, 8, fillB)
22
```