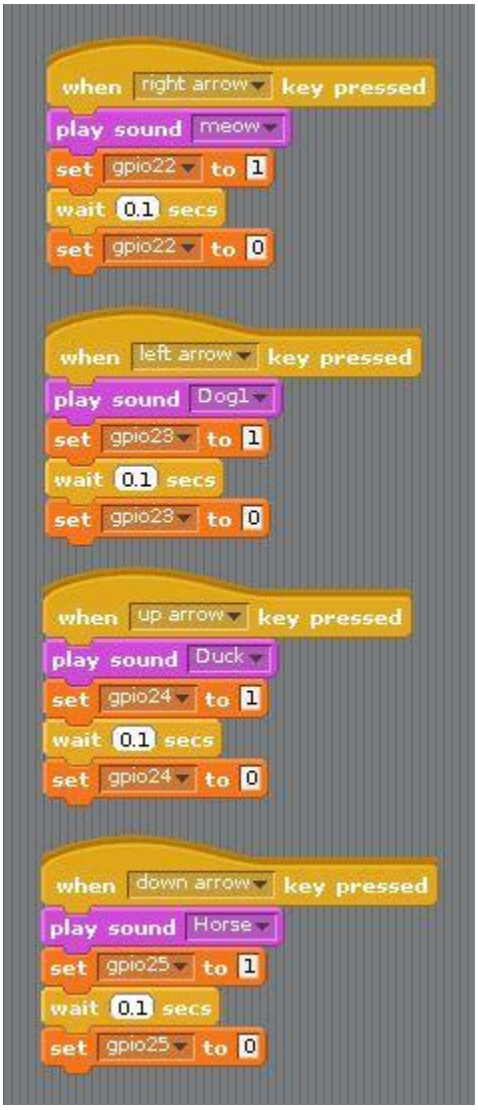
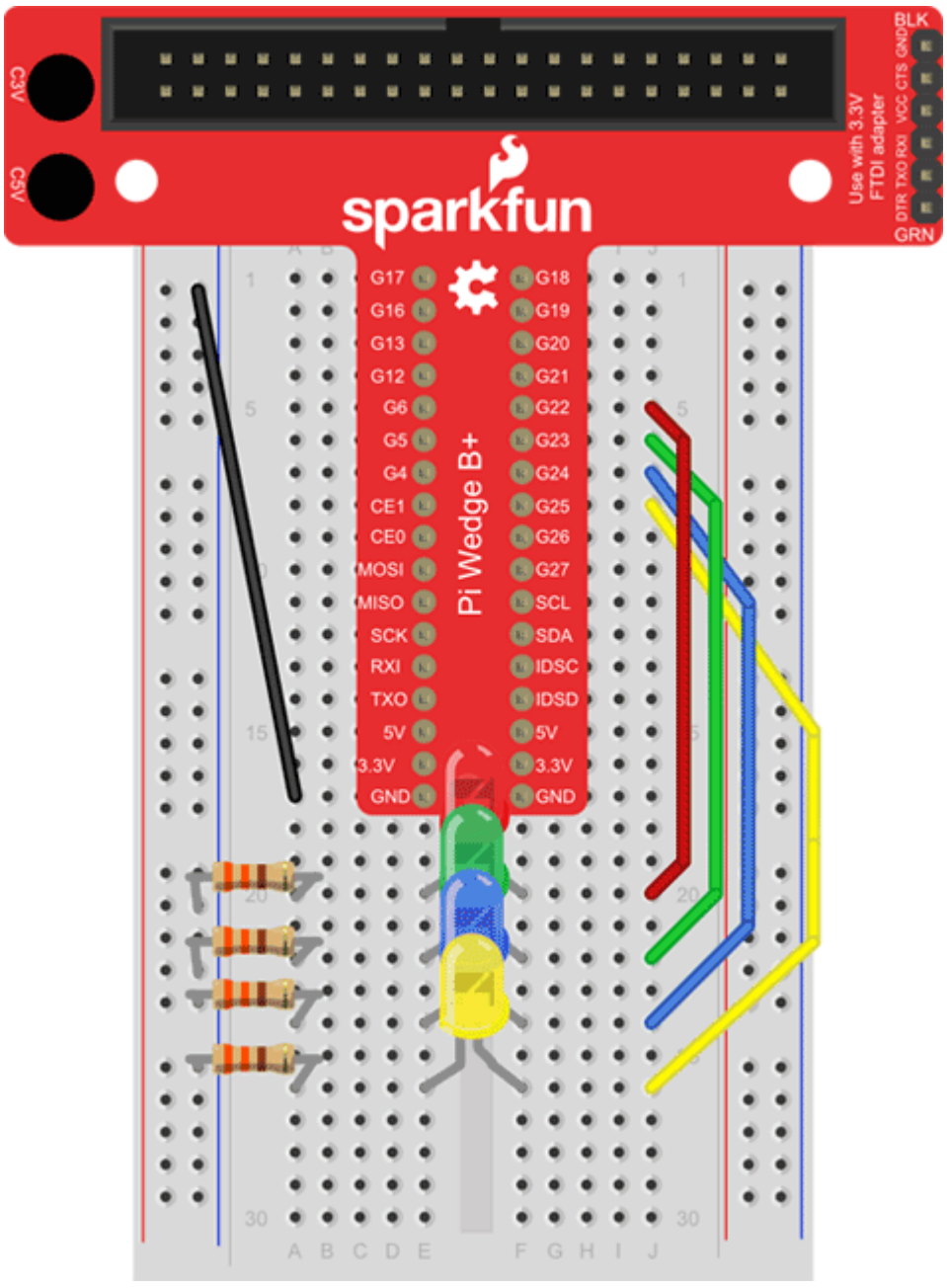
Science Buddies Raspberry Pi Projects Kit Instructor Reference Sheet

Version 1.0

This document shows the *final* Scratch program and circuit diagram for each project, but not any intermediate steps.

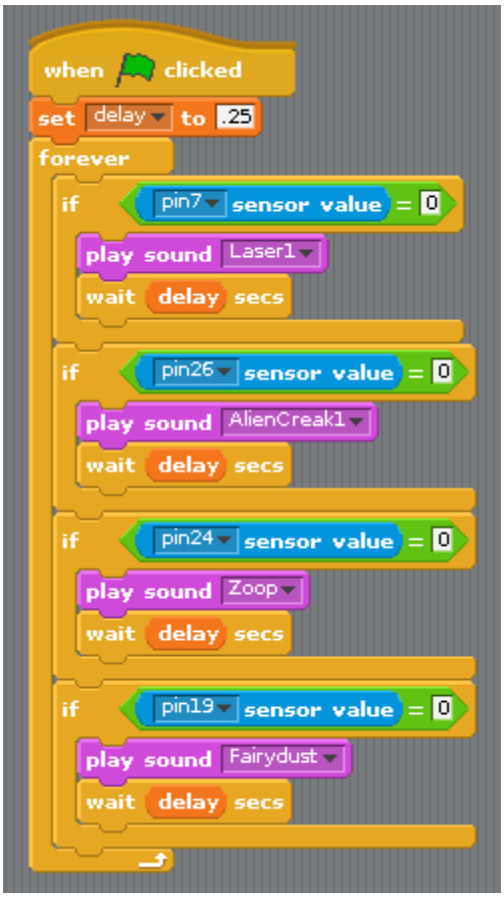
Project 1 – Light-up Piano

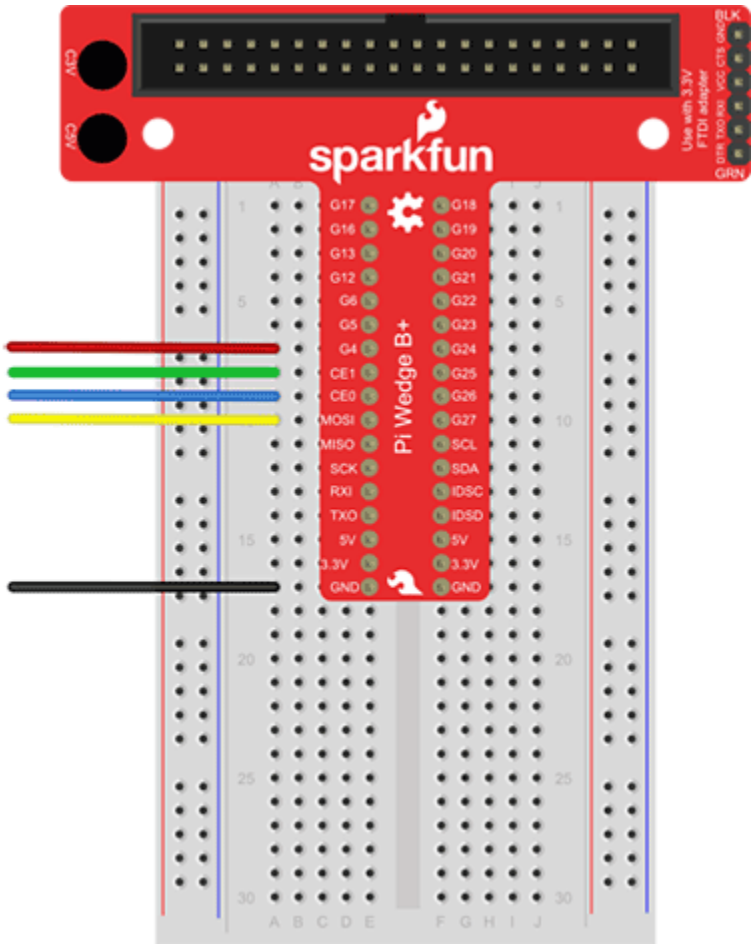


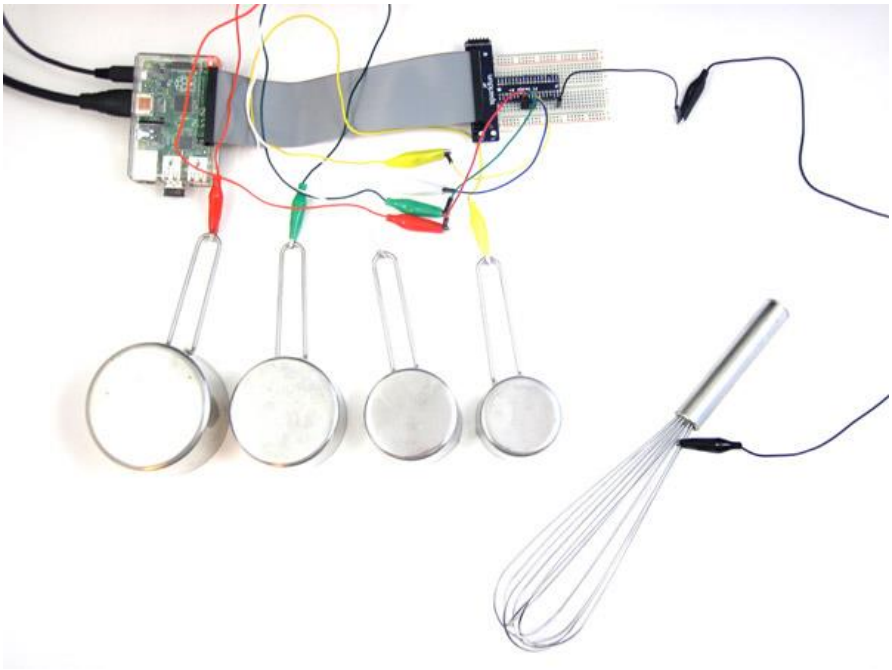


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Project 2 – Electronic Drumset

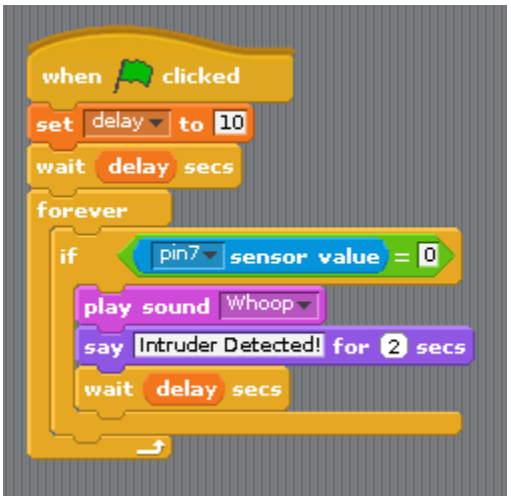


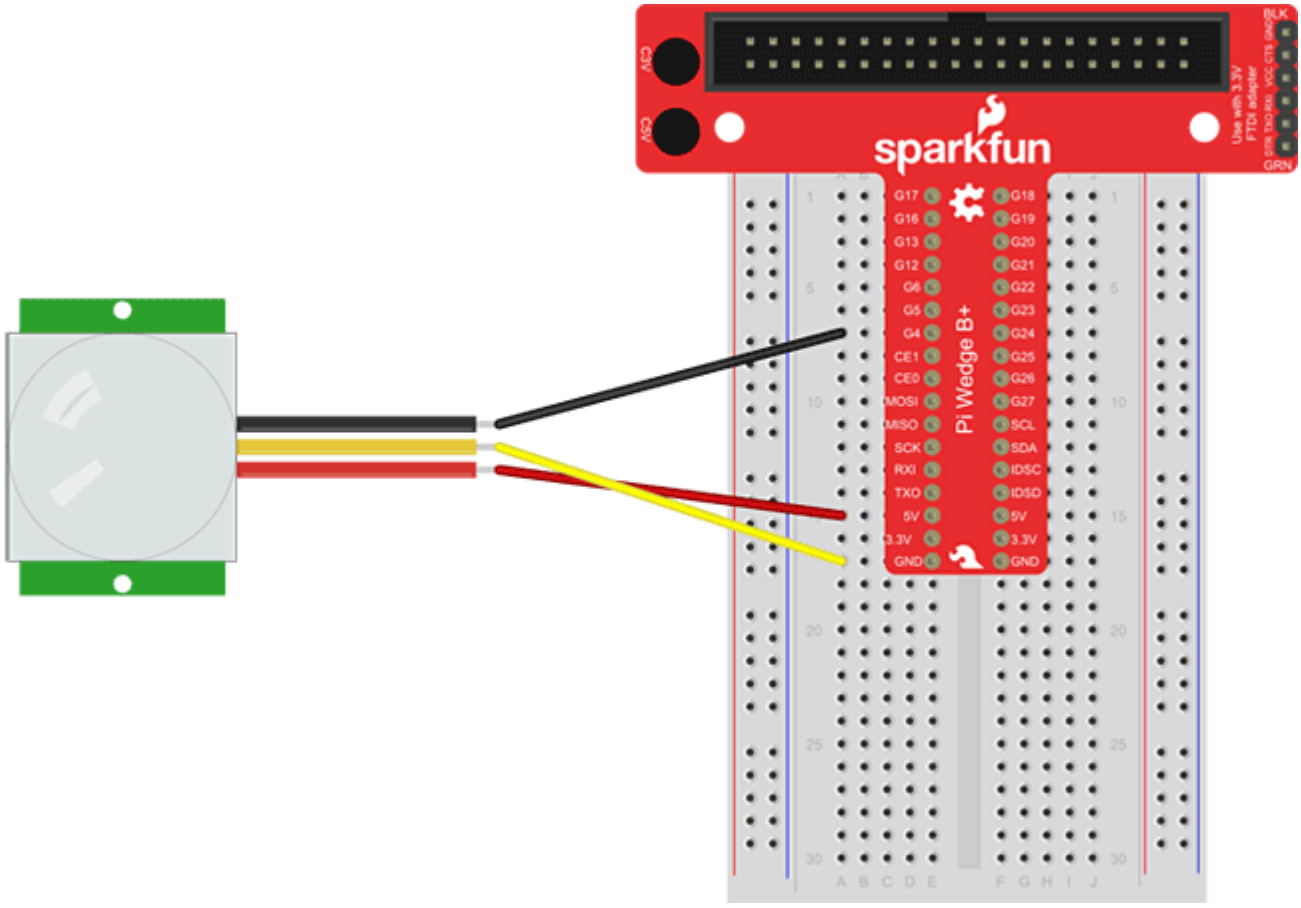




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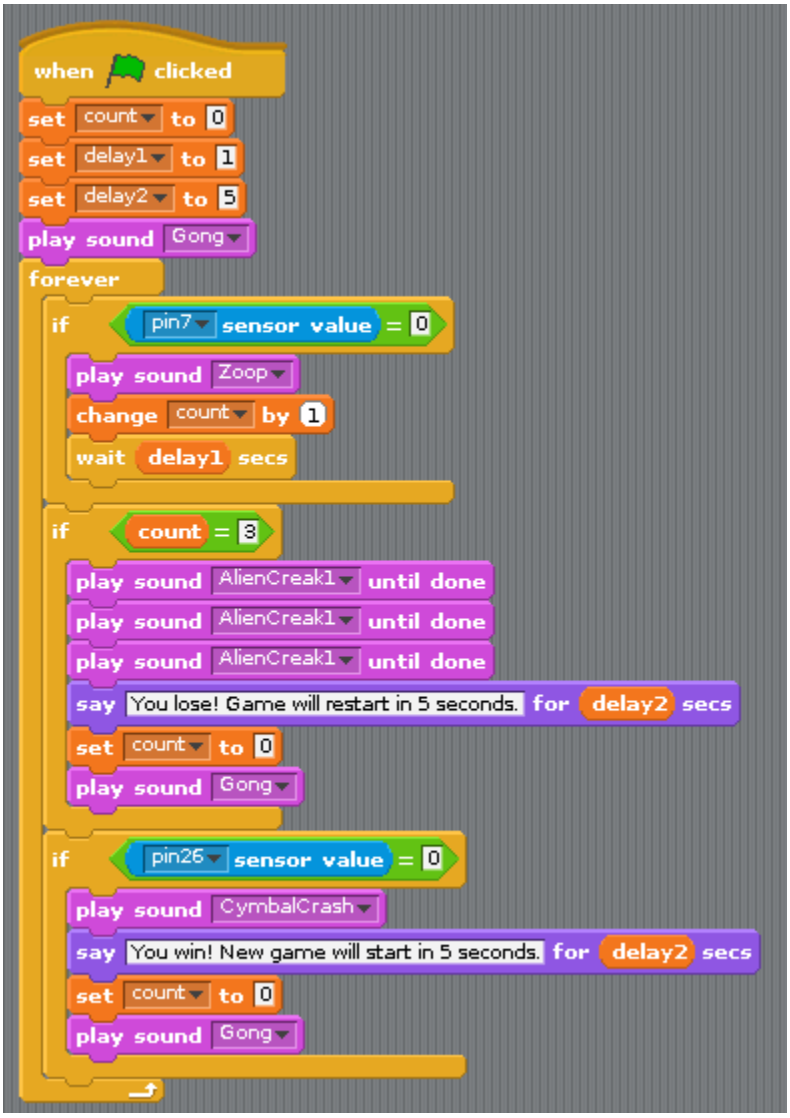
Project 3 – Invader Alert

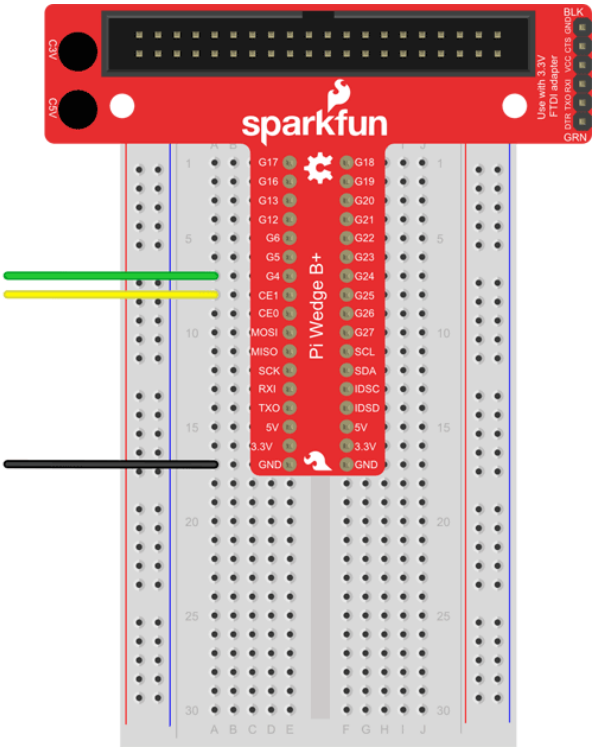


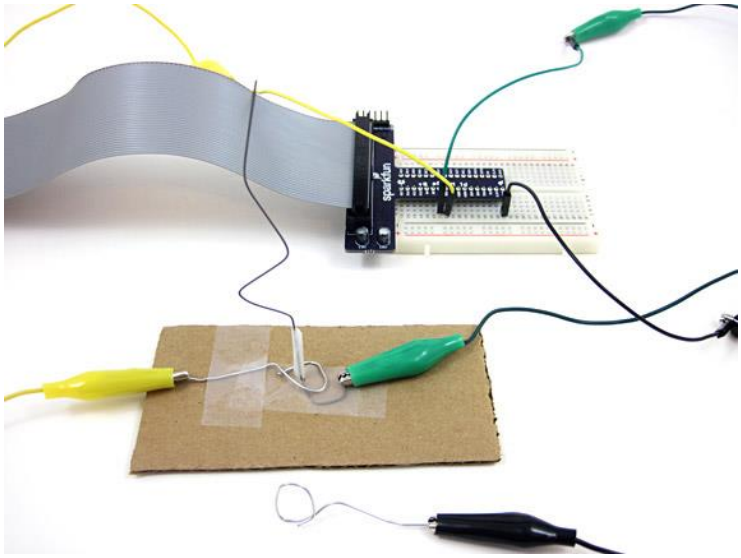


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Project 4 – Buzzer Game

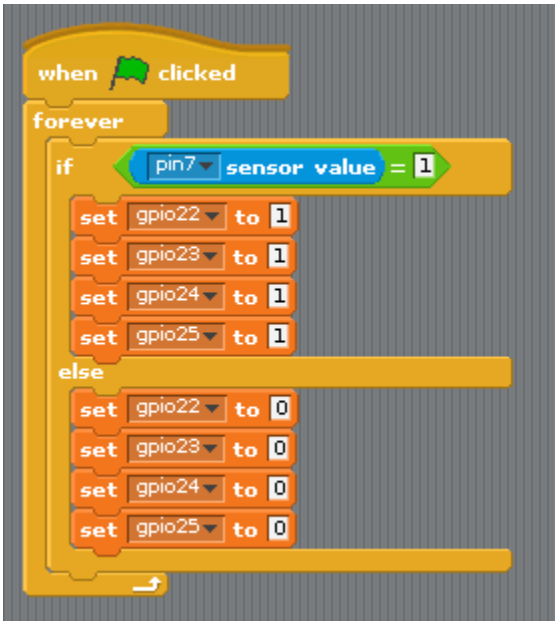


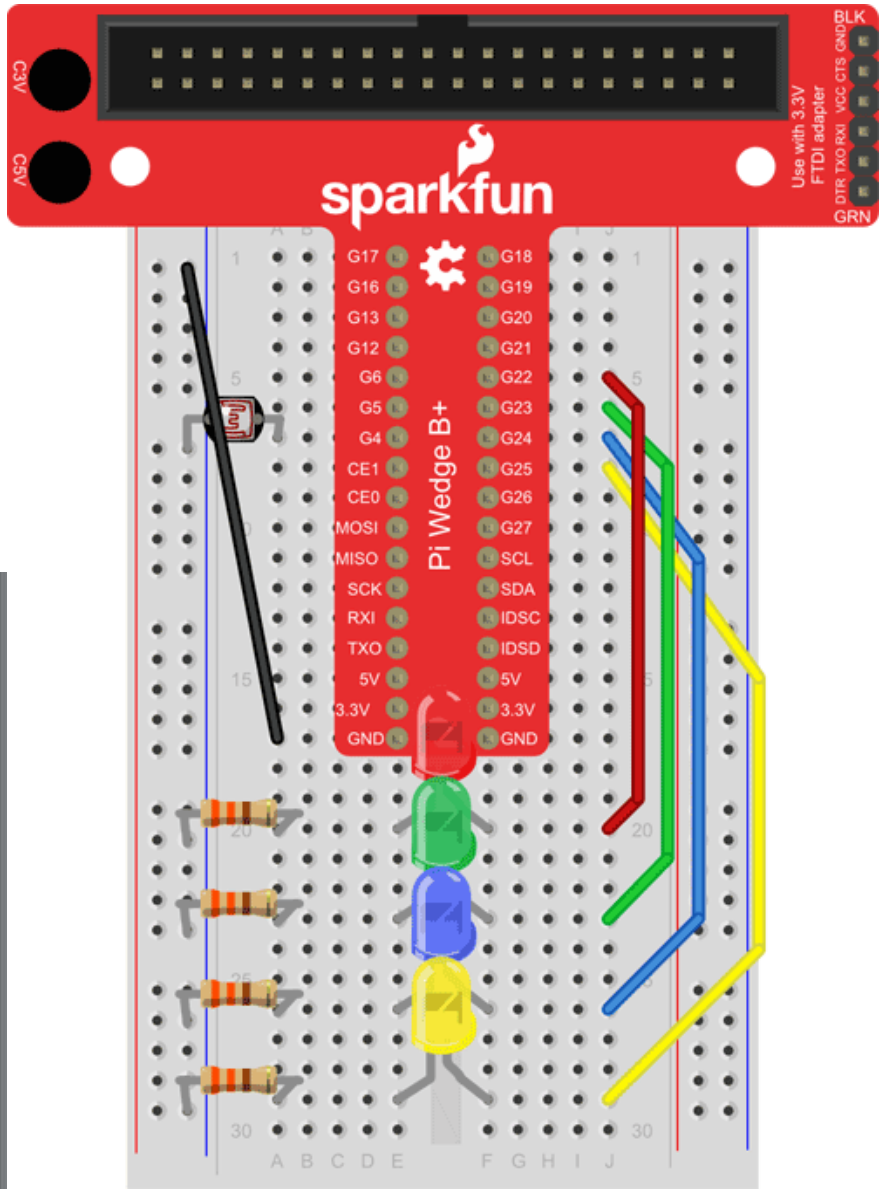




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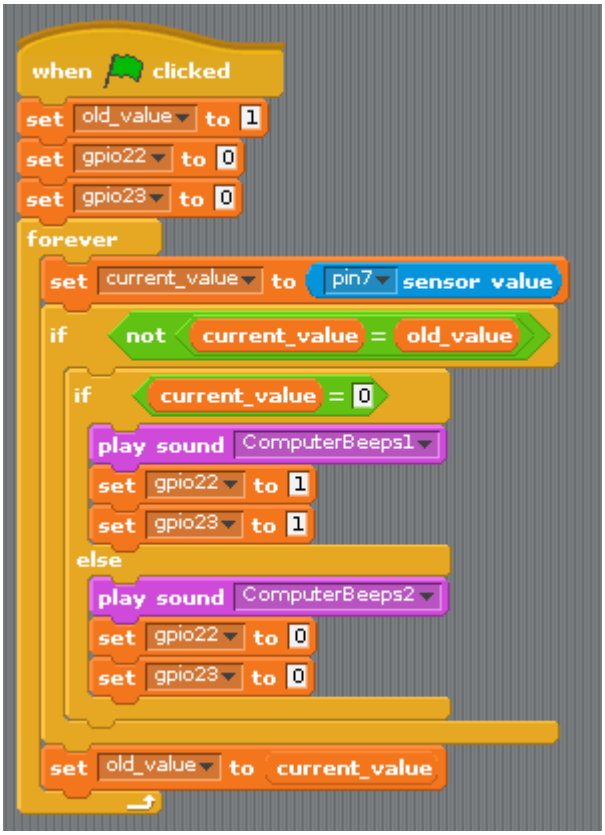
Project 5 – Starry Night

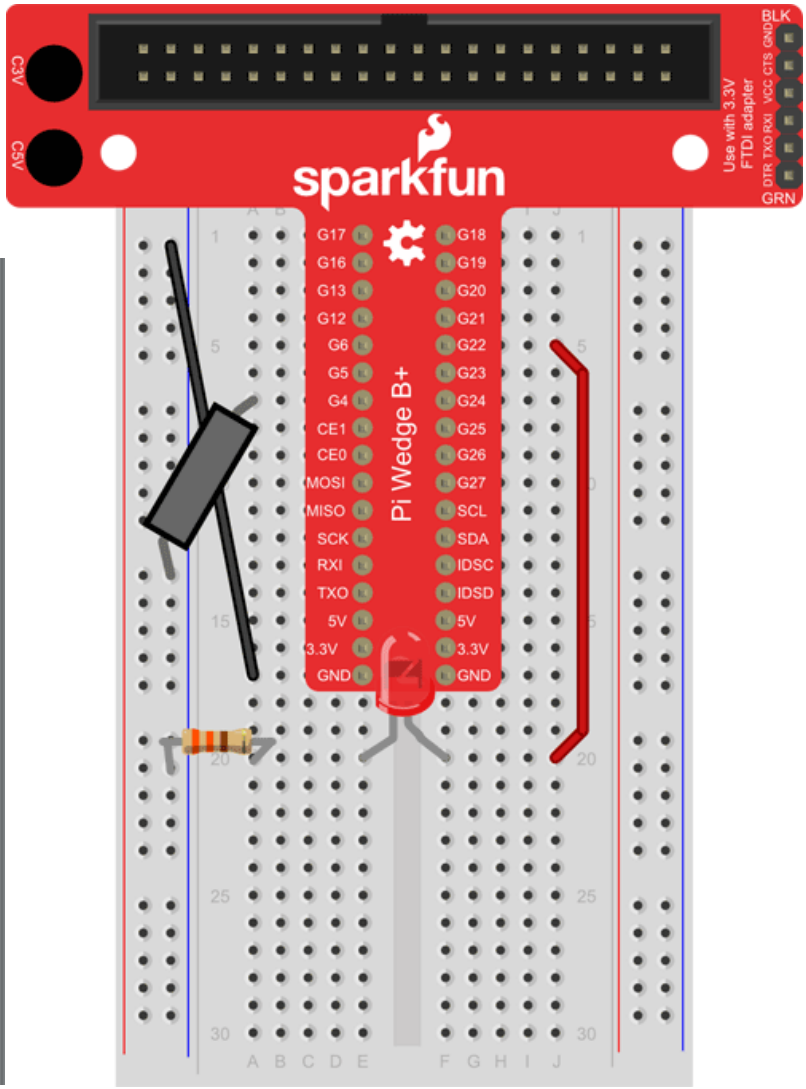




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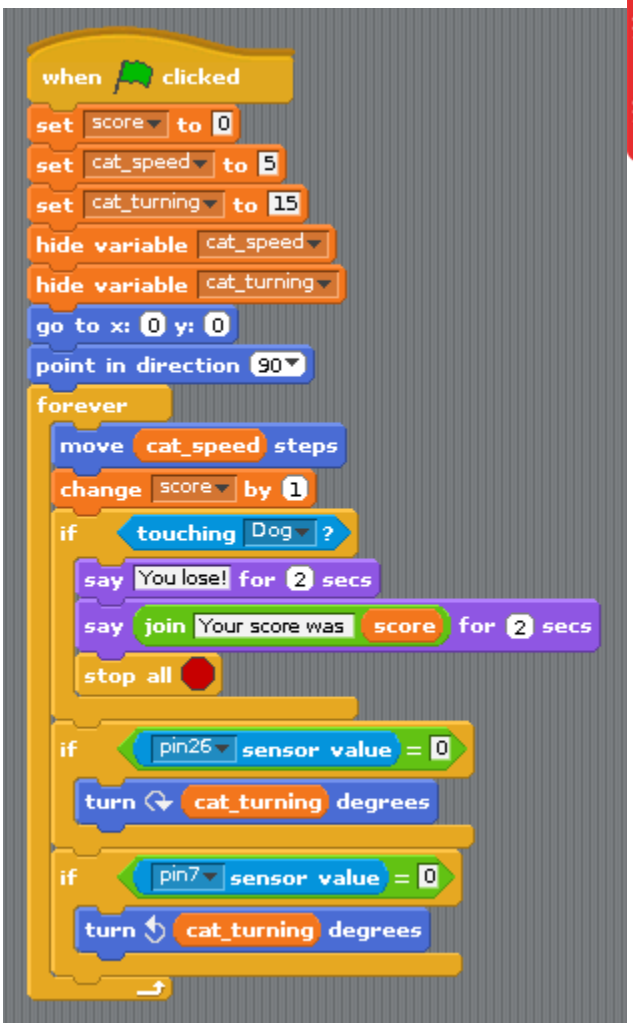
Project 6 – Digital Puppet

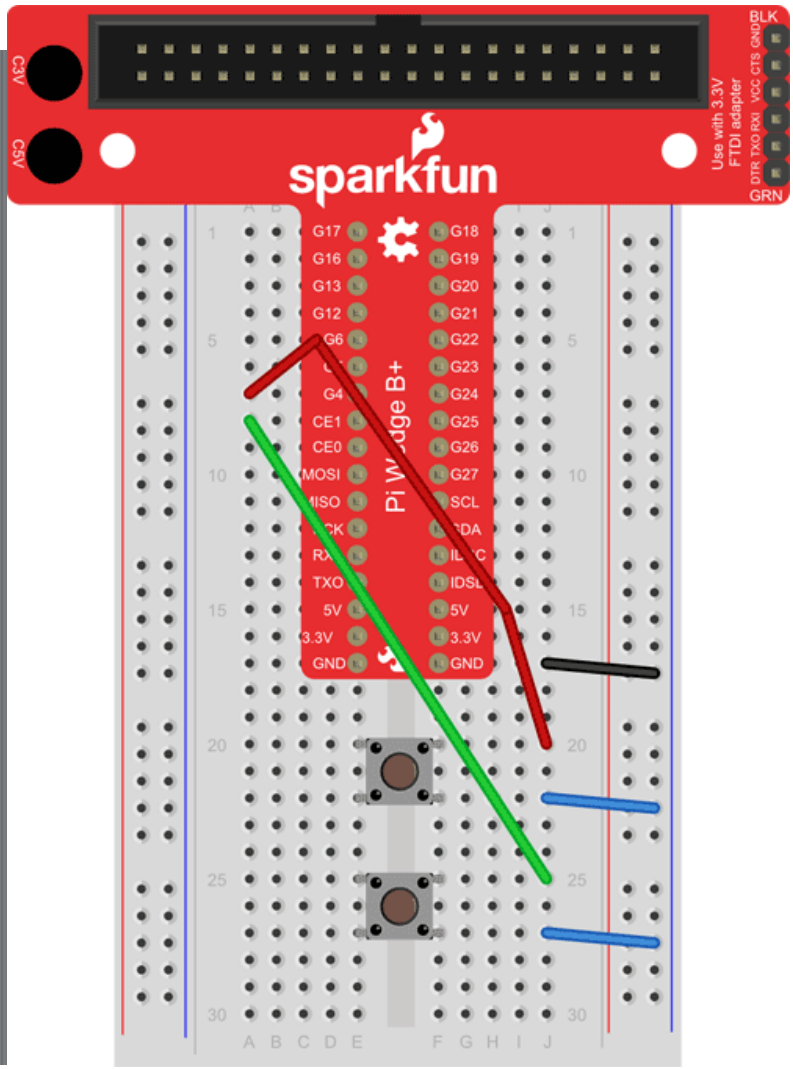




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Project 7 – Make Your Own Video Game





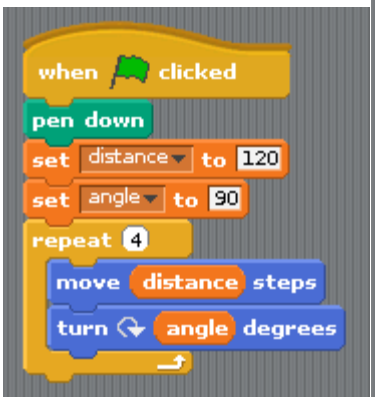
This project has a separate script for the dog sprite:



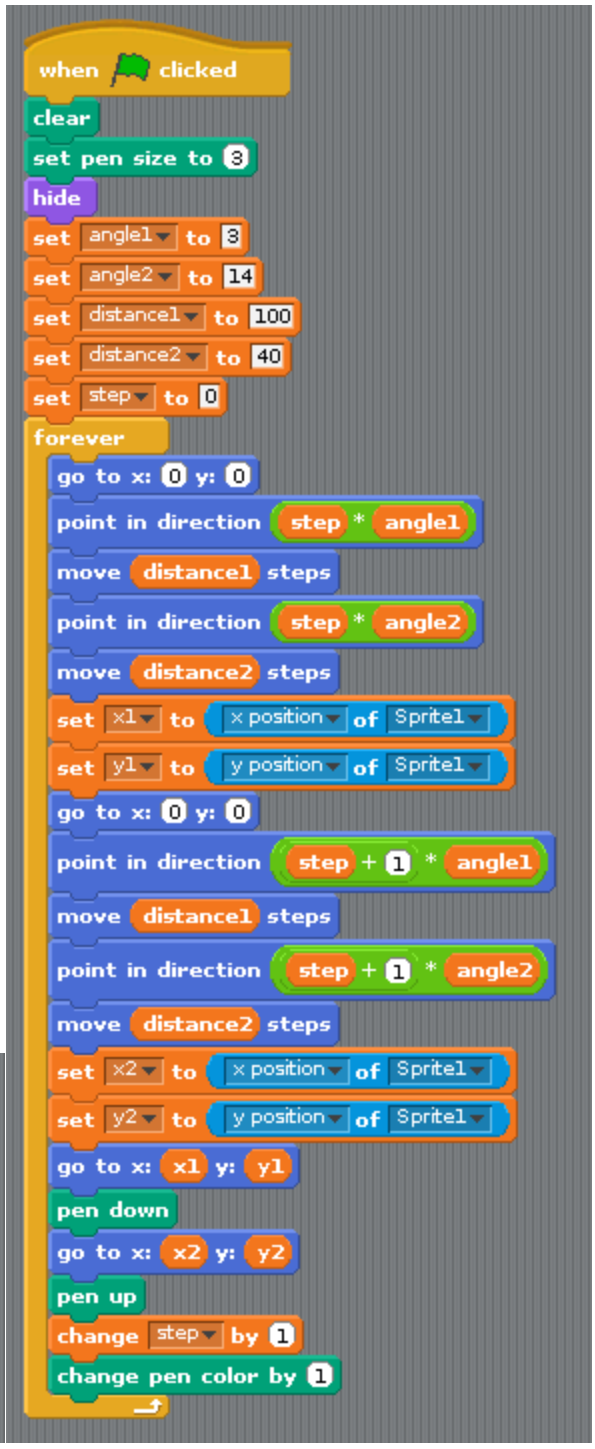
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Project 8 – Spirograph

Note: unlike most of the other projects, this one has students step through progressively more complicated Scratch programs, to go from drawing a simple square all the way up to a spirograph. The circuit is the same as in project 7.



Code for square



Code for Spirograph

Note: there is a line of code misplaced in Figure 8.15 in this project. The line “set angle to 360/number_of_sides” should appear *inside* the first “repeat” loop, not before it. This allows the number of polygon sides to update each time you press a button.

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