SqueakCMI Notebook:
Projects, Tools, and Techniques

Introduction

Welcome to eToys/Squeak: an object-oriented programming language. This notebook was written to introduce Squeak to curious beginners with step-by-step descriptions of projects and how they were done.

Advice is freely given in the hope that the path you take to learning eToys/Squeak is quick and smooth. The Squeak community will be generous with their time, their knowledge, and their willingness to help newcomers. The Office for Mathematics, Science, and Technology Education at the University of Illinois Urbana-Champaign invites you to use these materials to the benefit of students everywhere.

These projects can be explored on the computer by opening them from www.Squeakcmi.org. This dynamic experience of projects on the computer in conjunction with the written materials should give you a range of ideas and possibilities to combine in many ways and for many purposes.

Section I

This section contains two easy projects designed to help you get started with Squeak. They are followed by an extensive description of the rich resources, tools, icons, supplies, and conventions that make Squeak what it is.

Section II

This section explains more complicated projects. They are in alphabetical order by the name of a Squeak tool used predominantly in that project. The projects are not in sequential order by level of difficulty. The project's name can be used to locate that project atwww.Squeakcmi.org. So, if you wonder, "What is a scale factor and how could it be used in a Squeak project?" you can find out.

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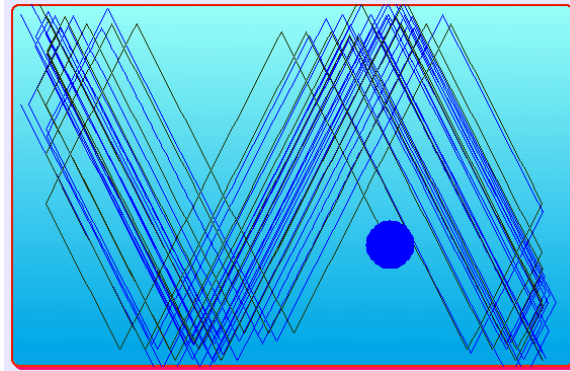
www.SqueakCMI.org

Resources, projects, tutorials, and standards-based lessons applying Squeak in math, science, language arts, social science, and art. Additional projects and essays can be found on the website. Tutorials developed by math specialists show the myriad ways Squeak enriches the study of geometry and trigonometry. The SqueakCMI community can answer questions, share ideas, and schedule workshops.

www.squeakland.org

The origin of Squeak: software, tutorials, and example projects. Get the most current versions of the software at Squeakland. The site includes interesting essays about the nature of learning, about programming and thinking.

www.squeak.org

Technical information for experienced programmers and developers

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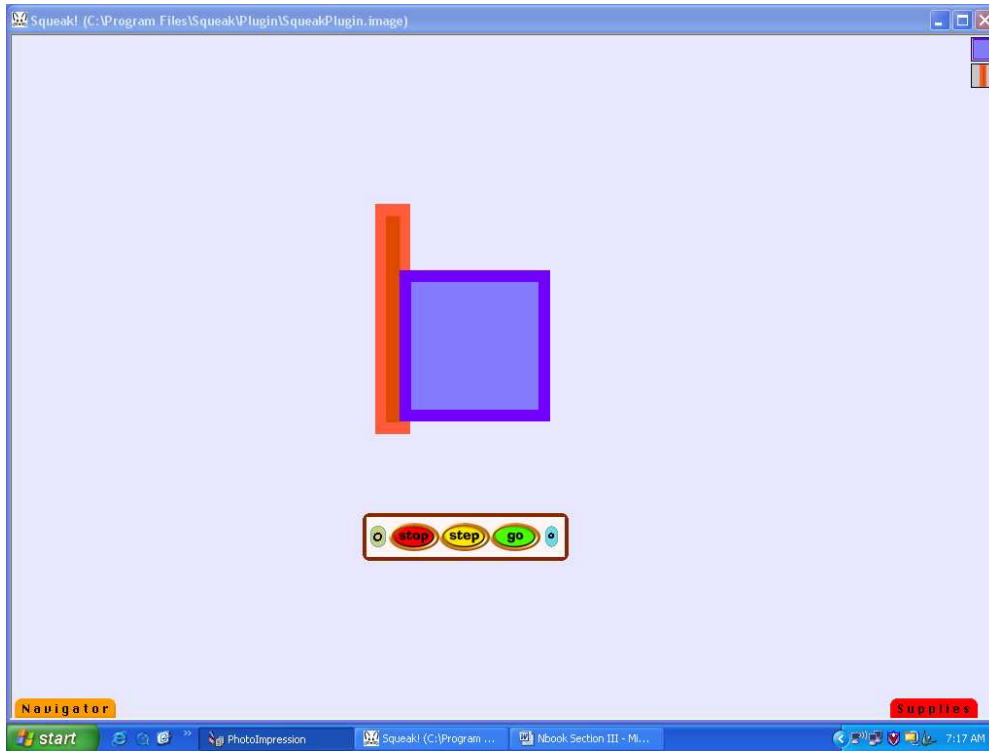
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All Scripts/stop-step-go: bothatoncenb

This project has two objects and each one has a script that makes it turn. The stop-step-go button will start both scripts at the same time.

Draw an object using the paint brush in the Navigator flap.

Look at the open paint palette. There are four button choices: Undo, Keep, Clear, and Toss.

Keep your new painting by clicking on the keep button near the paint palette. This is an important step because if you have clicked on keep then the other features of Squeak are available.

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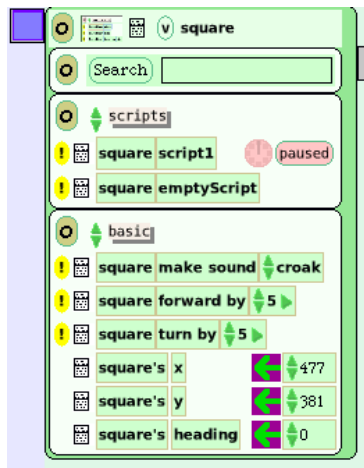University of Illinois Urbana-Champaign

Touch the drawing with the cursor's point and a halo of handles will appear.
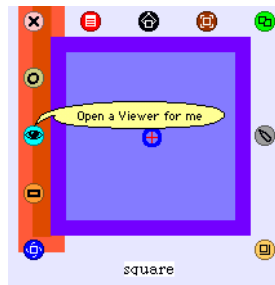
Click on the halo's cyan eye to open a viewer panel of scripts.

Next name the object so that your script tiles are each labeled correctly. The script for this project is "square turn by 5".

Drag a copy of that tile onto the screen and drop it. It will open in a script box like this one. Change the number in the script from 5 to any number of turns. This script shows -5 because that will make a counterclockwise turn. Start and stop the script with the little round clock at the top of the box.
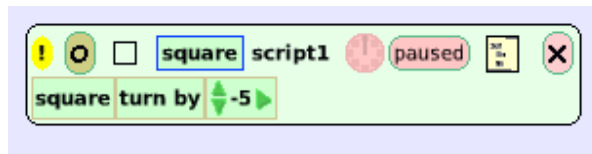
Draw a second object using a new paint brush from the Supplies flap. Keep it. Each object needs to be drawn and kept as separate things otherwise Squeak will combine them as one. Type in a name for the new object and drag out a turn by 5 script tile for it. Start and stop that script using the small round clock in that script.

Now you have two objects and two scripts. You can start and stop each one using each one's timer or you can open Supplies and drag out an All Scripts button.

Put this on the screen and click on go to start both scripts at once. The step button will run each script one time for each time you click on it. The stop button stops both scripts at the same time.

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