

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.

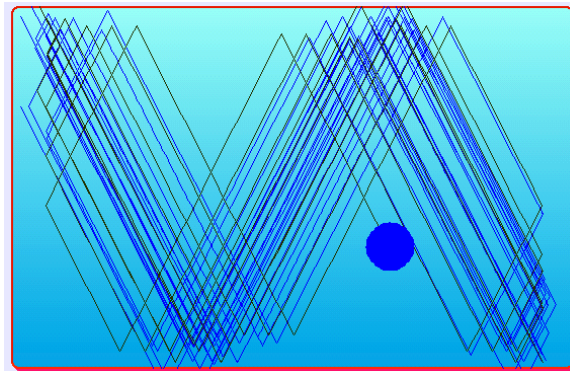
Section II

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 at www.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.

www.Squeakcmi.org

The Office for Mathematics, Science, and Technology Education
University of Illinois Urbana-Champaign





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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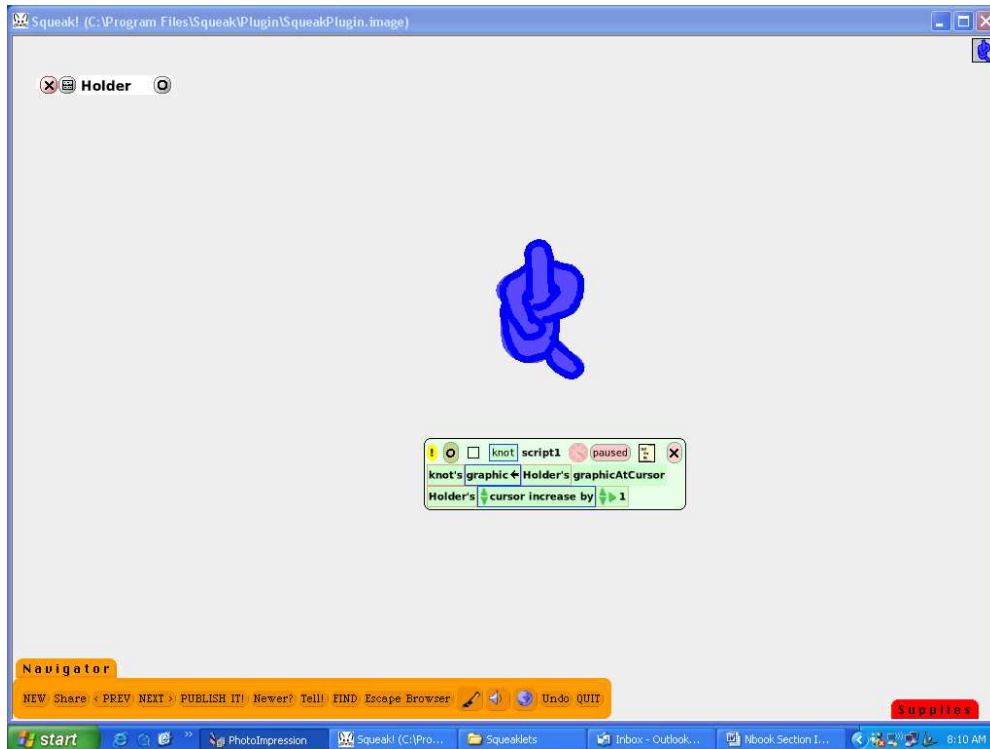
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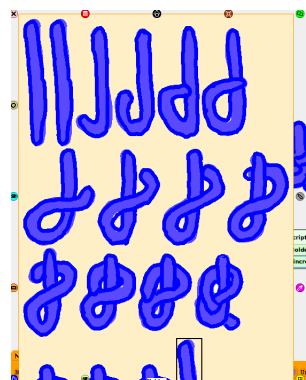


Holder: knotTodaynb

This project is an animation and uses a holder to store each stage. It shows a series of hand drawn stages of the process of tying a knot.



This is an animation of a figure-eight stopper knot. Each stage of the knot was drawn as a separate object using the paint tools. They were put into a holder dragged from Supplies.

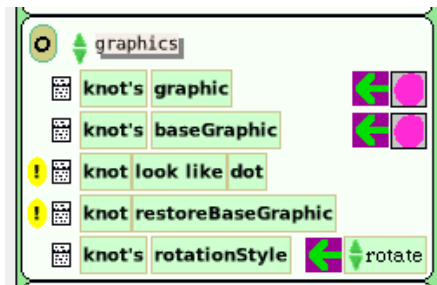


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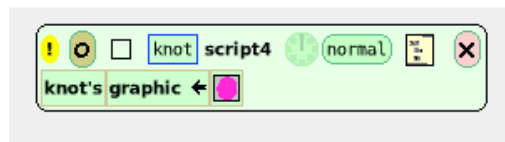
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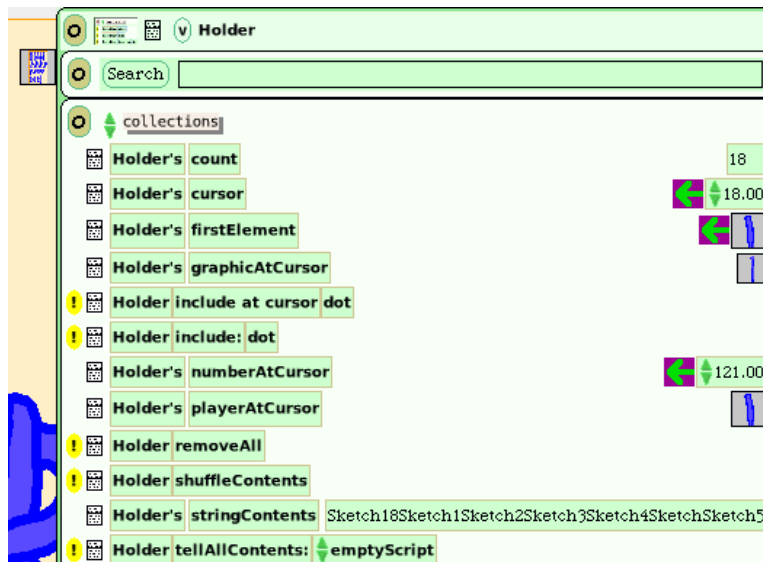
The paint tool was used to put a spot of color on the screen. It was named knot and the viewer pane was opened. It is good to name the little spot of color what it will become so that it is clear what it is. The viewer pane of scripts was opened and the graphics category was selected.



The phrase tile knot's graphic was dragged onto the screen and dropped to make script1. The green/purple arrow was used to drag the tile.



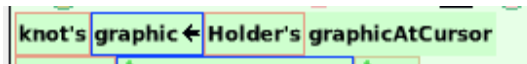
The holder's script viewer was opened and the 'collections' category selected.



The phrase tile Holder's graphicAtCursor



was dragged into Script1 and dropped onto the end of the tile knot's graphic.



Then the tile holder's cursor was added to Script1. The tiny green up/down arrow was used to change the tile to read holder's cursor increase by 1. Increase will cause the cursor, the black outline box around the drawings, to advance one position each time the script runs. So every time the script runs, the image that shows for the knot's graphic is a different stage's drawing of the knot.

