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.

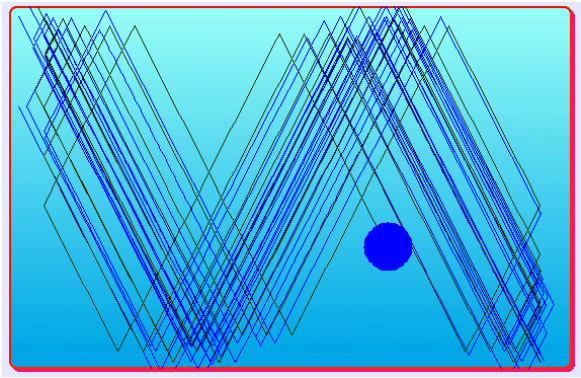
These projects can be explored on the computer by opening them from www.Squeakcmi.org. This dynamic experience of projects on the computer in conjunction with the written materials should give you a range of ideas and possibilities to combine in many ways and for many purposes.

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.



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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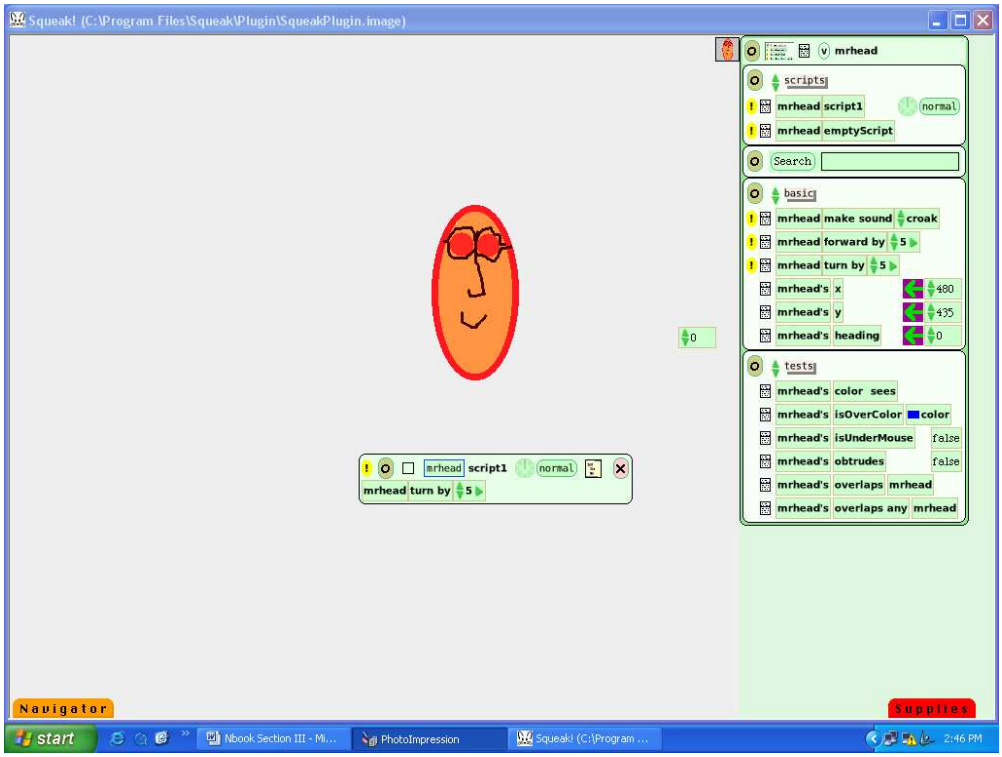
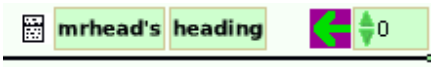
Simple Watcher: mrheadnb

This project shows using a simple watcher so that you can see specific information about what the object is doing as the script runs.

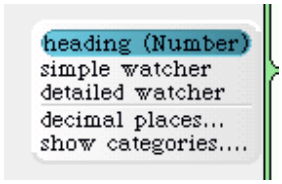


This example shows an object with a script that says turn by 5. The simple watcher will show the heading of the object as it turns.

The simple watcher is found by clicking on the small white and black box to the left of the script tile for the heading script tile.



Click on this rectangle  ; a menu opens with a list of items that looks like this. The top line tells you the heading is a number value.



Click on simple watcher and a number and box will attach to the point of your cursor. This number will change as the script runs. The script for this object is turn by 5 and the small green box's number will change. This can show you the heading without having the large script panel open on the right of the screen. Or, you can set the heading by changing the number in the small green box with the tiny green up/down arrows. Or, you can click on the number and type in the new heading.

The small green box can also be added to a script so a forward by 5 can be changed to forward by the heading value. This makes the script run very differently.