



A General Purpose, Extensible, Blocks-Based Programming Language

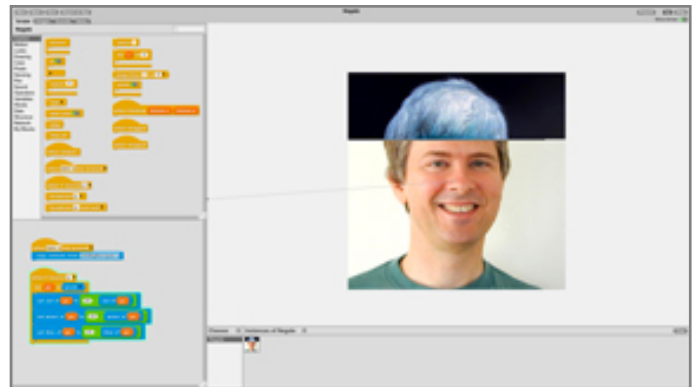
WHAT IS GP?

GP is a new, general-purpose blocks language that is powerful to use and easy to learn.

GP can:

- generate graphics
- manipulate images and sounds
- analyze data
- simulate scientific ideas
- use cloud data
- interact with the physical world
- run on a web page
- create stand alone applications

Experienced GP users can create and share extensions that add new blocks and facilities to GP. For example, a teacher might create a library of blocks for manipulating sound then share that extension with their students. GP extensions are written in the GP blocks language, so extension writers do not need to install or learn any other programming language.



This GP project manipulates pixels to transform a color image into a negative one.

WHO IS GP FOR?

GP is a natural next step for those who have used Scratch. In education, GP is ideal for grades 8-12, introductory college-level computer science classes, or adding a hands-on computing component to courses in science, math, and the humanities. GP is also great for anyone who wants to make their own app but doesn't want to deal with the complexities of text-based languages and IDE's designed for professional software developers.

A LITTLE HISTORY

GP grew out of experience with Scratch, a blocks-based visual programming language created at the MIT Media Lab and used by nearly twenty million children around the world. GP's creator, John Maloney, was the lead developer for Scratch over its first eleven years, and is incorporating lessons from Scratch into the design of GP. GP's design also draws heavily on ideas from Squeak Smalltalk, Etoys, and Snap. That's not surprising, since members of the GP were deeply involved in creating all those systems.

GP runs on Mac, Windows, Linux, and in most web browsers. iOS and Android are planned.

Interested? GP is available for beta testing at gpblocks.org.

GP User Interface Guide

1 File Options

Create, open and save GP projects. **Export as App** allows you to save a project as a stand alone application.

5 Blocks Palette

The **Scripts** tab is where blocks live. GP has many categories of blocks that allow users to create robust projects.

6 Scripts Area

The scripts for a project go here - drag blocks from the blocks palette to the scripts area to construct a project. Each class has its own scripts.

7 Classes

A class describes one or more objects that share the same scripts. Classes help keep a project organized.

8 Instances of a Class

An instance of a class is an independent object. All the instances of the class act the same even if they have different costumes (like clones in Scratch).

2 Stage

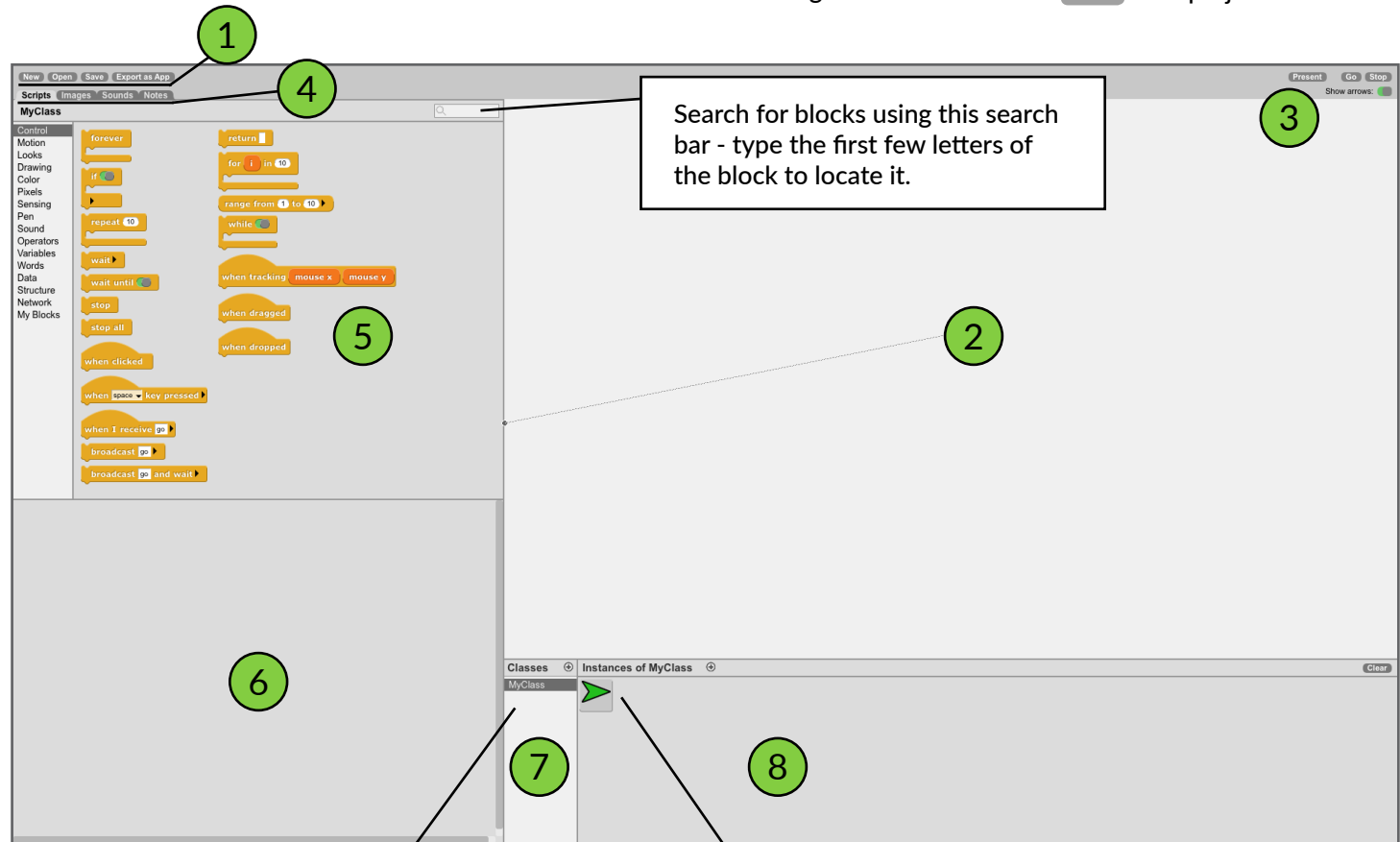
This is where you see a project in action.

3 Control Buttons

Use **Present** to see a GP project in full screen. Control a GP project with **Go** and **Stop**. **Show arrows:** tracks the location of instances on the stage.

4 Tabs

Use the tabs to view the **Scripts**, **Images**, **Sounds**, and **Notes** for a project.



GP is available for beta testing at gpblocks.org.