

Flooding the Desktop with Learning tools

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How much value can we add
by connecting the dots?

Who am I?

- (fmr.) One Laptop Per Child.
- (fmr.) Sugar desktop.
- (fmr.) Endless.
- Member of Sugar Labs and the GNOME Foundation.

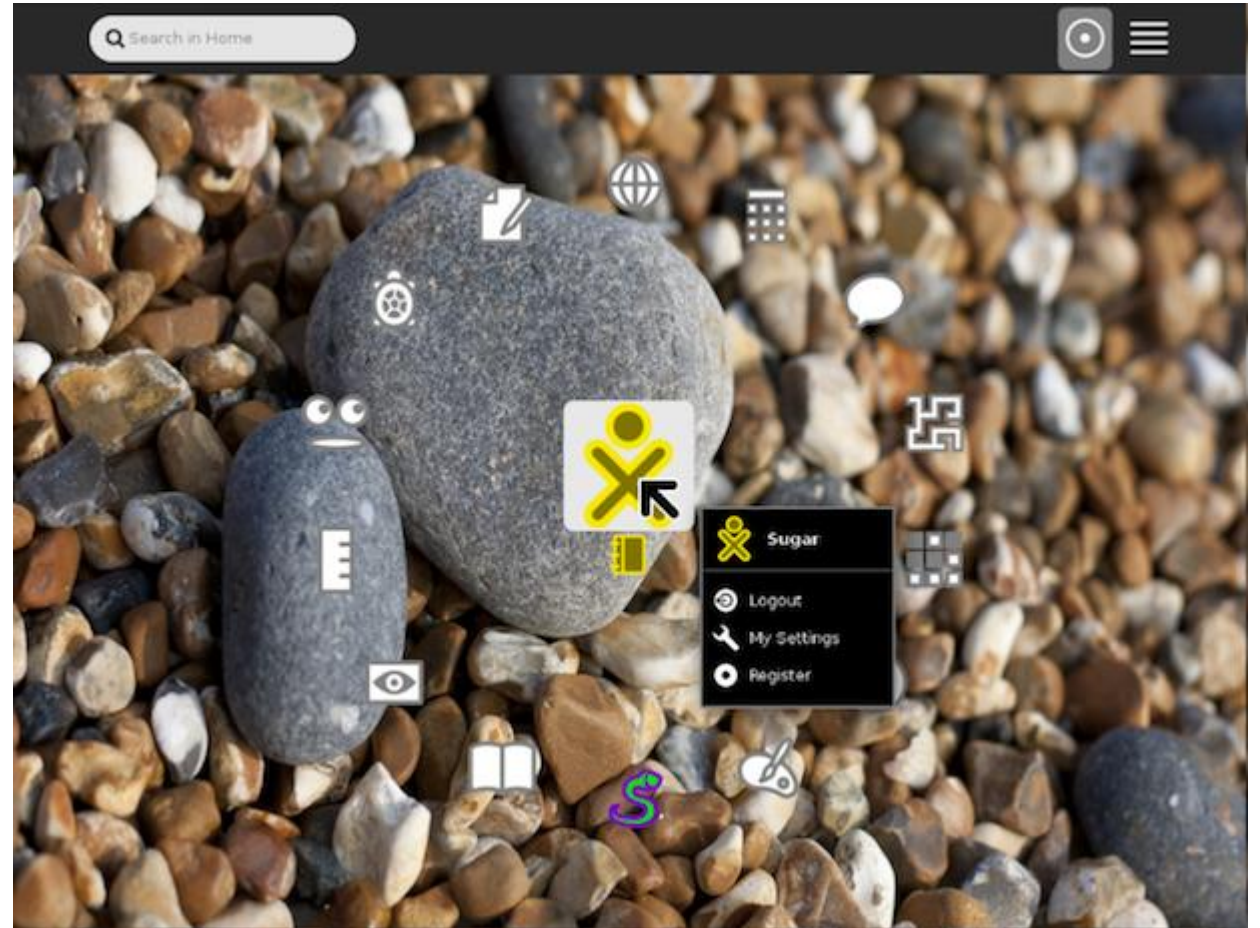


twitter.com/tchx84

The dots

What's Sugar?

- Desktop for Linux.
- Hundreds of learning tools.
- Different paradigms.
- Released on May 2006.



sugarlabs.org

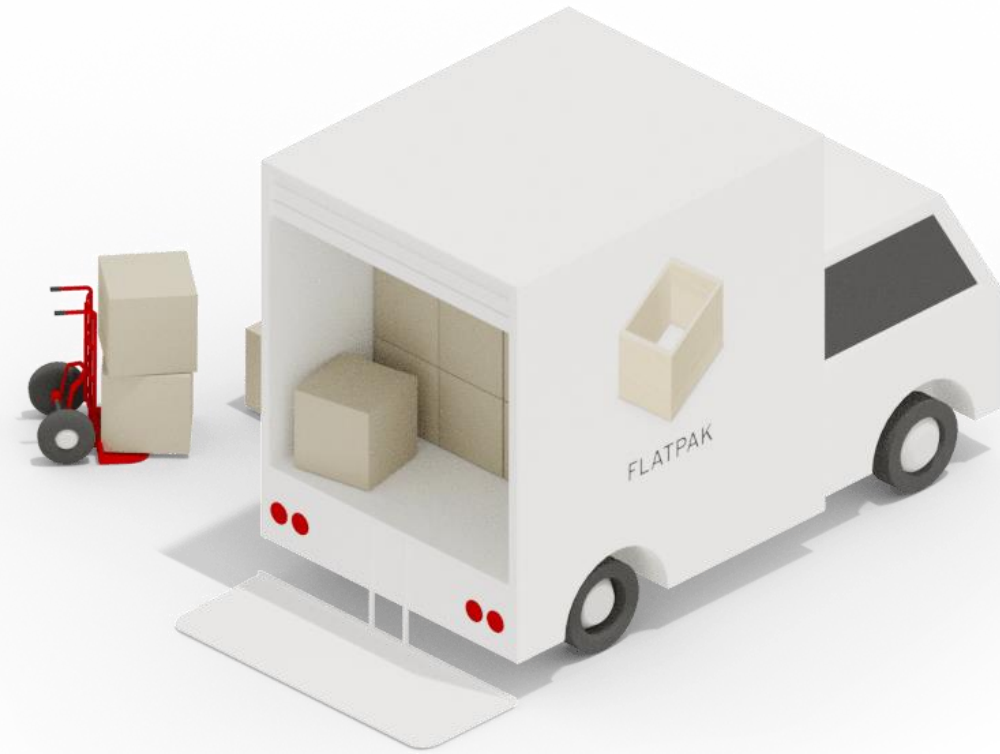
What's Flatpak?

For users:

- A better way to manage apps.
- On every distribution.
- More secure.

For developers:

- A better way to package apps.
- For every distribution.
- Easier.



flatpak.org

What's Flathub?

For users:

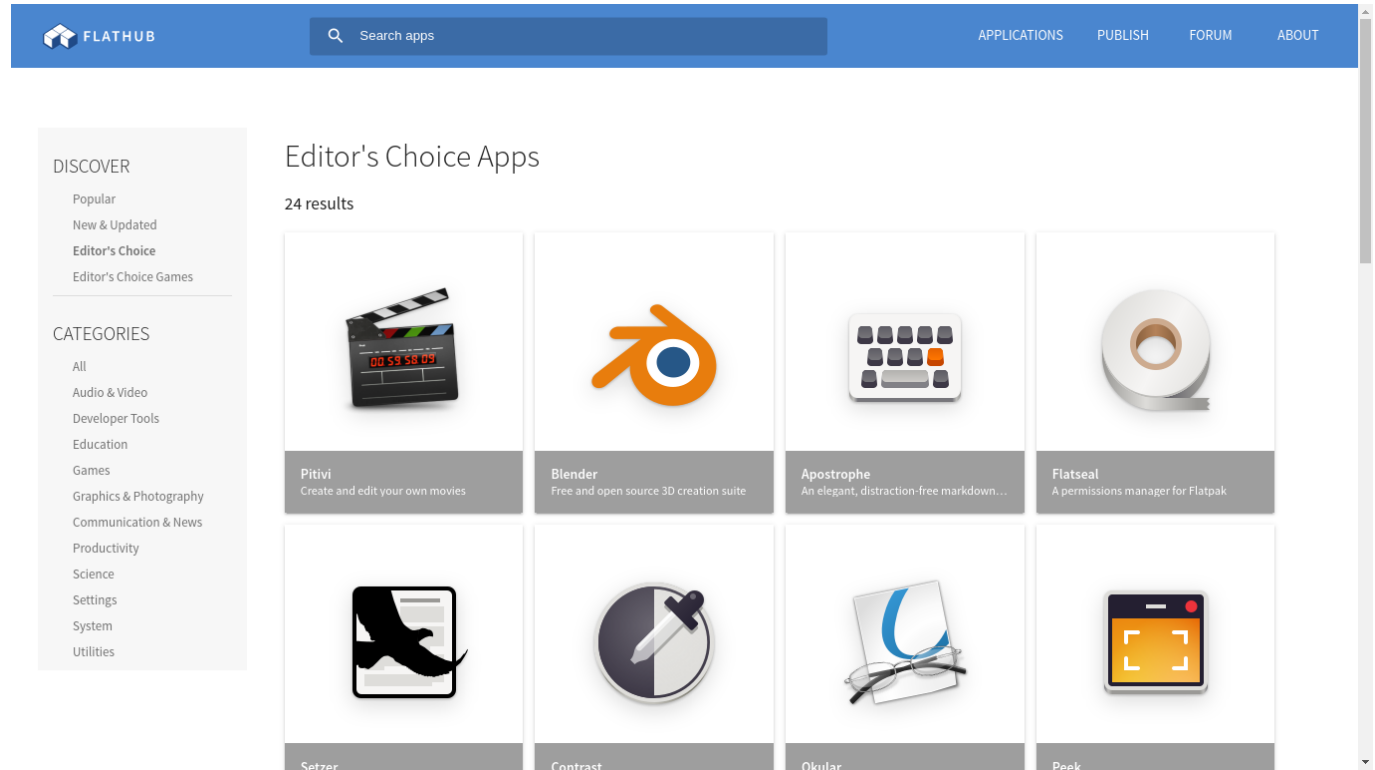
- A store for apps.

For developers:

- A platform.

For both:

- A community.



flathub.org

Connecting

What's the premise?

- Hundreds of learning tools.
- Wider audience.



What's the approach?

- Wrapper application.
- Replacement widgets.
- Meta-data generation tools.



github.com/tchx84/sugarapp

Value

DISCOVER

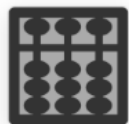
Popular
New & Updated
Editor's Choice
Editor's Choice Games

CATEGORIES

All
Audio & Video
Developer Tools
Education
Games
Graphics & Photography
Communication & News
Productivity
Science
Settings
System
Utilities

Search

20 results



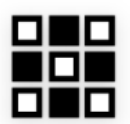
Abacus

A tool for simple arithmetic c...



Chart

Create your charts



ColorDeducto

A game based on logical ind...



Dimensions

A pattern-matching game



Finance

Learn financial planning basics



FotoToon

Create your own comic



FractionBounce

A game about fractions



Implode

Implode blocks of the same ...



Maze

A simple maze game



Measure

Oscilloscope program for vis...



Memorize

Find matching pairs



Music Keyboard

Play music with this piano ke...



Physics

Prove Sir Isaac Newton correct



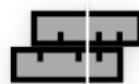
Pippy

Talk to your computer in Pyt...



Read ETexts

Read thousands of free e-bo...



Sliderule

A mechanical calculator



Speak

An animated face that speak...



Story

Tell a story



Turtle in a Pond

Surround the turtle before it ...

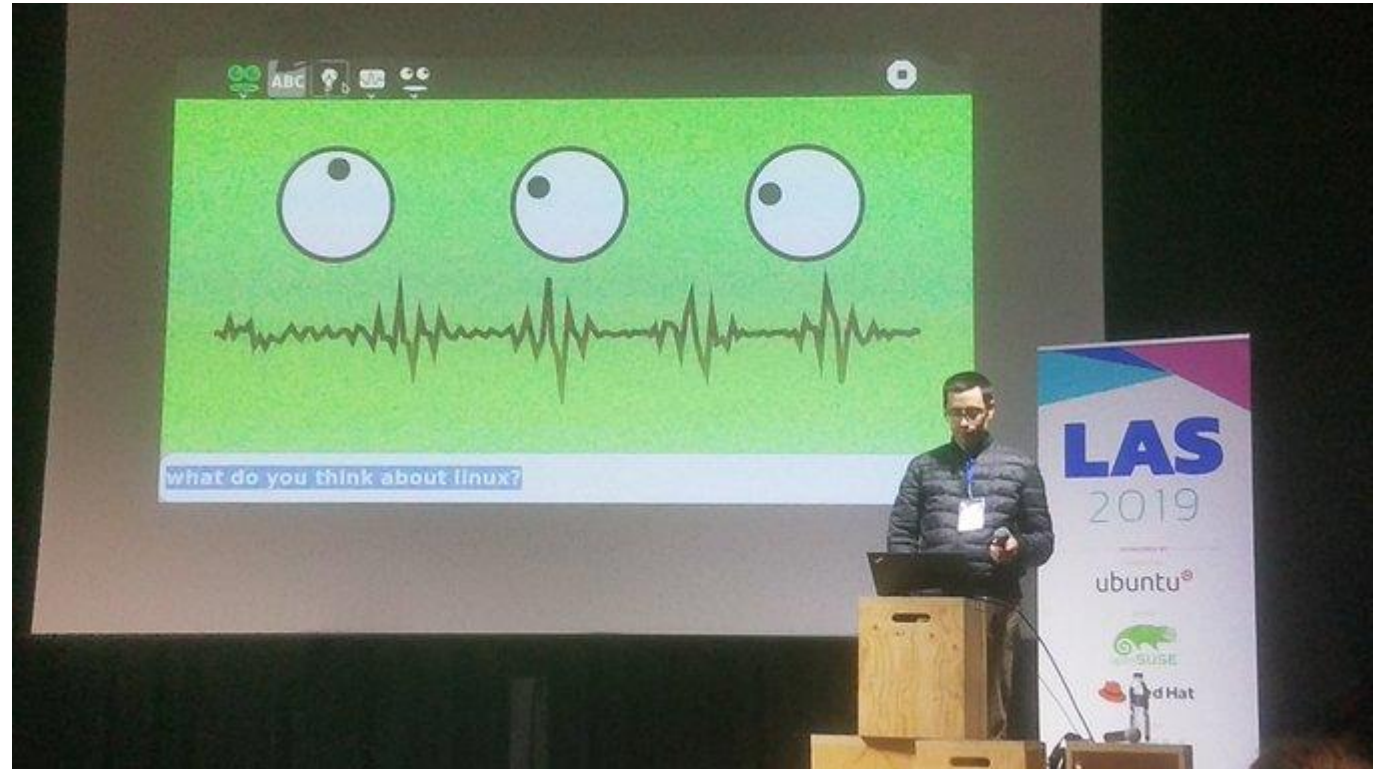


Words

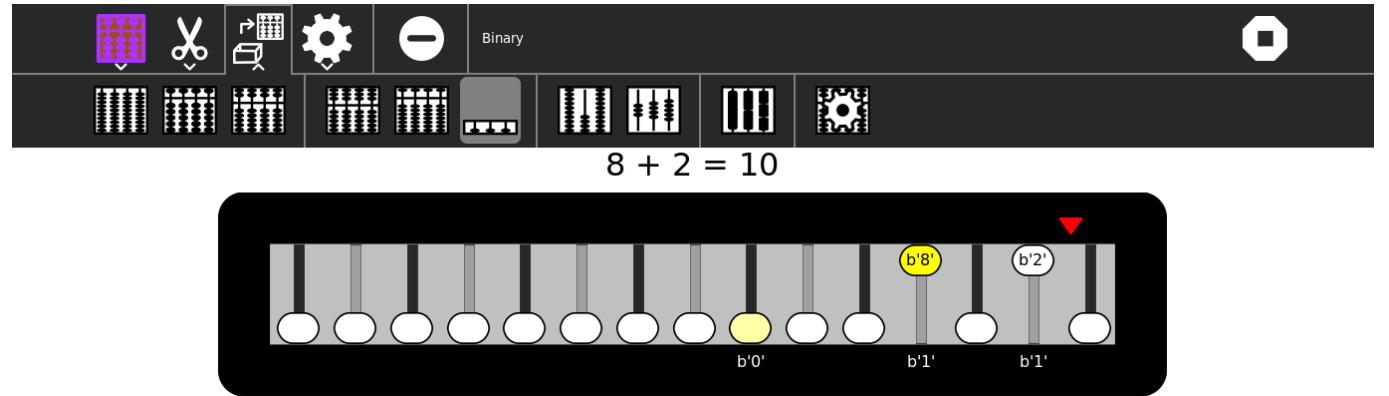
A multilingual offline dictio...

Phase one

- Initial experiments.
- Linux Apps Summit.
- First results.



linuxappsummit.org

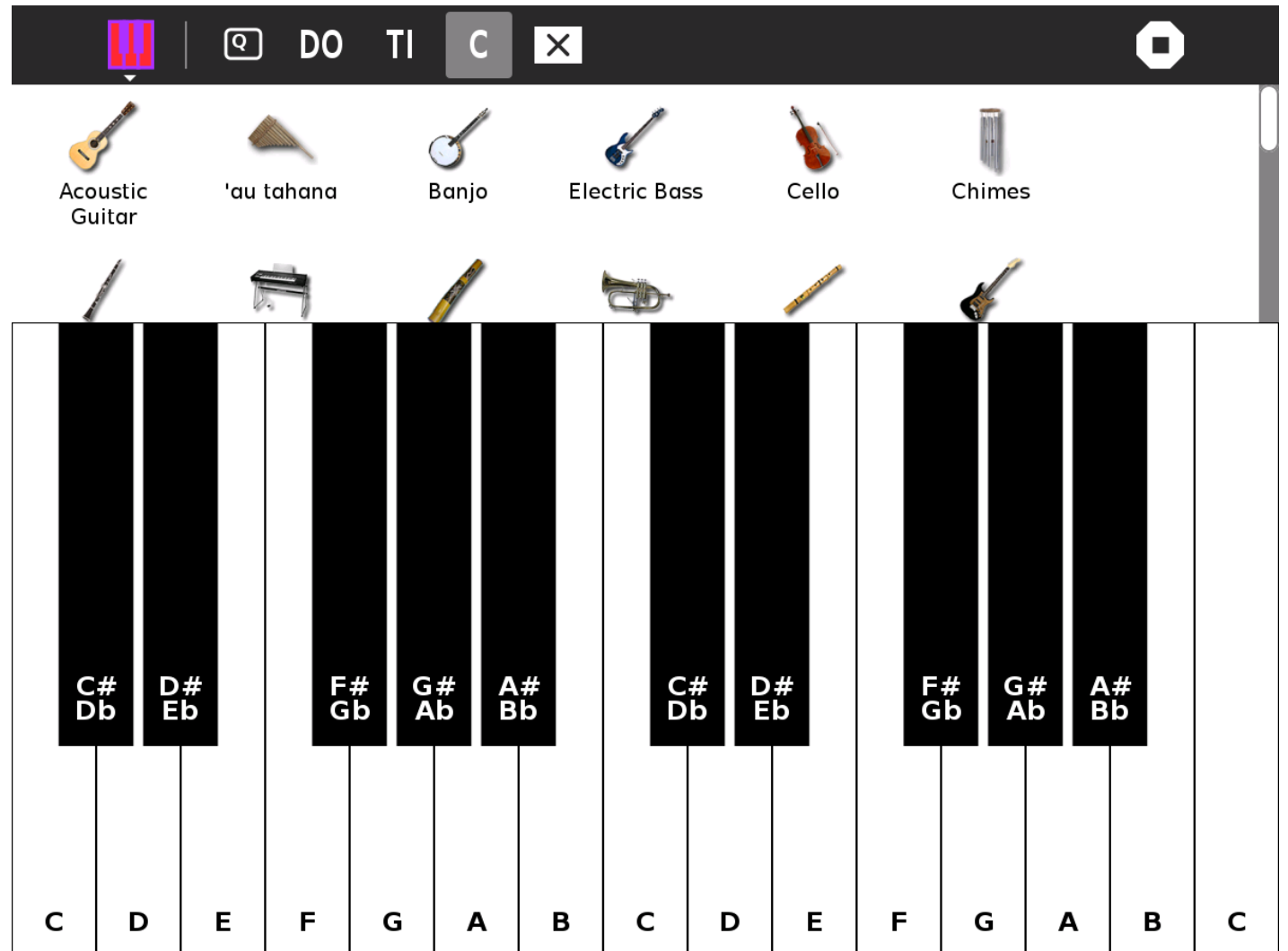


Abacus

Learn the basics of computation.

Music Keyboard

Play your next master piece.



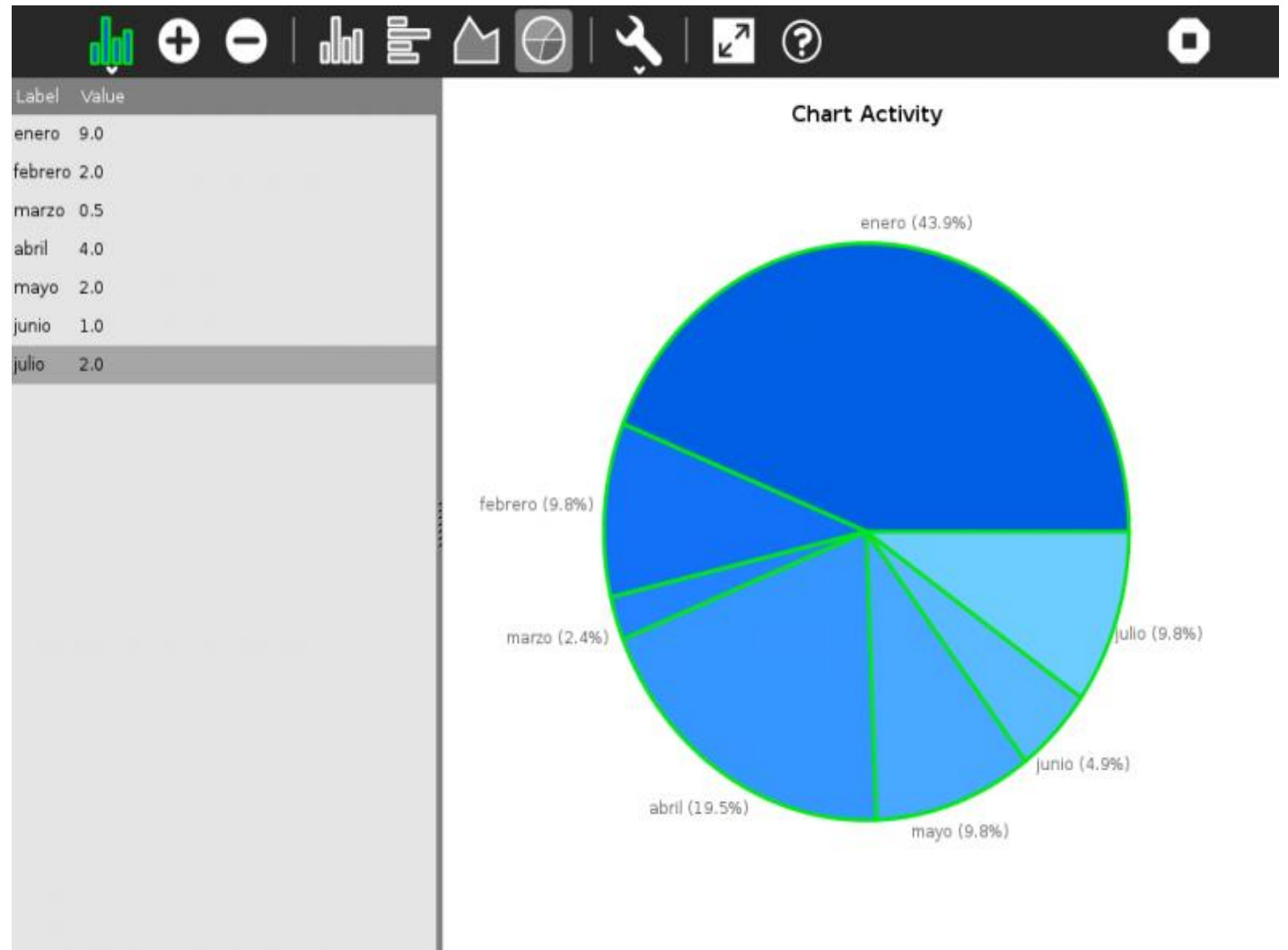
Phase two

- Tutorials.
- Google Code-In.
- Upstream.



Chart

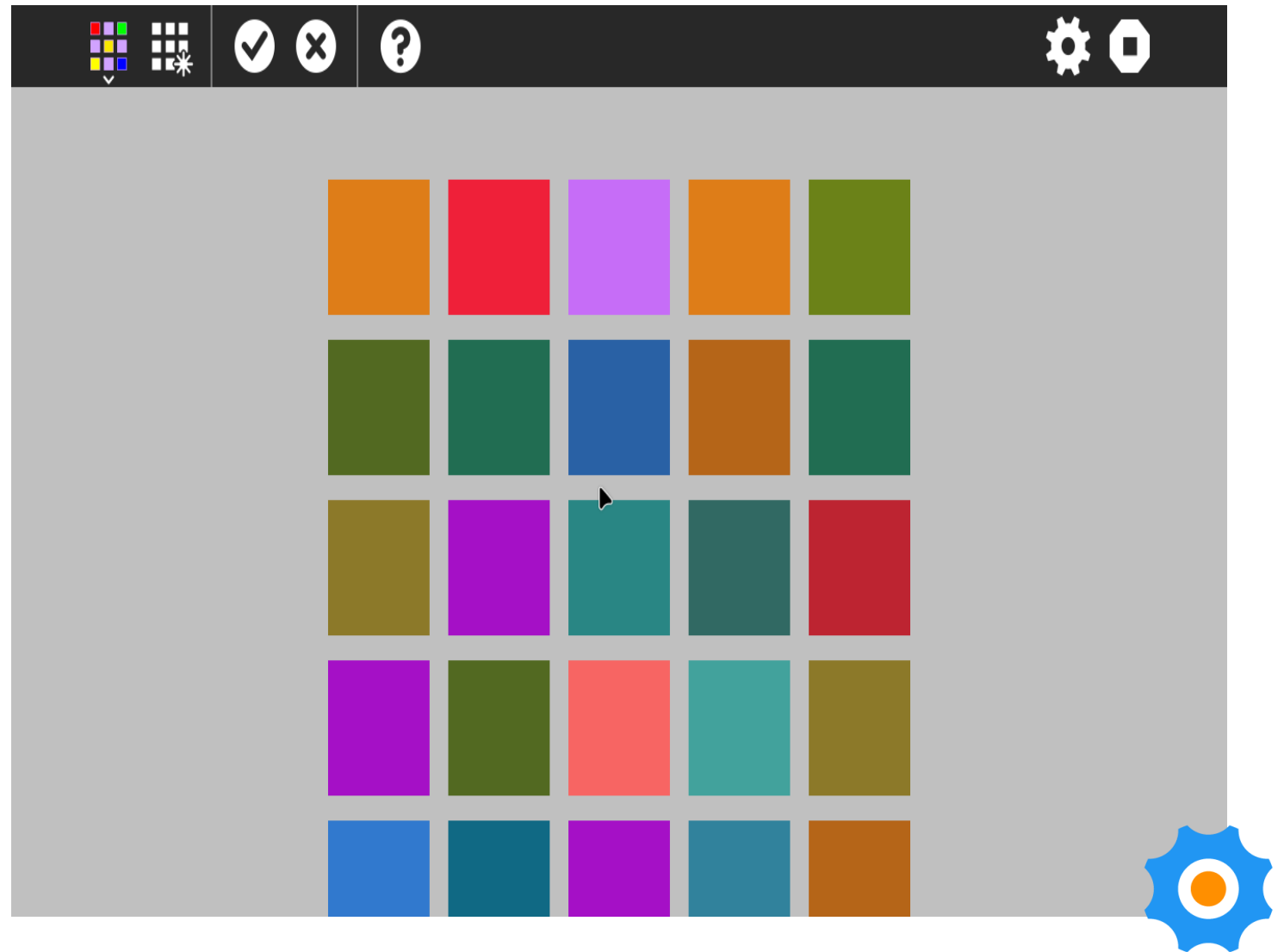
Make your first steps into data visualizations.



flathub.org/apps/details/org.sugarlabs.Chart

Color Deducto


Play and learn about
logic induction.



flathub.org/apps/details/org.sugarlabs.ColorDeducto

Dimensions


Put your pattern matching skills to test.



2

3

4



0 matches
(1 robot)

11	十四	22
+	22	廿一
15	十四	卅三

13

<div> </div>			
<div> <div> </div> <div> Day </div> </div>			
November 07, 2018			
Category	Description	Date	Amount
Pocket money	New Credit	2018-11-07	20.00
Pocket money	New Credit	2018-11-07	10.00
Sweets	New Debit	2018-11-07	-5.00
From mom	New Credit	2018-11-07	50.00
Game	New Debit	2018-11-07	-10.00
PS Controller	New Debit	2018-11-07	-50.00
Sweets	New Debit	2018-11-07	-10.00

Finance

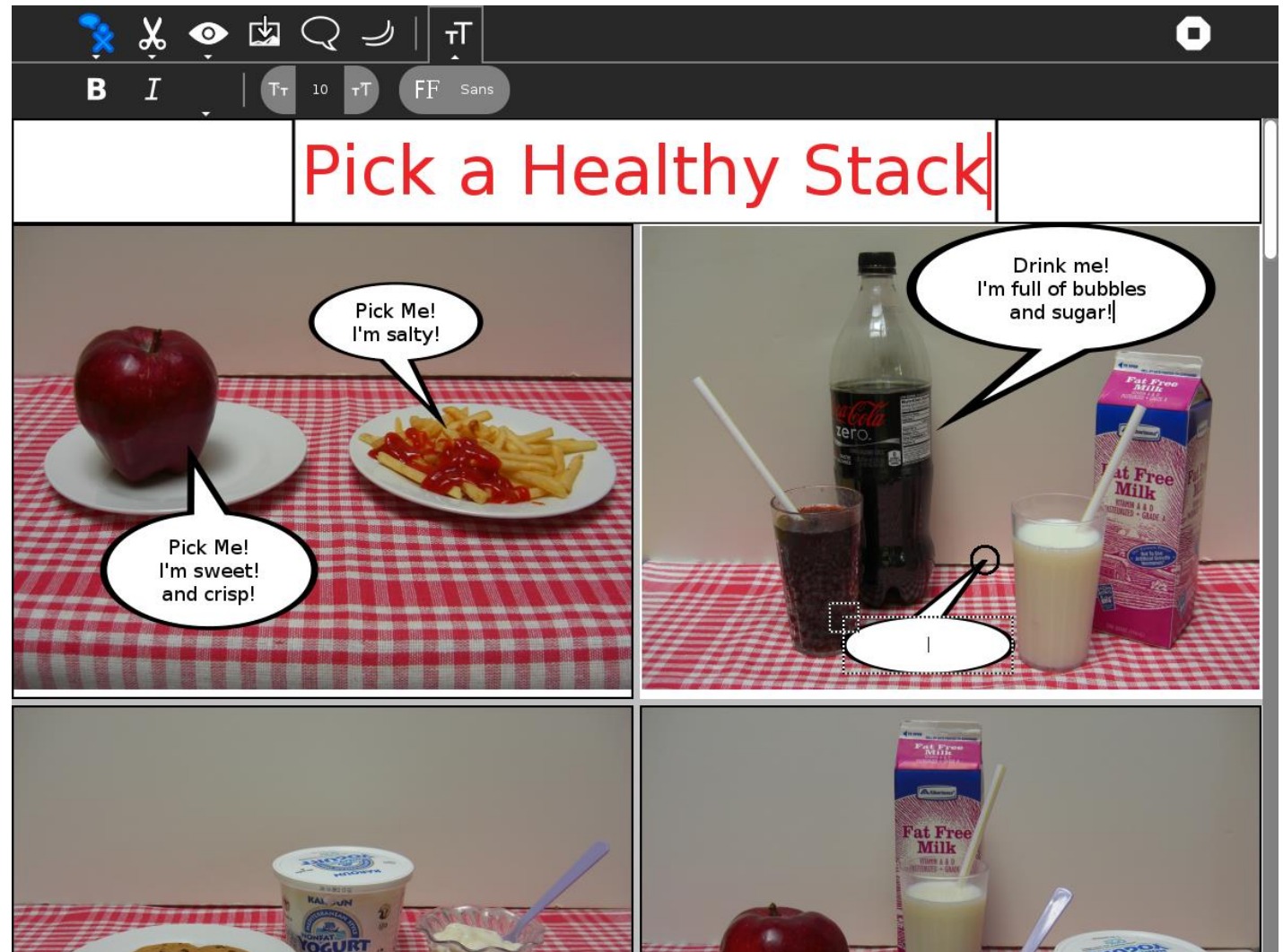
Learn by managing your home finances.

Starting Balance: \$0.00		\$80.00 in 3 credits \$75.00 in 4 debits	Balance: \$:
------------------------------------	--	---	---------------------

flathub.org/apps/details/org.sugarlabs.Finance

FotoToon

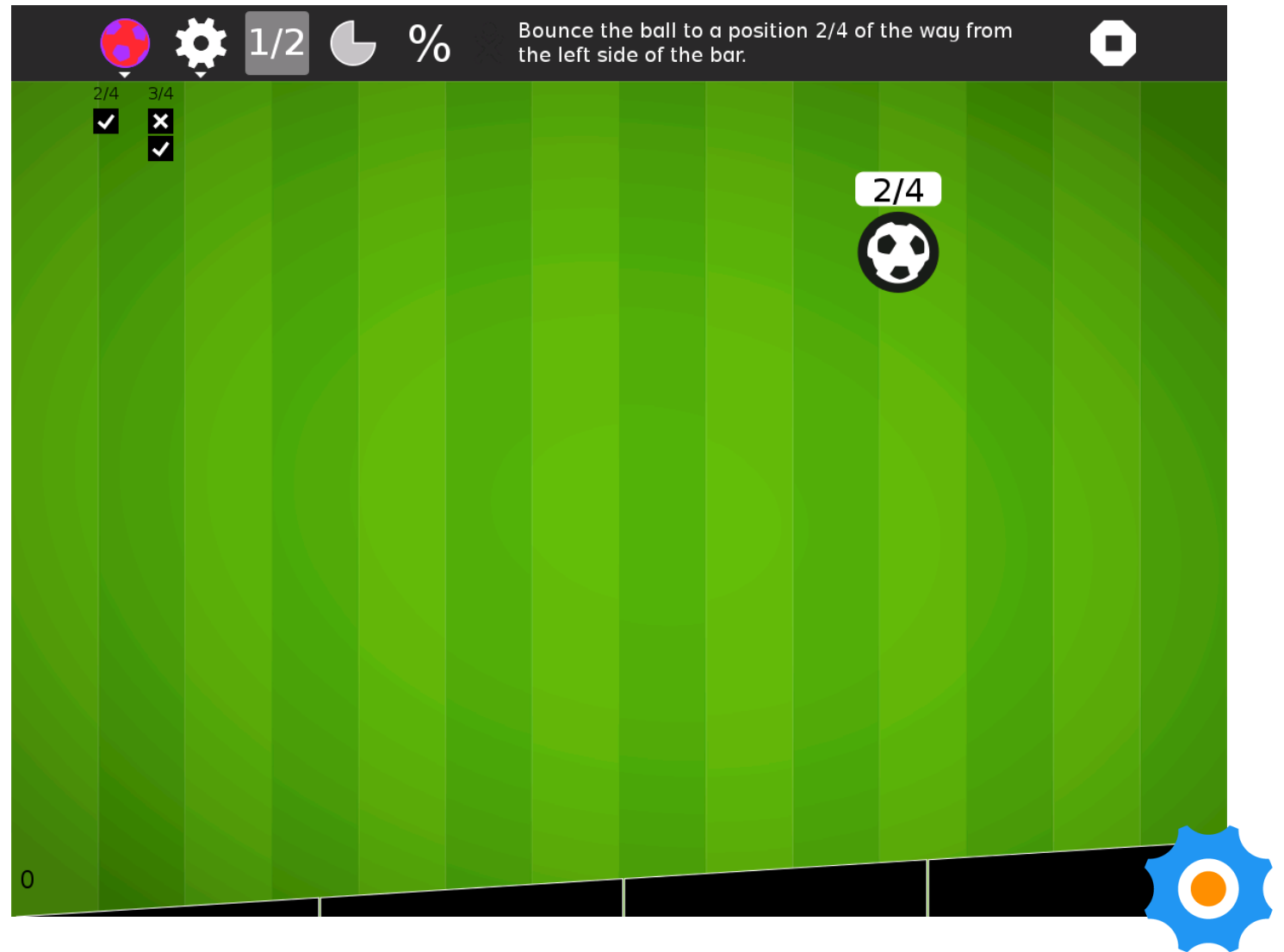
Create the next biggest
meme.



flathub.org/apps/details/org.sugarlabs.FotoToon

FractionBounce

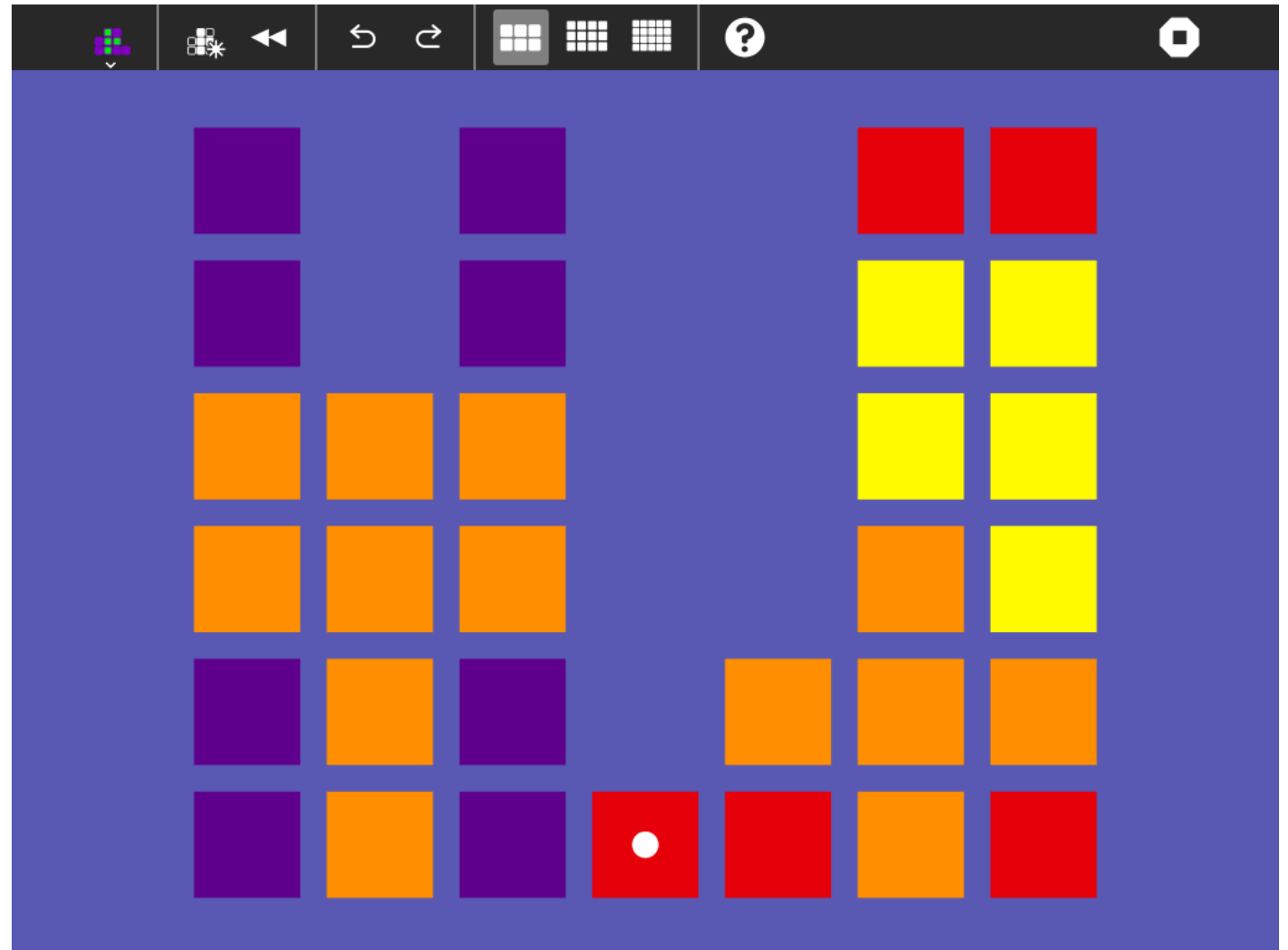
Learn fractions while kicking a football.



flathub.org/apps/details/org.sugarlabs.FractionBounce

Implode

Solve complex tetris-like puzzles.



Maze

Put your problem solving skills to test.



flathub.org/apps/details/org.sugarlabs.Maze

Measure

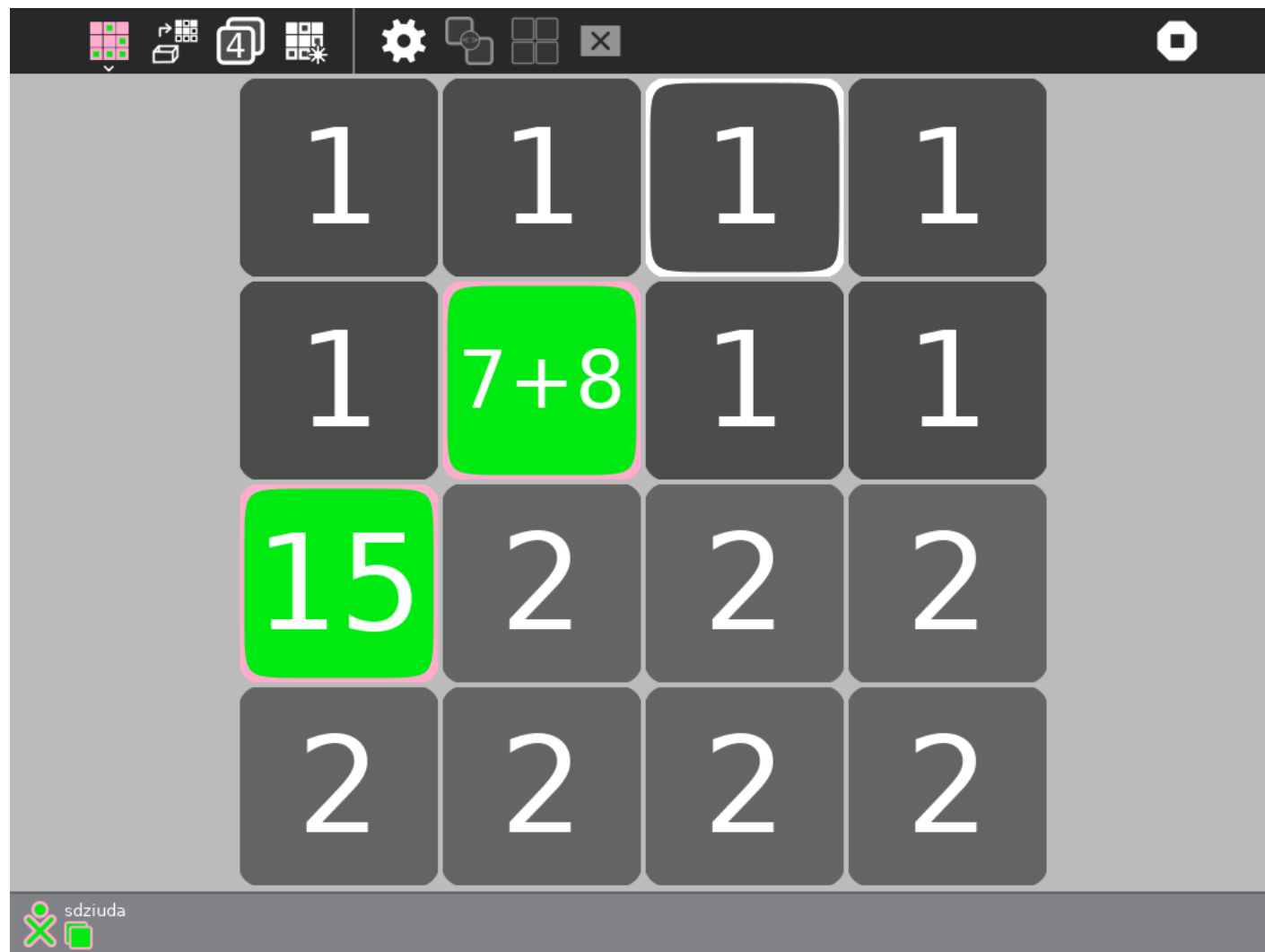
See sound in a completely new way.



flathub.org/apps/details/org.sugarlabs.Measure

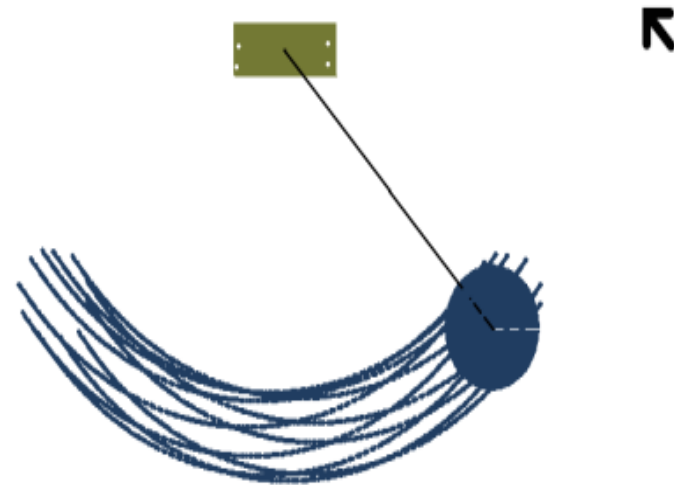
Memorize

Put your memory to test.



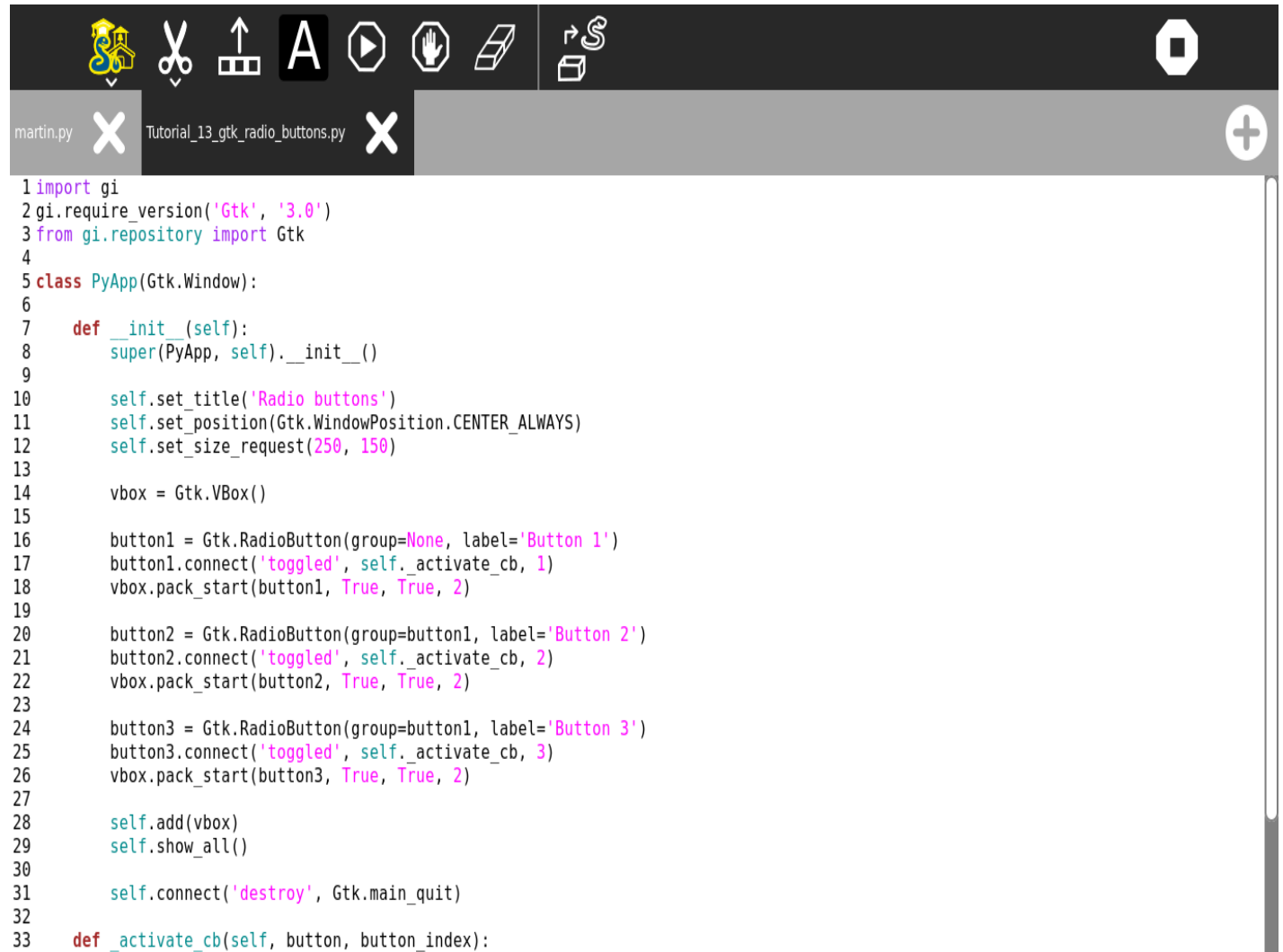
Physics

Build the craziest structures
or enjoy watching them fall.



Pippy

Talk to your computer
using Python.



```
1 import gi
2 gi.require_version('Gtk', '3.0')
3 from gi.repository import Gtk
4
5 class PyApp(Gtk.Window):
6
7     def __init__(self):
8         super(PyApp, self).__init__()
9
10        self.set_title('Radio buttons')
11        self.set_position(Gtk.WindowPosition.CENTER_ALWAYS)
12        self.set_size_request(250, 150)
13
14        vbox = Gtk.VBox()
15
16        button1 = Gtk.RadioButton(group=None, label='Button 1')
17        button1.connect('toggled', self._activate_cb, 1)
18        vbox.pack_start(button1, True, True, 2)
19
20        button2 = Gtk.RadioButton(group=button1, label='Button 2')
21        button2.connect('toggled', self._activate_cb, 2)
22        vbox.pack_start(button2, True, True, 2)
23
24        button3 = Gtk.RadioButton(group=button1, label='Button 3')
25        button3.connect('toggled', self._activate_cb, 3)
26        vbox.pack_start(button3, True, True, 2)
27
28        self.add(vbox)
29        self.show_all()
30
31        self.connect('destroy', Gtk.main_quit)
32
33    def _activate_cb(self, button, button_index):
```

flathub.org/apps/details/org.sugarlabs.Pippy

ReadETexts

Have a robot read you
thousands of books in your
own language.

very much pleased.

Chyavana made offerings of Soma to the Asvini Kumâras. This offended Indra. He held up the Vajra to kill Chyavana, but the son of Bhrigu paralysed the hands of Indra. From that time the Devas consented to give a share in Soma to the Asvini Kumâras.

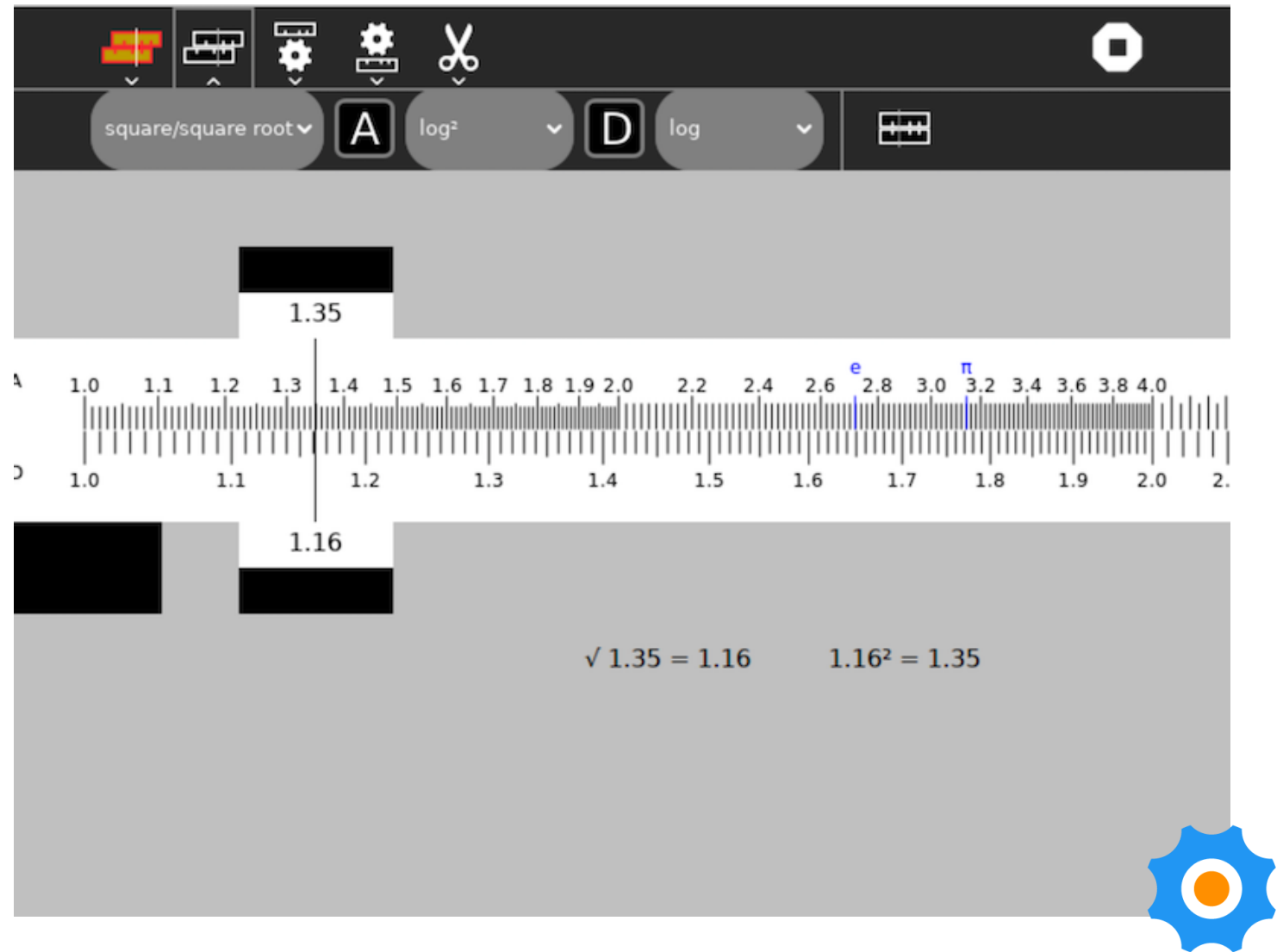
SARYÂTI.

```
graph TD
    Saryati[SARYÂTI.] --- Sukanya[Sukanyâ  
m. Chyavana]
    Saryati --- Uttanavarhi[Uttânavarhi]
    Saryati --- Anarta[Ânarta  
Revata  
(He built a town called Kusasthali  
in the midst of the sea and from that  
town ruled Anarta and other lands.)]
    Saryati --- DhuriSena[Dhûri Sena]
    Anarta --- Kakudmin[Kakudmin  
Revati]
    Anarta --- OtherSons[99 other Sons.]
```

Kakudmin took his daughter Revati with him and went to Brahmâ loka to

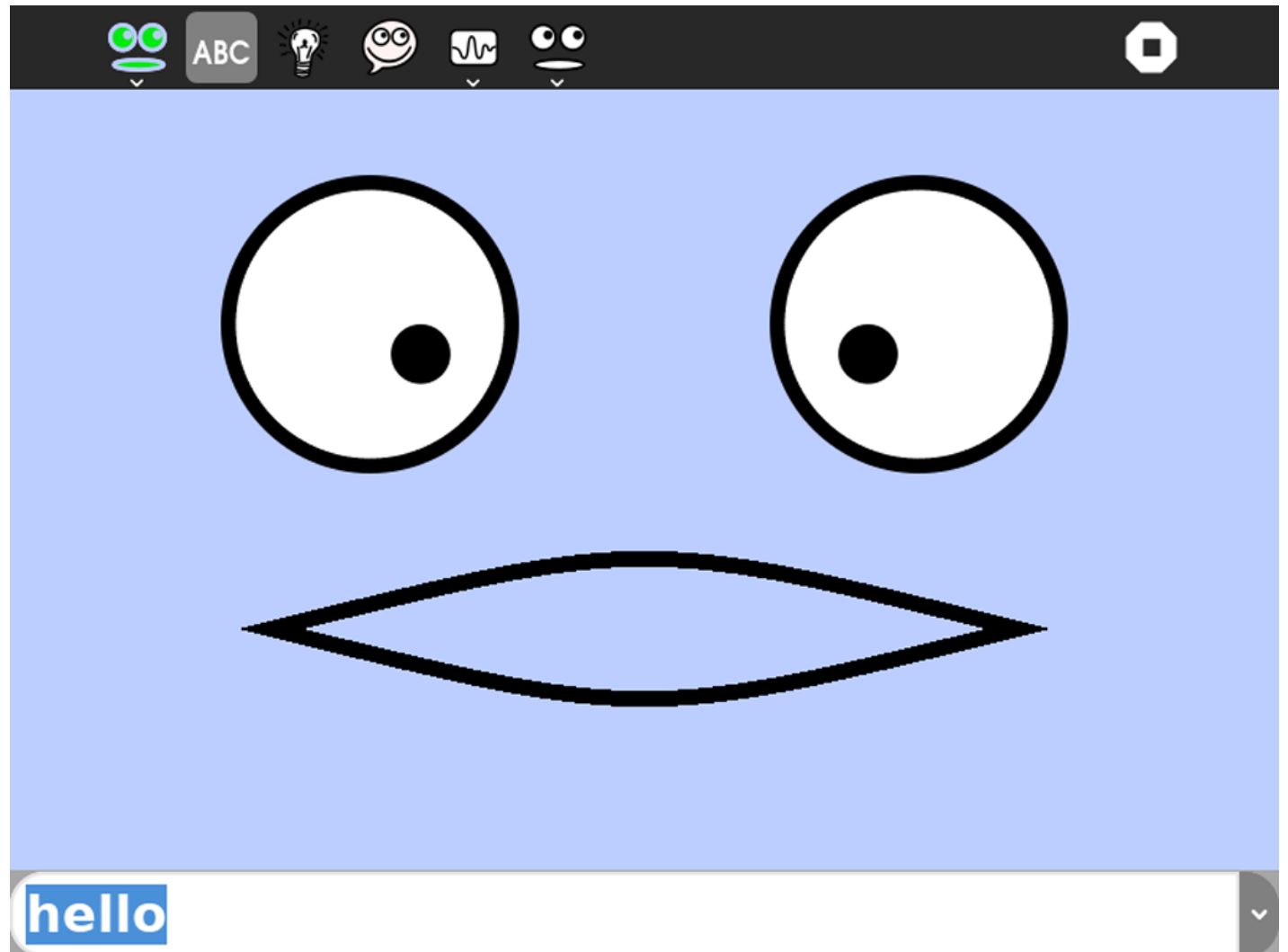
Sliderule

Learn arithmetic in a different way.



Speak

Chat with Alice, a robot with a particular sense of humor.



flathub.org/apps/details/org.sugarlabs.Speak



Story

Have fun writing the most silly stories.

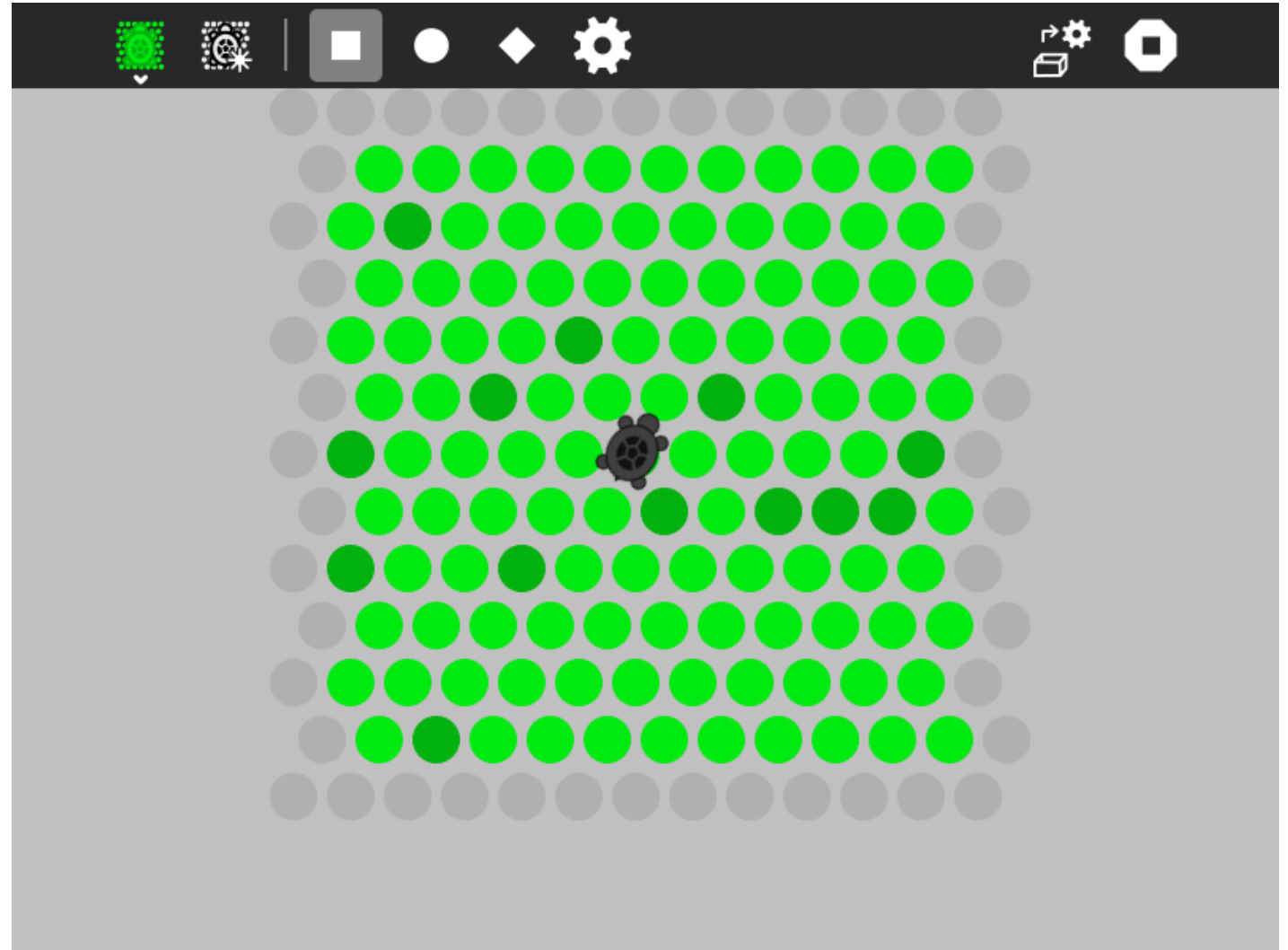


Write your story here.



Turtle in a Pond

Teach this turtle to be smarter by writing code.



Word

Learn how to spell "learn"
in many languages.



Phase three

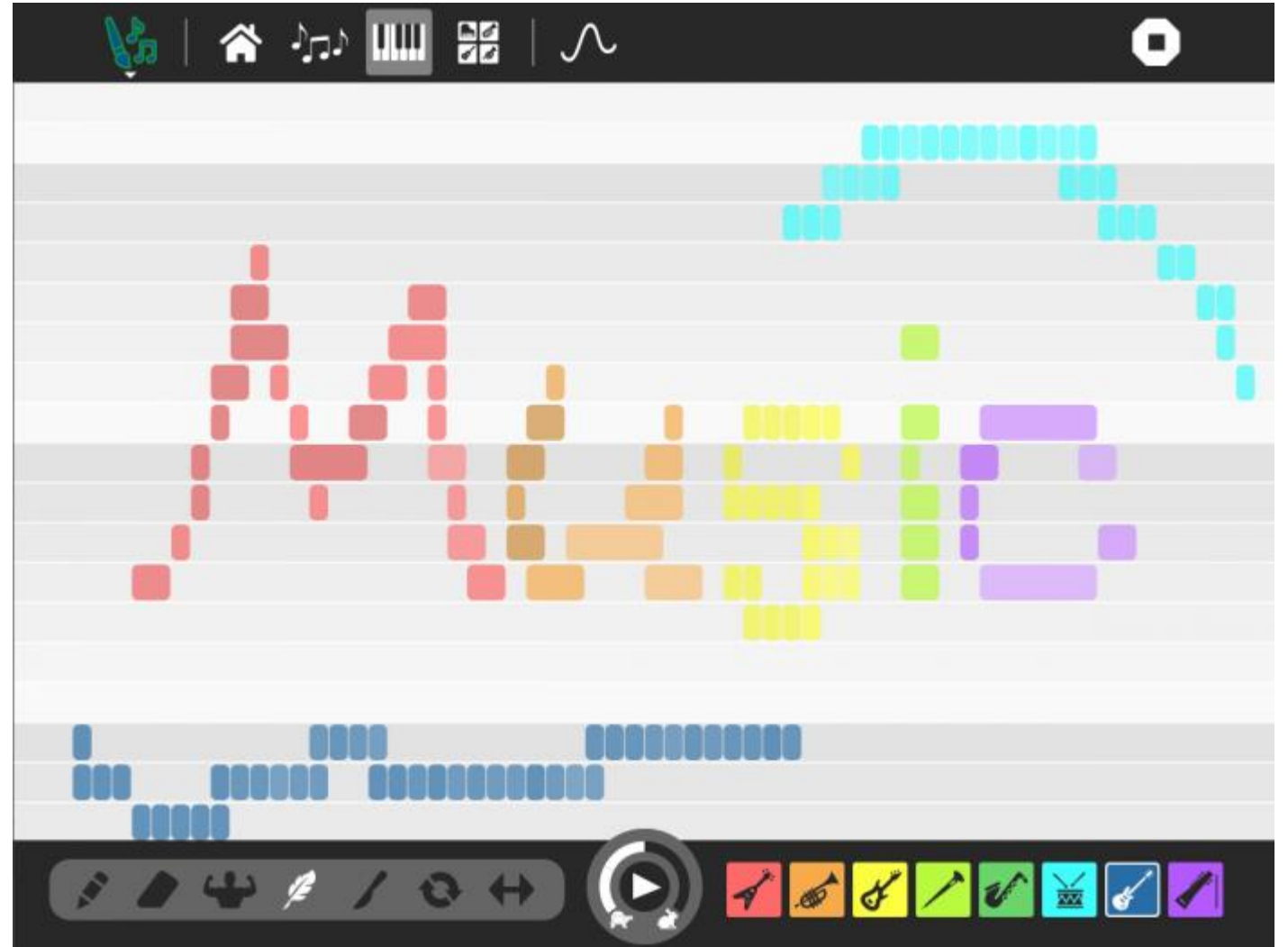
- Refinement.
- Updates.

```
54 lines (54 sloc) | 1.88 KB
1 {
2   "app-id": "org.sugarlabs.Maze",
3   "base": "org.sugarlabs.BaseApp",
4   "base-version": "20.04",
5   "runtime": "org.gnome.Platform",
6   "runtime-version": "3.30",
7   "sdk": "org.gnome.Sdk",
8   "separate-locale": false,
9   "command": "sugarapp",
10  "finish-args": [
11    "--socket=x11",
12    "--socket=pulseaudio",
13    "--share=ipc",
14    "--device=dri",
15    "--env=SUGAR_BUNDLE_ID=org.sugarlabs.Maze",
16    "--env=SUGAR_BUNDLE_PATH=/app/share/sugar/activities/Maze.activity"
17  ],
18  "modules": [
19    {
20      "name": "maze",
21      "buildsystem": "simple",
22      "build-commands": [
23        "python3 setup.py install --prefix=${FLATPAK_DEST} --skip-install-desktop-file --skip-install-mime"
24      ],
25      "sources": [
26        {
27          "type": "git",
28          "url": "https://github.com/sugarlabs/maze-activity.git",
29          "tag": "v30",
30          "commit": "864b3e46b48d5ec308eeab2f593694fed8adeb5f"
31        },
32        {
33          "type": "patch",
34          "path": "maze-port.patch"
35        },
36        {
37          "type": "patch",
38          "path": "maze-monitors.patch"
39        },
40        {
41          "type": "patch",
42          "path": "maze-info.patch"
43        }
44      ],
45      "post-install": [
46        "sugarapp-gen-appdata activity/activity.info appdata",
47        "sugarapp-gen-desktop activity/activity.info desktop",
48        "install -D appdata /app/share/metainfo/org.sugarlabs.Maze.appdata.xml",
49        "install -D desktop /app/share/applications/org.sugarlabs.Maze.desktop",
50        "install -D activity/activity-maze.svg /app/share/icons/hicolor/scalable/apps/org.sugarlabs.Maze.svg"
51      ]
52    }
53  ]
54 }
```

Moving forward

Next phase

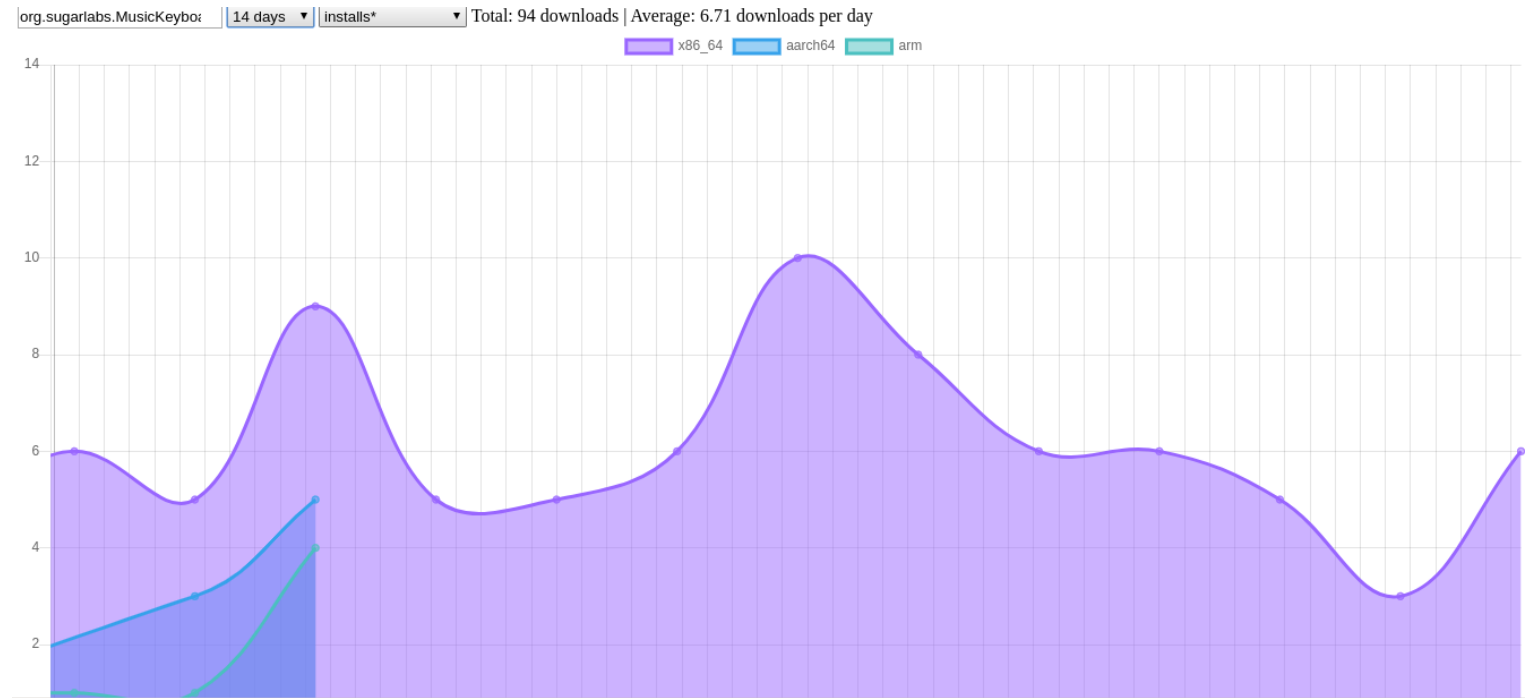
- Update tutorial.
- Port more art applications.



activities.sugarlabs.org/en-US/sugar/addon/4730

Conclusions

- 20 new unique learning tools.
- So far, over 6k downloads.
- Valuable feedback.
- Sugar legacy preserved.



klausenbusk.github.io/flathub-stats

Thank you!
Questions?