Blockly2Hooks*

Wazen SHBAIR
Lucian TRESTIOREANU
Radu STATE

@SEDAN Research Group - SnT
University of Luxembourg

24th June 2022

*Original name: Scratch2Hooks

Funded by XRPL Grants-Wave 1 (06/10/2021)

Built on Blockly

Blockly2Hooks

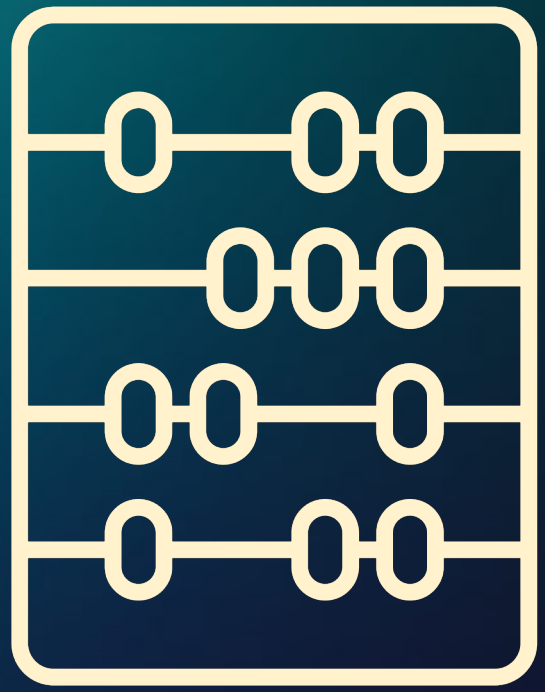
[PROBLEM TO SOLVE]

- Smart contract programming **learning curve** is not smooth
- For people without **advanced** technical background smart contract is is a kind of **mystery**
- We aim to help **teenager**, **non-technical audience and knowledge seekers** to **learn programming XRPL HOOKS** easily and adopt the technology

Blockly2Hooks

[XRPL HOOKS SMART CONTRACT]

- **Hooks** are small, efficient web assembly modules designed specifically for the XRPL.
- **Hooks** can be written in any language (compilable to WebAssembly)
- Typically **Hooks** are written in C.
  - **Good** : very efficient programming language
  - **Bad**: not easy to learn and use for non-developer
- **Hooks** are deliberately not Turing-Complete programs.



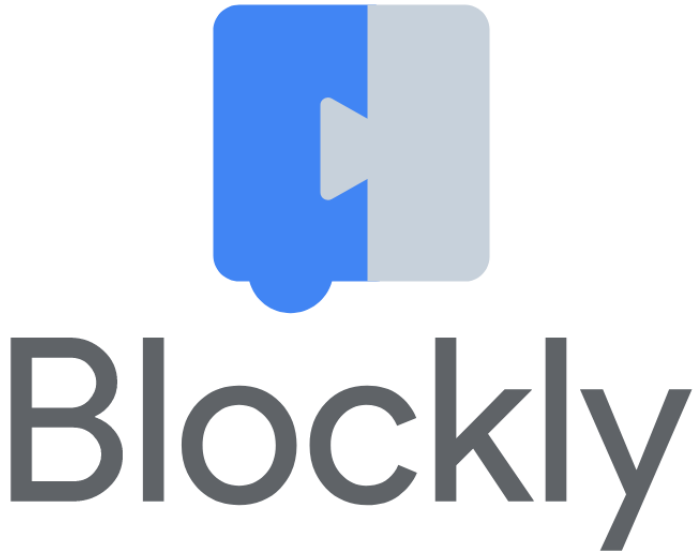
Blockly2Hooks

[SCRATCH]

- Visual programming language developed at the MIT Media Lab
- Used by thousands of kids worldwide to learn how to program
- Kids share their creations with one another over the Internet.

Blockly2Hooks

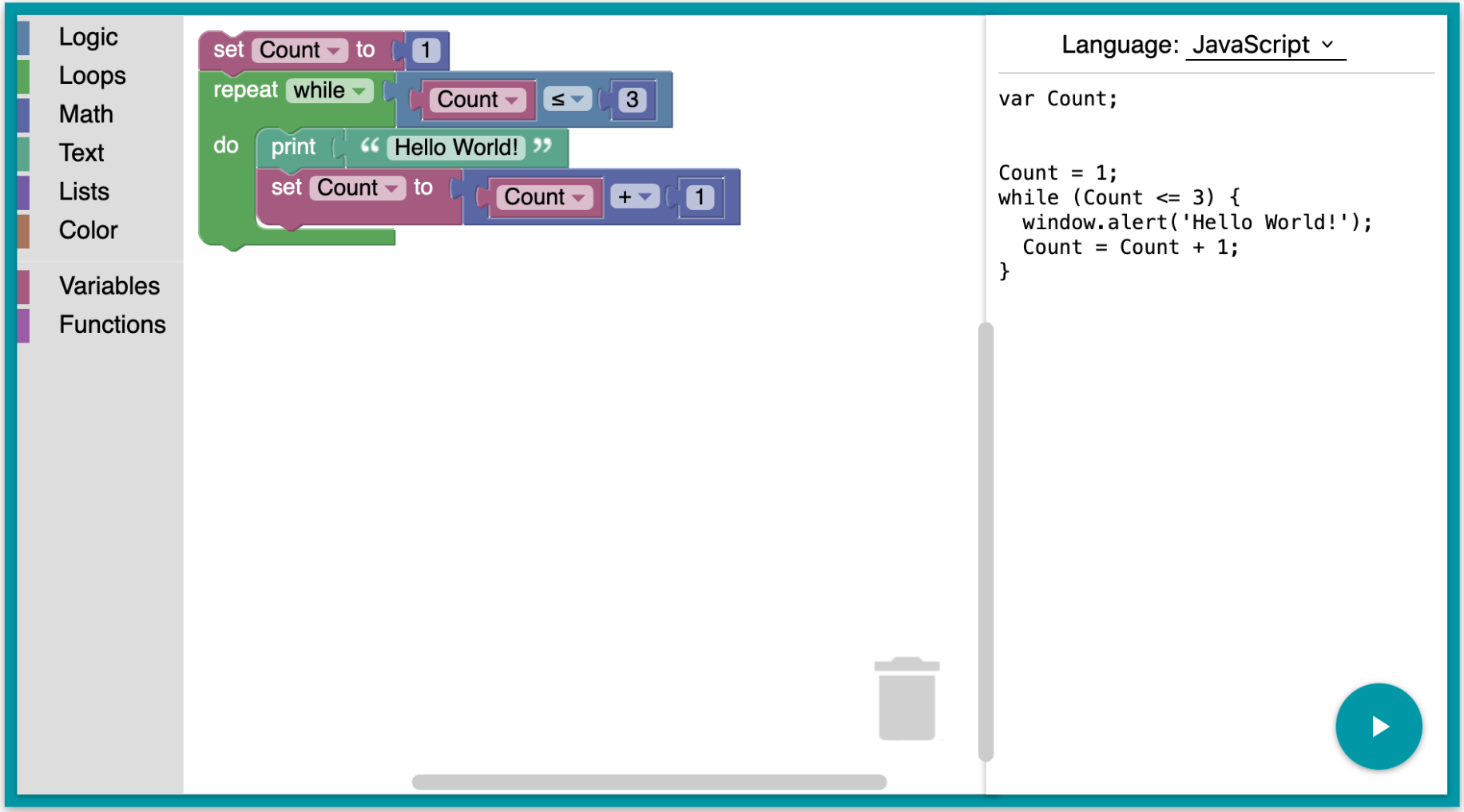
[BLOCKLY TO RESCUE]



- Google’s open-source framework.
- Visual block-based icons and a drag-drop programming environment.
- Transform visual programs into textual codes, e.g., JavaScript, Php, Python, Dart, and Lua

Blockly2Hooks

[BLOCKLY TO RESCUE]



Blockly2Hooks

[OUR SOLUTION]

Develop and deploy XRPL Hooks Smart Contracts using VPL.

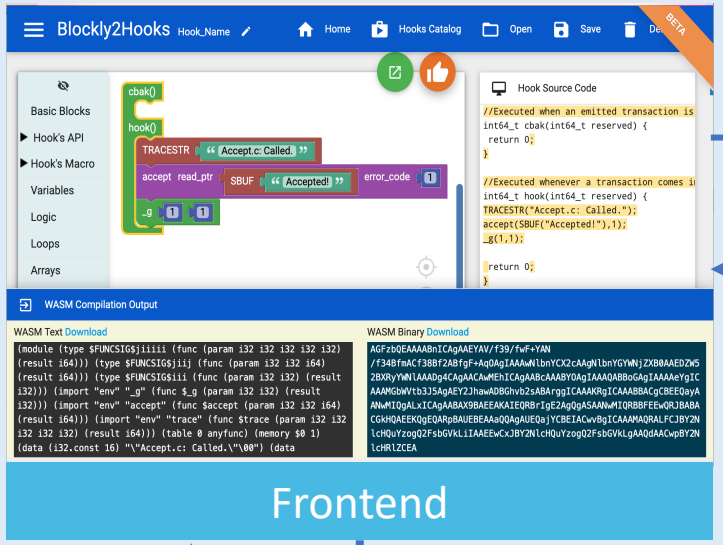
Implement all XRPL Hooks' functions as Blocks using Blockly.

Use Drag and drop for smart contract development.

Compile and publish XRPL Hooks to the Testnet or Mainnet.

Blockly2Hooks

[HOW DOES IT WORK?]



Frontend

1

Hooks C Code

WASM Code

Backend Server

Hooks C Code

WASM Code

2

Remote WASM Compiler

3

Signed **setHook** Tx

XRPL Hooks Amendment BETA

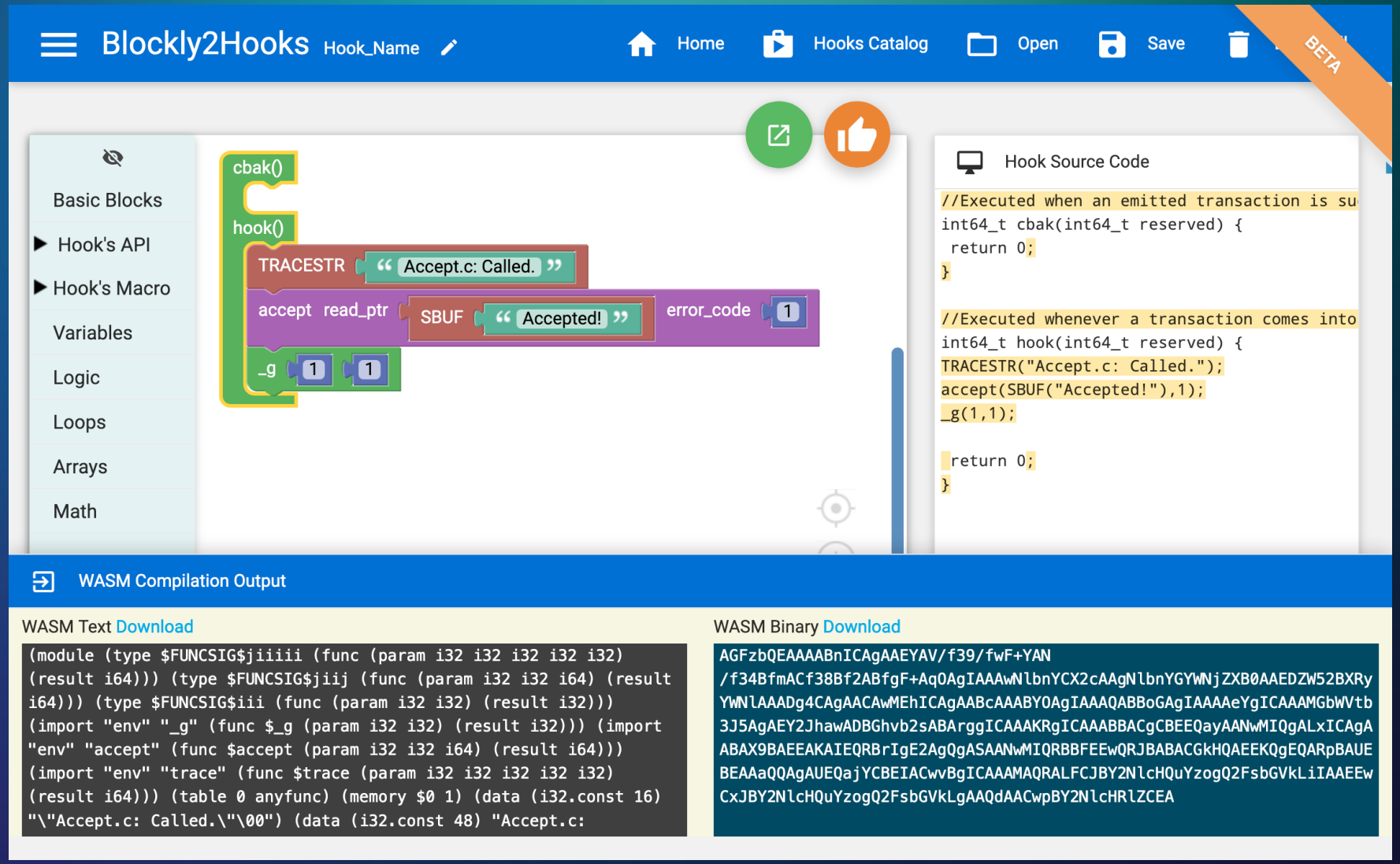
XRPL HOOK TESTNET

4

Tx's Result

Blockly2Hooks

[PLATFORM BETA VERSION]



Blockly2Hooks

[CONCLUSION]

- The platform released as **open-source** project
- GitHub Link: https://github.com/wshbair/blockly2hooks
- We have integrated some examples Hooks for testing and looking forward to add more
- We are looking for feedback from Ripple/Hooks team to validate our output.

Blockly2Hooks

[OUR TEAM]

Wazen Shbair
Blockchain Architect@VNX
Team Leader
Blockchain & NodeJS expert

Lucian Andrei Trestioreanu
Doctoral researcher @SnT
Developer
Senior Game developer

Radu State
Professor @SnT
Team Mentor
Scientific and technical Advisor

TALK IS CHEAP
SHOW ME THE
CODE
</>