Coding Ethereum Smart Contracts: Syllabus

January 16, 2020 / 2:00 PM - 3:30PM EST

Important Links

Workshop Hackpack

Pre-workshop checklist, and resources to explore during and after the workshop.

Hack the North 2020++ Event Schedule

Check this out to stay up-to-date on activities, workshops, and other key happenings this weekend.

Motivator

Smart Contracts are one of the easiest ways to take advantage of the Blochchain's value and use it in your project! The code looks very familiar to Java or JavaScript, but beware, the ecosystem around that is very very different. Smart Contracts are used in many financial and non-financial settings alike, and even the tiniest error can have million dollar consequences. Critical understanding of that is key, and this workshop aims to give you an initial direction.

Prerequisite Knowledge

In order to get the most out of this workshop you should be comfortable with the following concepts:

- Basic Object Oriented Programming concepts such as classes, methods, global variables, public/private modifiers, etc.
- Basic programming ability. Halfway through the workshop you will already be writing code :)

Learning Outcomes

This is what you will walk away from the workshop able to do:

- Understand the purpose of a smart contract, what it is good for, and what it is not.
- Some basic concepts in Solidity, Ethereum's smart contract language.
- Be able to understand a more sophisticated smart contract, such as how to make - your own currency :)
- Be able to write a smart contract yourself!

Timeline (1.5 hour)

Time	Module	Description
15 min.	Basic smart contract & Ethereum theory	We will go over a smart contract's basic value propositions, get to read and run your own smart contract, and learn about Ethereum (and my ill-informed investment decisions)
30 min.	More sophisticated smart contract examples	Read and play with how to hold "elections" in 60 lines, as well as how to create your own currency.
15 min.	Exercise	Write your own basic contract!
30 min.	Challenge Exercise	A challenge for those willing to go the extra mile. We will get to write a Domain Name System where everyone can buy domain names with ETH currency.