Programming Smart Contracts in Ethereum Blockchain using Solidity

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This workshop introduces participants to programming smart contracts using Ethereum Blockchains and the Solidity programming language. Cryptocurrencies such as Bitcoins use Blockchains and Smart Contracts to enforce transactions. Given the popularity of Bitcoins and related technologies in the press, this module provides a module for CS educators to introduce the underlying technology into their classrooms. Participants receive handouts describing sample programming techniques and worksheets for creating basic smart contracts. The workshop proceeds in three sessions in which we: present the underlying technology of Ethereum; practice the creation of smart contracts using the Solidity programming language; and discuss the implementation of this module in our classrooms in small groups. Further information, sample code and workshop handouts are at: http://maui.hawaii.edu/cybersecurity. ***Note: A laptop is needed for this workshop and handouts will be given out.***

Keywords: blockchain; smart contracts; Solidity; Ethereum; bitcoins; programming

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