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AP Computer Science Principles, Period 1
17 December 2018

Practice Explore Task: Cryptocurrency - Bitcoin

2a)

The computing innovation is cryptocurrency, specifically bitcoin. Essentially, Bitcoin is digital currency. Bitcoin attempts to take the place of physical currency while allowing access to more advanced systems such a decentralized currency and fraud combat ("7 Benefits of Decentralized Currency"). The artifact portrays two of the main draws of Bitcoin. The bottom left picture of gpus represents "crypto mining". The picture on the right represents the strong security and the ability to combat fraud, specifically chargebacks, of electronic currency.

2b)

I utilized Google Drawings to create the artifact. Through online resources I was able to gather relevant and important images and pictures. Each image was made to show a specific part and draw of Bitcoin. Finally, a title describing the artifact and a caption describing some key characteristics of Bitcoin were added.

Image Sources:

"Bitcoin Price Analysis: Bitcoin Forecast for 2019, Bitcoin Price Prediction." *Smartereum*, 15 Dec. 2018, smartereum.com/4744/bitcoin-price-analysis-bitcoin-to-reach-29500-by-the-end-of-2018-sat-dec-15/.

"ASUS Releases Crypto-Mining Motherboard Supporting 20 GPUs." *Bitcoinist.com*, 1 June 2018, bitcoinist.com/asus-releases-crypto-mining-motherboard-supporting-20-gpus/.

Chen, Qin. "This Is How You Can Protect Your Cryptocurrencies from Hackers." *CNBC*, CNBC, 3 Nov. 2017, www.cnbc.com/2017/11/02/heres-how-to-protect-your-bitcoin-and-ethereum-from-hacking.html.

2c)

Bitcoin allows for peer to peer transactions, it is decentralized. Thus many of the issues with today's banks are irrelevant. There are no transaction fees, no worry for banks failing, and there can be no aggressive bank policies. The impacts of a decentralized currency are highly beneficial. It eliminates the need for converting one currency to another because a decentralized currency can easily be universal and easily accessible to all ("7 Benefits of Decentralized Currency"). Currently, in many location such as Kenya that struggle with access to conventional exchanges, like banks, crypto wallets are becoming more and more widespread (Rosic). Still,

there are negatives. While the crypto network itself may have a very high level of security. The third parties working within Bitcoin do not always have adequate levels of protection and can be taken advantage of by those willing to work around the law ("Cryptocurrency Pros and Cons"). Thus, without effective regulations Bitcoin can become a cornerstone of crime rings and money laundering. Additionally, crypto is not currently widely accepted and is mainly used online. For Bitcoin to completely take off and become a fully fledged and useful currency it must be more widely utilized.

2d)

For Bitcoin and many other cryptocurrencies the most important piece of data is a "private key". Essentially, whenever there is a transacter or transfer of funds between two Bitcoin wallets, the Bitcoin wallet holds on to the key. The key gives mathematical proof that the funds come from the wallet's manager, the key acts as a digit signature. Once a key has been assigned to a transaction, no one is able to alter any of the circumstances or characteristics of the transaction. This secret key is a 256-bit number kept by every Bitcoin wallet ("How Does Bitcoin Work?"). This data while being utilized to create traceable and recorded transactions as well as combat any fraud, still have some issues. The fact that all transactions and their signature are recorded are on one hand a massive benefit of the Bitcoin system but also has great security risks and bars industries such as healthcare, legal, government sectors from using Bitcoin (Price). If these fields were to introduce Bitcoin there would be large susceptibility to leaking crucial, confidential information. For example, medical records could become available with only pseudo anonymity protecting it through privacy keys. Then, these records have a great change of being targeting and eventually stolen.

2e)

"How Does Bitcoin Work?" *FAQ - Bitcoin*, Bitcoin, bitcoin.org/en/how-it-works.

Price, Dan. "5 Big Blockchain Issues: Security, Privacy, Legal, Regulatory, and Ethical." *Blocks Decoded*, 5 Oct. 2018, blocksdecoded.com/blockchain-issues-security-privacy-legal-regulatory-ethical/.

Rosic, Ameer. "7 Incredible Benefits Of Cryptocurrency." *The Huffington Post*, TheHuffingtonPost.com, 7 Dec. 2017, www.huffingtonpost.com/ameer-rosic-/7-incredible-benefits-of-_1_b_13160110.html.

"Cryptocurrency Pros and Cons." *CryptoCurrency Facts*, cryptocurrencyfacts.com/cryptocurrency-pros-and-cons/.

"7 Benefits of Decentralized Currency." *Bitcoin Market Journal*, 6 Apr. 2018, www.bitcoinmarketjournal.com/decentralized-currency/.