



BLOCKCHAIN AUDITS

Advanced Cases in Assurance Services (ACCTG 521) Class 12 | MPAcc class of 2025

Agenda Review/Admin

Auditing Blockchain: Brief Overview Deliverable

Lab:

- Manually extract and reconcile blockchain.
- Use the Blockchain Analyzer tool.



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Auditing Blockchain: Brief Overview



The Blockchain is an "immutable public ledger"

The ledger is cryptographically sealed:

- Transactions are recorded into blocks and blocks are linked into a chain of blocks using cryptographic hashes.
 - Each transaction hash a hash, like a digital fingerprint.
- This process makes the blockchain near impossible to alter the history of the ledger, instead, you can generally only add to it.
- Often considered as leading to a trusted ledger, the truth, or a trustless environment (so why do we need to audit crypto??)



"Trust" is misleading in the world of blockchain



Many perceive that because blockchain transactions are considered immutable and based on cryptography (the math), there are no additional risks; however, this is not the case. For example, the math can validate the existence of a digital asset and imply ownership but ownership can be compromised if the private key is stolen, lost or otherwise misappropriated. Let's now discuss these additional risks.

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Deliverable



Deliverable

As a 1 page memo, please answer the following (based on Part 5 Section 3 of the Case):

Testing for completeness and existence Required As an auditor, you need to audit for certain assertions. Your first assertions are completeness and existence. In evaluating these assertions, you need to check if the given transactions exist and add up to the same end balance in the wallet. You also need to look for any unusual items (something suspicious or potentially risky).

- 1. Which of the analyzer tabs would you use? Take a screenshot and Explain why and any findings.
- 2. How does this tool help in a blockchain audit relative to manual sampling?

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Lab*

*(no need for remote today)



Rather than relying on a central entity to verify transactions, blockchains are managed and secured autonomously by a peer-to-peer network.



• Reconcile a blockexplorer's data with client records.

Your client has provided you with a table of their cyptocurrency transactions (Bitcoin) that occurred on March 1, 2018 for their wallet at the address: **17A16QmavnUfCW11DAApiJxp7ARnxN5pGX**

Transaction ID	Block	DD.MM.YYY Time	Value	Running Balance	Sent/ Received
5a60cf5712521d0dc57c0cb56f493126c6d7967b78ee6cc9ac28c7b77bffb2c7	511417	01.03.2018 04:54	0.09761362	273.938403	Received
3c25b98df1d2ce6a7cce227f4300e28c93141ad98cdf4f4d8f07955b79f7abf1	511418	01.03.2018 05:02	-0.04125702	273.9001168	Sent
3a69317f65e4ef0c73a242c9c4ae125a7c27e0f23397be7652e65d409a156ea1	511418	01.03.2018 05:02	0.0271139	273.9413739	Received
66a8dd8135d7655207b17ee5a0279ab0184987105b8c51cb79233d3d0835dbf9	511418	01.03.2018 05:02	-0.01465857	273.91426	Sent
C22e31c0010acadf1c9457593379b496b0f0a65d25df3bdea19b7453bf67cc68	511418	01.03.2018 05:02	0.01877822	273.9289185	Received
3bb36c8afe021b031b4bac846f56e4b17ba25e5cc208ea8a450a97535c29a86b	511419	01.03.2018 05:04	0.00042844	273.9005453	Received
4c5ff27fa0c0e20d3d55dd94f065c9258208e339c0b02c403c8c3c6587781db6	511420	01.03.2018 05:28	0.05636806	273.9177608	Received
7cad2ead30accb9f4f0dbd4511f755589e4efd42fb44e9d6daaf231d49c46fb3	511420	01.03.2018 05:28	-0.09210298	273.8613927	Sent
F533bbf1e47ed31a14a5a4ce80907d0aa28b271147fb6e098e92d5b1e732e774	511420	01.03.2018 05:28	0.00587873	273.9534957	Received
96b536a276c1add2e511837a20f67dc1bfa547e004397a4e4743406349ed2f0d	511420	01.03.2018 05:28	0.07450548	273.947617	Received

Master of Professional Accounting

Tools often referred to as block explorers are commonly used to access and analyze information from a public blockchain. These tools display the contents of a public blockchain and allow users to examine the details of individual blocks (e.g., all transactions included in a block), individual transactions (e.g., the transaction amount, the sender's public address, the receiver's public address) and information about specific public addresses (e.g., balance as of the point in time that the information is accessed, details of all transactions).



Required

- 1. <u>Blockchair</u> is a block explorer. Using this block explorer, the transaction ID and wallet address, check to see if each transaction exists and if the value of each transaction differs from the client data.
- 2. What are your findings?
- 3. What are your perspectives (and or/concerns) about using a tool like this to audit these types of transactions?

We will do this in breakout teams, you will need to explore the transaction data and the concile w

Perspectives (Q3):

- 1. Inefficient / time consuming
- 2. Risky reliance on a third party
- 3. Insufficient can we get running balances?



Auditing Digital Assets: Using an audit node on the blockchain

Rather than relying on a central entity to verify transactions, blockchains are managed and secured autonomously by a peer-to-peer network.



• Reconcile live data with client records.

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Thank you!