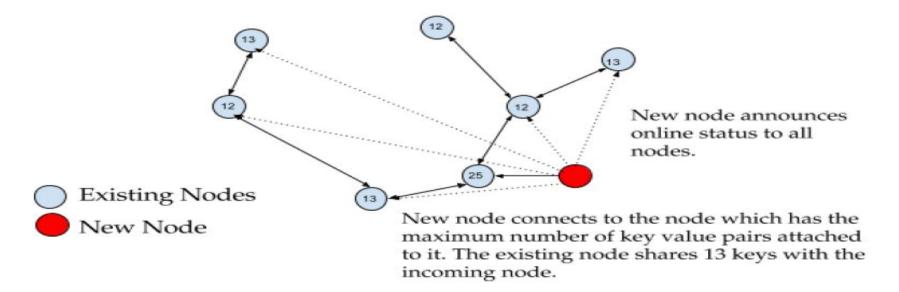
## **Distributed Ledger**

COP701: Software Systems Lan

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### **Node Protocol**

Total nodes: 100 Nodes online: 7



#### **Transaction Protocol**

Initiator

- •To Reciever: Message type 3, transaction details: Amount, reference to unspent transactions
- •To Witness: Message type 4, transaction details: Amount, reference to unspent transactions

Reciever and Witness

- •To Initiator: Message type 5, if they wish to commit to the transaction
- To Initiator: Message type 6, if they wish to abort the transaction

Initiator

 Broadcast: If both responses are 5, then class Transaction is created with amount, reference to unspent transactions and sender, reciever and witness public key.

Every Online Node

- Updates transaction history.
- •To Initiator: Message type 11, after updating the transaction

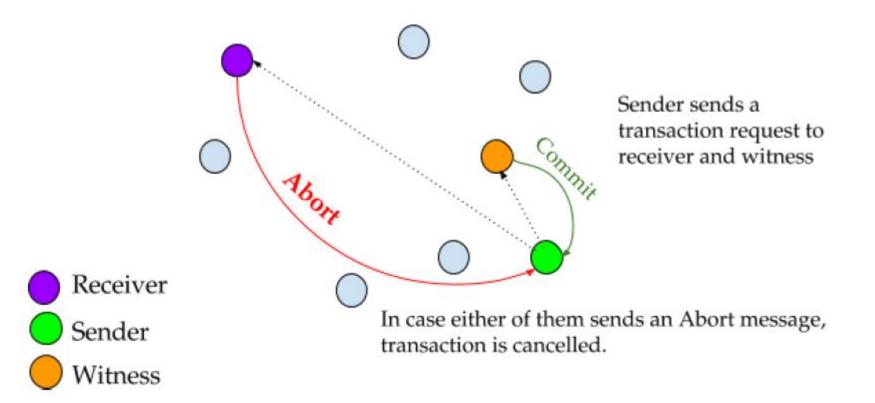
Initiator

 Broadcast: Messsage type 12, List of all nodes that have not sent back the message for updating the transaction array.

## **Transaction Protocol**

Message Type	Meaning
1	Node is now online
2	Update incoming node with transactions
3	Transaction Request to receiver
4	Transaction Request to witness
5	Commit (Response to message type 3/4)
6	Abort (Response to message type 3/4)
7	Broadcast Transaction
9	Send public key
11	Transaction updated (Reply from node to confirm update of transaction)
12	Nodes not updated list (Broadcast about which nodes have not yet been updated)
13	Ask for public key

## **Failure Protocol**



# **Thank You**