Course: CSL7490: Introduction to Blockchain

Assignment 2

Max. Marks: 15 **Due Date: 10.11.2022**

In continuation to Assignment 1, implement the database as shown in the following paper.

“Yue, Kwok-Bun, Karthika Chandrasekar, and Hema Gullapalli. "Storing and querying blockchain using SQL databases." Information Systems Education Journal 17, no. 4 (2019): 24.”

After implementing the database, execute Assignment 1 and store the data (transactions) in the database and ask the following queries.

1. Genesis transaction: find the (Genesis) block hash from the transaction hash. (1 Mark)
2. Find the addresses and amounts of the transactions. (2 Marks)
3. Show the block information of the block with the hash address of (input the hash of the block). (2 Marks)
4. Show the height of the most recent block stored. (1 Mark)
5. Show the most recent block stored. (1 Mark)
6. The average number of transactions per block in the entire Bitcoin blockchain. (2 Marks)
7. Show a summary report of the transactions in the block with height 6 with three columns: (6 Marks)
    A. “Number of transactions”: numbers of transactions with this number of inputs.
    B. “Total input Bitcoins”: total inputs’ BTC of transactions with this number of inputs.