Special Topics in Computer Engineering.

Assignment 1:

Building a Simple Blockchain.

Scope:

The student should be able to build an application that generates and simulates the operation of blockchain. The student is free to use any programing language.

Requirements of the application:

1- Building a blockchain application based on proof of work.
2- The application must have the following functions:
    a- Block mining function.
    b- Blockchain validation function.
    c- Cryptographic function to perform SHA256 hashing function.
3- The application must be working correctly, and the blocks can be displayed and verified.
4- Evry application should be clearly written and commented. A report should be presented with the working application explaining the function operation and the method of operation and the results.
5- The student can use the available resources on the internet, however any used resource should be clearly sited and referenced.
6- Maximum number of students in any project group is two.

Resources:

1- https://www.baeldung.com/java-blockchain
2- https://www.geeksforgeeks.org/implementation-of-blockchain-in-java/
3- https://www.geeksforgeeks.org/create-simple-blockchain-using-python/