Assignment-01 CS-4049 Blockchain and Cryptocurrency

- Create a Blockchain in golang https://golang.org

Your submission should be made on the classroom and you should submit a zip file containing both the main and assignment01bca package (see below). Deadline is **5th October**. Late submissions or ones sent by email are NOT accepted and WILL give you zero points. You should use the following naming convention while uploading file:

assignment01bca_YourRollNO.zip

Before submission, you need to create a golang package named exactly as assignment01bca that should be available on the Github.

The following code, when shujaathk replaced by your github username, should work and display all the info to evaluate the assignment. Please note that you risk losing ALL your marks if the code below does not work for the package you submit. You should make your github repo private and add me (shujaathk) as a collaborator.

```
package main

import (
a1 "github.com/shujaathk/assignment01bca"
)
```

Your github should have at least following public functions:

1. func NewBlock(transaction string, nonce int, previousHash string) *block {
   A method to add new block. To keep things simple, you could provide a sting of your choice as a transaction (e.g., “bob to alice”). Also, use any integer value as a nonce. The CreateHash() method will provide you the block Hash value.

2. func DisplayBlocks() {
   A method to print all the blocks in a nice format showing block data such as transaction, nonce, previous hash, current block hash

3. func ChangeBlock() {
   function to change block transaction of the given block ref

4. func VerifyChain() {
   function to verify blockchain in case any changes are made.

5. func CalculateHash (stringToHash string) {
   function for calculating hash of a block