***Assignment -1***

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Code :

BT-assignment1.js:

sha256 = require('crypto-js/sha256')

function blockChain(){

this.chain=[];

this.pT=[];

}

blockChain.prototype.getBlock= function(){

return this.chain[this.chain.length-1].bHash;

}

blockChain.prototype.createBlock=function(pHash,nonce){

const newBlock={

bId:this.chain.length+1,

tS:Date.now(),

transactions:this.pT,

bHash:this.createHash(pHash,nonce,this.pT).toString(),

//bHash:this.createHash(pHash,nonce),

pHash:pHash,

nonce:nonce

};

this.chain.push(newBlock);

this.pT=[];

return newBlock;

}

blockChain.prototype.createHash=function(previousBlockHash,nonce,currentBlockData){

const dataAsString = previousBlockHash + nonce.toString()+ JSON.stringify(currentBlockData);

const hash = sha256(dataAsString);

return hash;

}

blockChain.prototype.createTrans=function(s,r,amt){

const newTrans={

sender:s,

receiver:r,

amount:amt

};

this.pT.push(newTrans);

return newTrans;

}

module.exports = blockChain;

Test1.js:

var blockChain=require('./BT-assignment1');

var bitcoin = new blockChain();

console.log(bitcoin)

var newTransaction=bitcoin.createTrans('Ravi',"Revanth",345666);

var newTransaction=bitcoin.createTrans('Shyam',"Ram",34123);

var newBlock=bitcoin.createBlock('23986yasjdagsudyr326egyajsd',7890);

var newTransaction=bitcoin.createTrans('Rav',"Rev",345666);

var newTransaction=bitcoin.createTrans('Shyam',"Ram",34123);

var newBlock=bitcoin.createBlock(bitcoin.getBlock(),7890);

var newTransaction=bitcoin.createTrans('Ravi',"Revanth",345666);

var newTransaction=bitcoin.createTrans('Shyam',"R",34123);

var newBlock=bitcoin.createBlock(bitcoin.getBlock(),7890);

var newTransaction=bitcoin.createTrans('Deepa',"Ravi",345666);

var newTransaction=bitcoin.createTrans('Ram',"Raj",34123);

var newBlock=bitcoin.createBlock(bitcoin.getBlock(),7890);

console.log(bitcoin);

***OUTPUT***

