Practical No. 2

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Title: Block Structure

Aim: Write a program to implement a block structure in java.

Source Code:

```java
import java.util.Date;

class Block {

    public int index;
    public String data;
    public String previousHash;
    public String hash;
    public long timestamp;

    public Block(String data, String previousHash) {
        this.index = 0;
        this.timestamp = new Date().getTime();
        this.data = data;
        this.previousHash = previousHash;
        this.hash = calculateHash();
    }

    public String calculateHash() {
        return HashUtil.applySHA256(previousHash + Long.toString(timestamp) + data);
    }
```
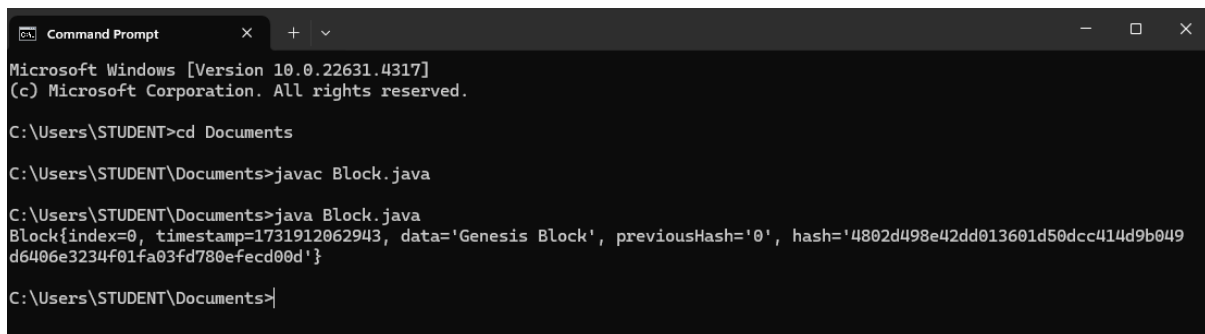
```java
    @Override
    public String toString() {
        return "Block{" +
                "index=" + index +
                ", timestamp=" + timestamp +
                ", data='" + data + '\'' +
                ", previousHash='" + previousHash + '\'' +
                ", hash='" + hash + '\'' +
                '}';
    }


    public static void main(String[] args) {
        Block genesisBlock = new Block("Genesis Block", "0");
        System.out.println(genesisBlock);
    }
}
```

Output: