Task-13 - use case

Indexing various devices in IoT Platforms :

- Scenario :- An IoT Platform needs to support a wide variety of devices.
- Requirement :- efficient data storage and indexing to query by device id location (or) parameter.
- Challenge :- Device data structure may differ.
- Goal :- Quick retrieval by common queries.

Why a Json-Based Document Database (MongoDB) fits

1. flexible schema.
   - Device Data can vary widely.
   - MongoDB store each document as Json like BSON
- Indexing support.
  - Can create indexes on device id, location id (or) even nested program like sensor.
- Scalability
  - IoT Platform generate massive, high frequency data which mongo DP, I can handle via sharding and horizontal sliding

Example Json Documents for IoT Devices Datat

```
{"device id" = " deive 123"
 "device Type " = " thermostat"
    " Location" = [
    " Location id" = "local 001",
     " building " = "Building A",
       " floor" : ]
 };
```

```
    Hospitalid = 101,
    Claimdata = '2023-10-01',
    Amount = 2000,
    status = 'submitted'
}]);
```

.Read :

```
db-claims.find({ Policy number: "PN123"})
```

.Update:

```
db-claims.updateone({
  claim id = 1001},
{set:{status:'Approved', approvaldate:'2023-10-10'}})
```

DELETE:

```
db.Claims.delete one ({claimid = 1001})
```

VEL TECH - CSE	
EX NO.	13
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	5
VIVA VOCE (3)	5
RECORD (4)	
TOTAL (15)	15
SIGN WITH DATE	

Result:

Thus the ~~mini~~ use case is successfully verified and executed.