BITWISE OPERATOR:

MongoDB provides bitwise query operators that allow you to filter data based on bit positions. Here are the available bitwise operators:

1. $bitsAllClear: Matches documents where all specified bits are clear (i.e., set to 0).\

2. $bitsAllSet: Matches documents where all specified bits are set (i.e., set to 1).

3. $bitsAnyClear: Matches documents where at least one of the specified bits is clear.

4. $bitsAnySet: Matches documents where at least one of the specified bits is set.

GEOSPATIAL QUERY:

A geospatial query involves retrieving information from a database based on geographic locations and spatial relationships.

Name	Description
`$geoIntersects`	Selects geometries that intersect with a GeoJSON geometry. The `2dsphere` index supports `$geoIntersects`.
`$geoWithin`	Selects geometries within a bounding GeoJSON geometry. The `2dsphere` and `2d` indexes support `$geoWithin`.
`$near`	Returns geospatial objects in proximity to a point. Requires a geospatial index. The `2dsphere` and `2d` indexes support `$near`.
`$nearSphere`	Returns geospatial objects in proximity to a point on a sphere. Requires a geospatial index. The `2dsphere` and `2d` indexes support `$nearSphere`.

Example:

```
db> db.locations.find({
... location:{
... $geoWithin:{
... $centerSphere:[[-74.005,40.712],0.00621376]}}});
[
  {
    _id: 1,
    name: 'Coffee Shop A',
    location: { type: 'Point', coordinates: [ -73.985, 40.748 ] }
  },
  {
    _id: 2,
    name: 'Restaurant B',
    location: { type: 'Point', coordinates: [ -74.009, 40.712 ] }
  },
  {
    _id: 5,
    name: 'Park E',
    location: { type: 'Point', coordinates: [ -74.006, 40.705 ] }
  }
]
db>
```

Here are some of the key operators:

•**near:** This operator retrieves documents near a specified point. It looksup dataset points close to a given coordinates field.

•**$geoWithin:** Use this operator to select points within a specified shape (e.g., a bounding GeoJSON shape).

•**$geoIntersects:** This operator selects points that intersect a given geometry (supported by the 2dsphere index).

•**$nearSphere:** specifies a point for which a geospatial query returns documents from nearest to farthest.

• **location:** The field in the document that contains the geospatial data.

• **$geoWithin:** The query operator that specifies the geospatial query.

• **$centerSphere:** The specific type of geospatial query, which is a circular area centered at a point on the Earth's surface.

[-74.005, 40.712]: The center point of the circle, represented as a longitude-latitude pair. In this case, the center point is approximately New York City, USA.
0.00621376: The radius of the circle, in radians. This value corresponds to approximately 1 kilometer (0.62 miles) at the Earth's surface.