**Aim:** Create a table that stores spatial data and issues queries on it.

# RUN: Mongodb Shell

# Code:

# Show database present in mongodb:

# test> show dbs

**Command to create database:**

---->use SpatialData

**Command to insert data:**

---->db.dealerships.insert({"name":"Frank's Fords", "affiliation":"Ford", "loc":{"lon":51.10682735591432,"lat":-114.11773681640625}})

---->db.dealerships.insert({"name":"Steve's Suzukis", "affiliation":"Suzuki", "loc":{"lon":51.09144802136697,"lat":-114.11773681640625}})

---->db.dealerships.insert({"name":"Charlie's Chevrolets", "affiliation":"Chevrolet", "loc":{"lon":51.08282186160978,"lat":-114.10400390625}})

---->db.dealerships.insert({"name":"Nick's Nissans", "affiliation":"Nissan", "loc":{"lon":51.12076493195686,"lat":-113.98040771484375}})

---->db.dealerships.insert({"name":"Tom's Toyotas", "affiliation":"Toyota", "loc":{"lon":50.93939251390387,"lat":-113.98040771484375}})

**Command to create index on loc field:**

---->db.dealerships.createIndex({loc:"2d"})

**Command to get two dealerships closest to a specific co-ordinate:**

---->db.dealerships.find({loc: {$near:[51,-114]}}).limit(2)

**Command to create compound index (On multiple fields):**

---->db.dealerships.createIndex({loc:"2d", affiliation:1})

**Command to filter data by dealership affiliation:**

---->db.dealerships.find({loc: {$near:[51,-114]}, "affiliation":"Ford"})

**Command to define a polygon for a specific area of town:**

---->areaoftown = { a : { x : 51.12335082548444, y : -114.19052124023438 }, b : { x : 51.11904092252057, y : -114.05593872070312 }, c : { x : 51.02325750523972, y : -114.02435302734375 }, d : { x : 51.01634653617311, y : -114.1644287109375 } }

**Command to search for all dealerships within a given area of town:**

---->db.dealerships.find({ "loc" : { "$within" : { "$polygon" : areaoftown } } })