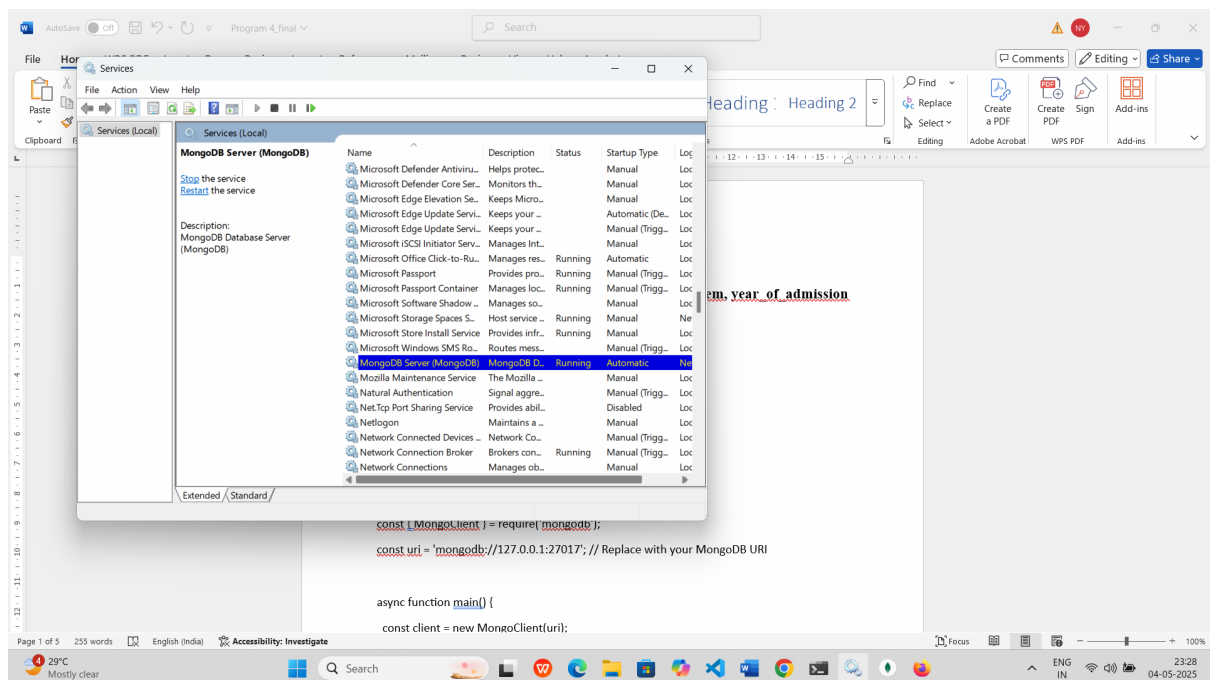**Program 4**

a. Read the data of a student containing usn, name, sem, year_of_admission from node js and store it in the mongodb.

npm init -y

npm install mongodb

Make sure Mongo db server is running :

Student.js

```
const { MongoClient } = require('mongodb');

const uri = 'mongodb://127.0.0.1:27017'; // Replace with your MongoDB URI

async function main() {

  const client = new MongoClient(uri);

  try {

    await client.connect();

    const db = client.db('studentdb'); // Your database name
```

```javascript
    const students = db.collection('students');


// Example student data

const student= [

    { usn: '4JK23AI001', name: 'Alice', sem: 4, year_of_admission: 2023 },

    { usn: '4JK24AI005', name: 'Jane', sem: 2, year_of_admission: 2024 }

    ];

    // Insert the student document

    const result = await students.insertMany(student);

    console.log(`Inserted ${result.insertedCount} students with ids: ${Object.values (result.insertedIds)}`);

    } catch(error) {

console.error("Error inserting data:", error); // Added error handling

} finally

{

await client.close();

}

} main().catch(console.error);
```
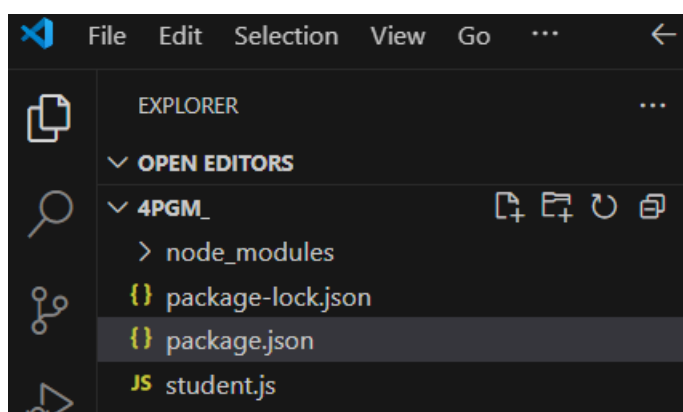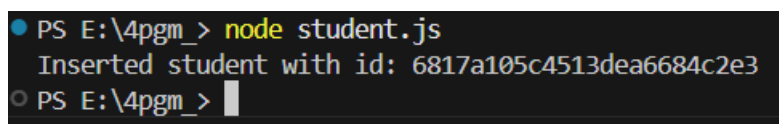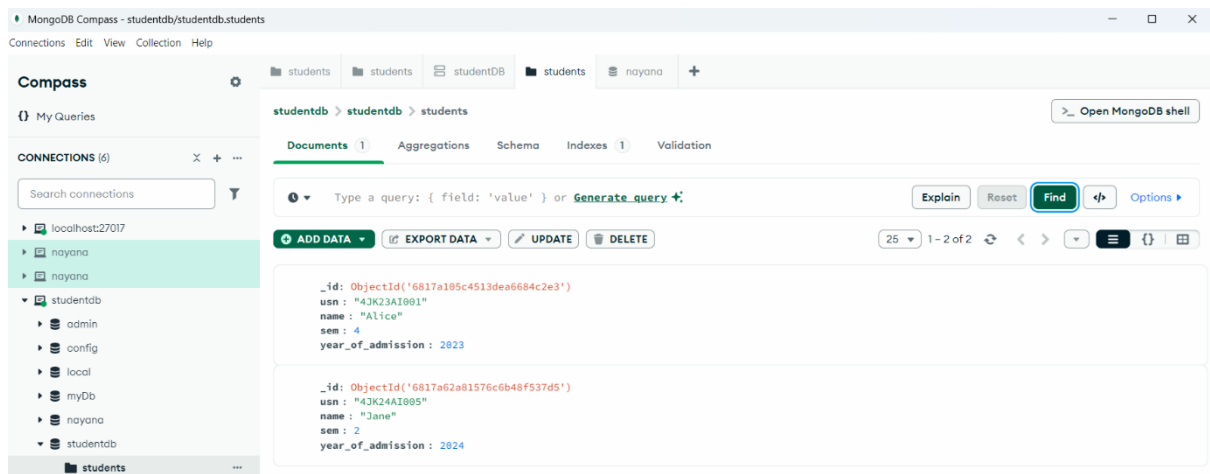
OUTPUT :

On the Terminal enter : node student.js

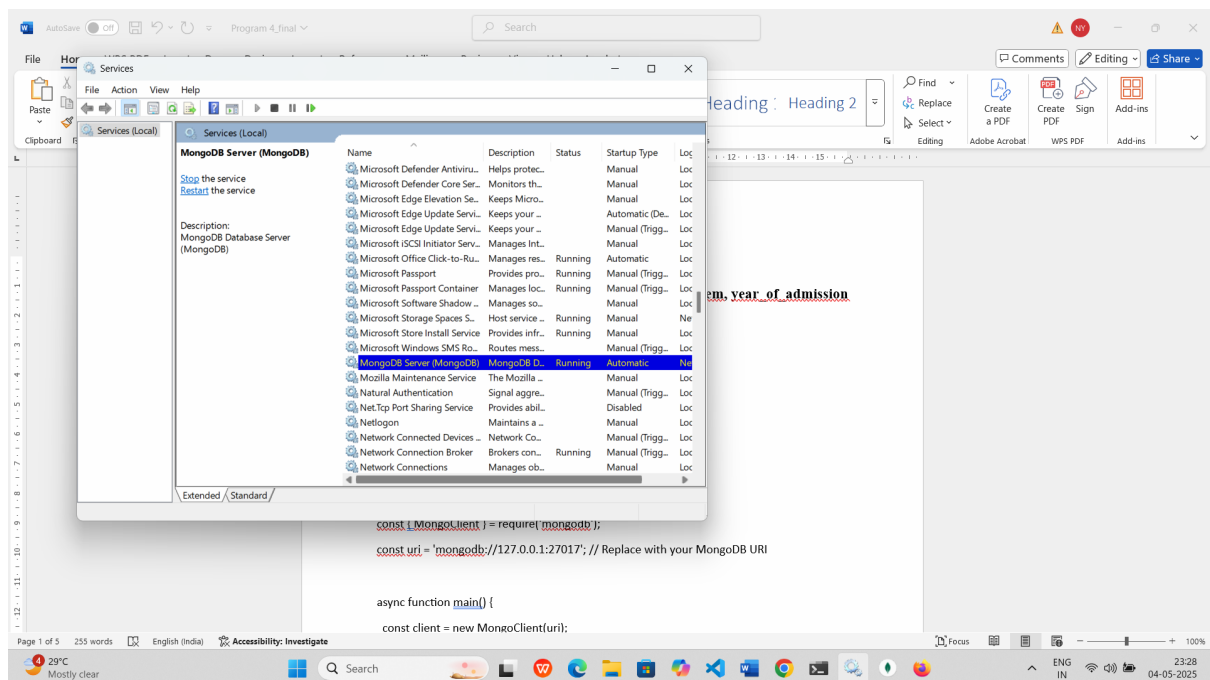In Mongodb , You can see the details entered.

Program 4b:

For a partial name given in node js, search all the names from mongodb student documents created in Question(a).

npm init -y

npm install mongodb

make sure mongodb server is running:

student.js

```javascript
const { MongoClient } = require('mongodb');

async function searchStudentsByName(partialName) {
  const uri = 'mongodb://127.0.0.1:27017';
  const client = new MongoClient(uri);

  try {
    await client.connect();
    const database = client.db('studentdb');
    const students = database.collection('students');

    // Create a regex for partial, case-insensitive match-Al or aL or al all are same
    const query = { name: { $regex: partialName, $options: 'i' } };

    const cursor = students.find(query);

    const results = await cursor.toArray();

    console.log(`Found ${results.length} students matching '${partialName}':`);
    results.forEach(student => console.log(student));
  } finally {
    await client.close();
  }
}
// Example usage:
searchStudentsByName('Al');
```
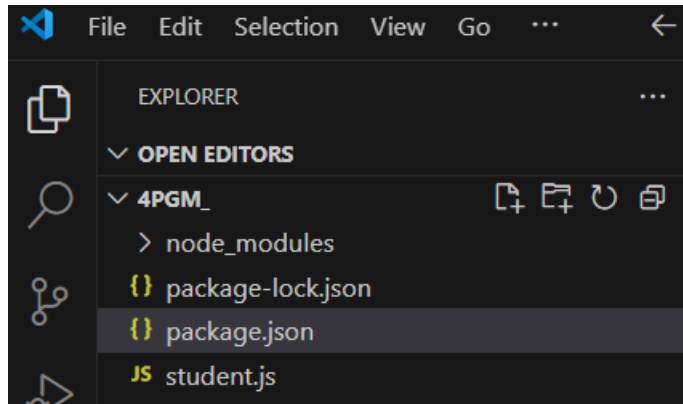
OUTPUT:

On the Terminal enter:

```
PS E:\4bProgm> node student.js
Found 1 students matching 'Al':
{
  _id: new ObjectId('6817a105c4513dea6684c2e3'),
  usn: '4JK23AI001',
  name: 'Alice',
  sem: 4,
  year_of_admission: 2023
}
```