Module 2 – Schema Design and Data Modelling

Case Study Solution - 1

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Solution

With limited time and finance, it is only possible to install and store data in a NoSQL database, which is Mongo DB. You can install the software and deploy it in almost half the time with minimum resource requirement.

After analyzing the data, you must have observed that there is many-to-many relationship between the JSON files provided with this case study.

For example: car_list.json file consist of car_brand, manufacturer, and car_models. Order.json file has orderId, orderStatus, etc. place_order.json file consist of classes such as manufacturer, orderId, orderer, etc. Vehicle.json file also has orderId and orderer class.

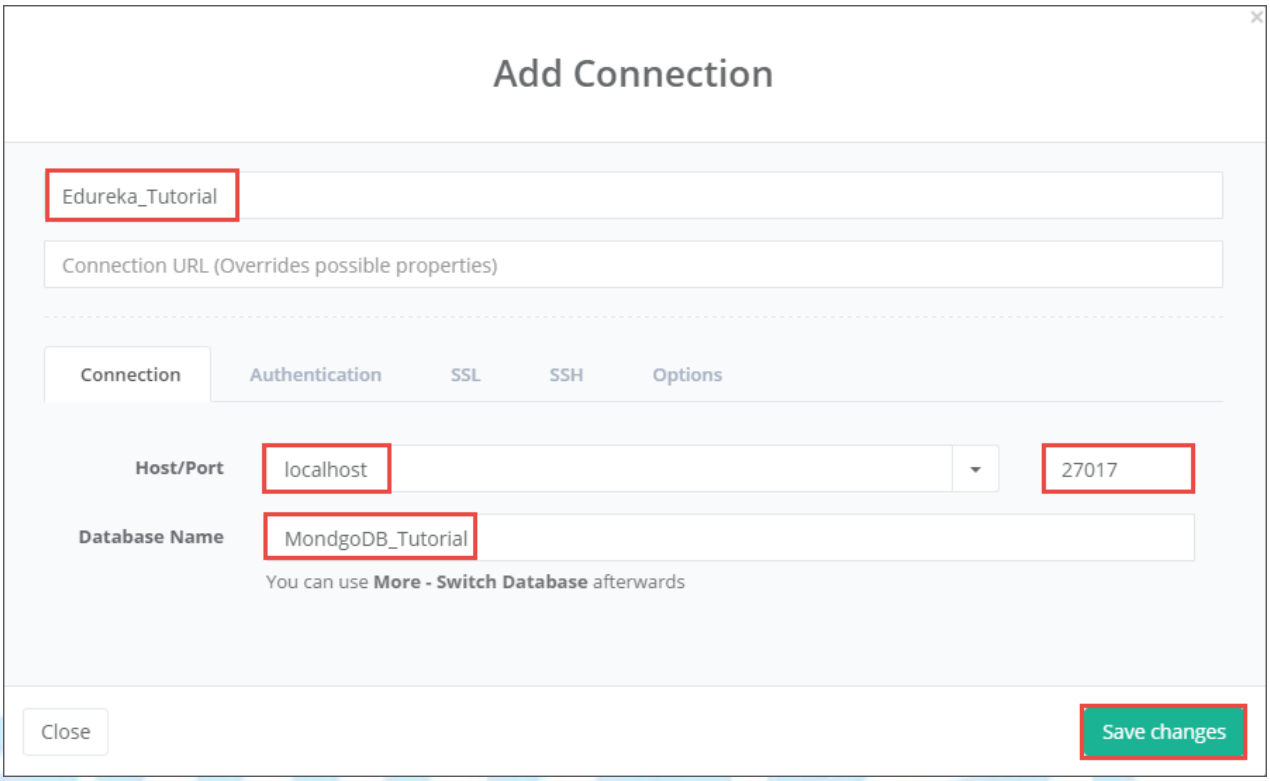
Here, every json file is related to each other due to some common classes. So, it is difficult to implement embedded data model. Hence, we are implementing the Reference data model. In this type, you can use a common field to find and perform crud operations on the records present in different collections.

Next, you must install Mongo DB database and a UI application such as Nosqlclient.

After successfully installing Mongo DB and Nosqlclient, you must create a connection.

1. Run the **mongod.exe** file and then run the **mongo.exe** file.
2. Open the **Nosqlclient** application.
3. Click the **Connect** option available on the top right side of your screen.
4. To create a New connection, click the **Create New** button.
5. In the Add Connection Page, provide a suitable name such as **Edureka_Tutorial** and connection URL(optional).
6. Under the Connection tab, enter host name or the IP address of the server machine. For this tutorial, you can enter **localhost** in the Host Name / IP Address.
7. The port field is automatically loaded with the required port. You can change it according to your Server machine configuration. Let's keep port value as it is for this example.
8. Enter a suitable name for your Database such as **MongoDB_Tutorial**.

9. Click the **Save Changes** button to save your connection.
   Note: You can configure additional properties to secure your connection from the Authentication, SSL, SSH, and Options tab.

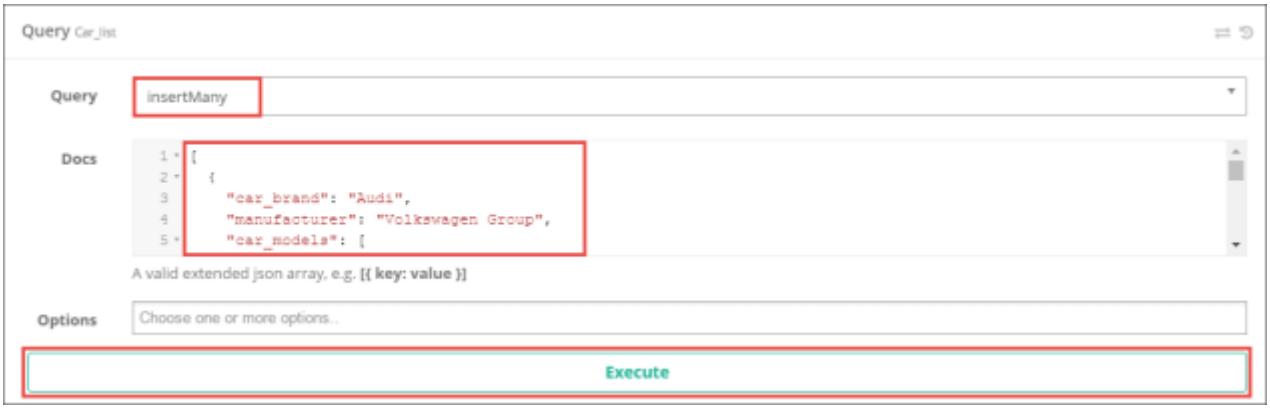


10. Select your newly created connection from the Connections page and click **Connect Now**.

Now, you can add collections and documents to this Database.

11. From the Navigation pane on the left side of your screen, right-click **Collections**.
12. Select **Add Collection/View** from the available options.
13. In the Create Collection/View pop-up, enter **Car_list** in the Name field and click **Create**.
14. To add documents in the Car_list collection, double click the **Car_list** under Collections in the Navigation pane.
15. From the Query dropdown, select **insertMany**.
16. Copy the content of **car_list.json** file provided to you with this Case Study and paste it in the Docs field.

17. Click **Execute** to insert all the records available in the car_list.json file.



18. Similarly, you should add following new collections:
    a. **Order**
    b. **PlaceOrder**
    c. **Vehicle**

    Note: JSON files for inserting the records in these collections is provided to you along with this case study.