

**Progressive Education Society's**  
**Modern College of Arts, Science and Commerce (Autonomous)**  
**Shivajinagar, Pune 5**

**M.Sc. Computer Science A.Y. 2021-22**

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Subject: Advanced Database Concepts

Assignment : NoSQL Concept Using MondoDb

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Company Employee Database:

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1. Create a database with name 'Company'.
2. An 'Employee' is a collection of documents with the following fields:
  - a. Employee ID
  - b. First Name
  - c. Last Name
  - d. Email
  - e. Phone No.
  - f. Address (House No, Street, City, State, Country, Pin-code)
  - g. Salary
  - h. Designation
  - i. Experience
  - j. Date of Joining
  - k. Birthdate
3. A 'Transaction' is a collection of documents with the following fields:
  - a. Transaction Id,
  - b. Transaction Date
  - c. Name (First Name of employee who processed the transaction)
  - d. Transaction Details (Item Id, Item Name, Quantity, Price)

e. Payment

(Type of Payment (Debit/Credit/Cash), Total amount paid, Payment Successful)

f. Remark (Remark field can be empty.)

Queries:

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1. Insert at least 5 documents in 'Employee' collection.
2. Insert multiple documents (at least 10) into the 'Transaction' collection by passing an array of documents to the db.collection.insert () method.
3. Display all the documents of both the collections in a formatted manner.
4. Update salary of all employees by giving an increment of Rs. 40000.
5. Update the remark for transaction id 201.
6. Update designation of an employee named "Nikita" from supervisor to manager.
7. Update designation of an employee having Employee Id as 101.
8. Change the address of an employee having Employee Id as 101.
9. Delete transaction made by "Abhishek" employee on the given date " ".
10. Delete all the employees whose first name starts with 'K'.

(MongoDB Aggregate framework based queries)

1. Find employees having designation as either 'manager' or 'floor supervisor'.
2. Find an employee whose name ends with "a" and print the output in json format.
3. Display the name of an employee whose salary is greater than using a MongoDB cursor.
4. Sort the employees in the descending order of their designation.
5. Count the total number of employees in a collection.
6. Calculate the sum of total amount paid for all the transaction documents.
7. Calculate the sum of total amount paid for each payment type.
8. Find the transaction id of the latest transaction.
9. Find designation of employees who have made transaction of amount greater than Rs. 500.
10. Find the total quantity of a particular item sold using Map Reduce.