**Modern Database MongoDB Programs**

1. Consider the text file, “Std.csv”, with the details of students like SRN, NAME, SEMESTER, SECTION AND AVG\_MARKS. Read the file, “Std.csv”, store the csv data into MongoDB and display the details of all the students of 4th Semester “A” Section who have scored more than 75%.

Program:

import pymongo

import pandas as pd

client = pymongo.MongoClient("mongodb://localhost:27017")

df = pd.read\_csv("aimlstudentlist.csv")

data = df.to\_dict(orient="records")

db = client["CSITB"]

db.CSITB.drop()

db.CSITB.insert\_many(data)

for x in db.CSITB.find({"CGPA": {'$gt': 7.5}}):

print("\n")

print(x)

Output:

{'\_id': ObjectId('64466e279b3414cad23c3727'), 'StudId': 'R20EA008', 'StudName': 'AYALURI PAVAN JYOTHI REDDY', 'Section ': 'A', 'CGPA': 8.0}

{'\_id': ObjectId('64466e279b3414cad23c3728'), 'StudId': 'R20EA009', 'StudName': 'BABY GOWTHAMI S', 'Section ': 'A', 'CGPA': 8.5}

{'\_id': ObjectId('64466e279b3414cad23c3729'), 'StudId': 'R20EA010', 'StudName': 'BORRA BHAVESH REDDY', 'Section ': 'A', 'CGPA': 9.0}

{'\_id': ObjectId('64466e279b3414cad23c372a'), 'StudId': 'R20EA011', 'StudName': 'C S VENKAT', 'Section ': 'A', 'CGPA': 9.5}

{'\_id': ObjectId('64466e279b3414cad23c3731'), 'StudId': 'R20EA063', 'StudName': 'ATHUL RADHAKRISHNAN', 'Section ': 'B', 'CGPA': 8.0}

{'\_id': ObjectId('64466e279b3414cad23c3732'), 'StudId': 'R20EA064', 'StudName': 'B JAMIN ENOCK', 'Section ': 'B', 'CGPA': 8.5}

{'\_id': ObjectId('64466e279b3414cad23c3733'), 'StudId': 'R20EA065', 'StudName': 'BOYANA RAJESH', 'Section ': 'B', 'CGPA': 9.0}

{'\_id': ObjectId('64466e279b3414cad23c3734'), 'StudId': 'R20EA066', 'StudName': 'CHANDANA R', 'Section ': 'B', 'CGPA': 9.5}

1. Consider the text file “Emp.csv”, with the details of Employees like EMP\_CODE, EMP\_NAME, BASIC\_SALARY, DA, GROSS\_SALARY, NET\_SALARY, LIC, PF and TOTAL-DEDUCTIONS. Read EMP\_CODE, EMP\_NAME, BASIC\_SALARY, DA, LIC and PF from the user using input() and compute the following:
2. TOTAL\_DEDUCTIONS= (LIC+PF)
3. GROSS\_SALARY= BASIC\_SALARY+ DA
4. NET\_SALARY= GROSS\_SALARY – TOTAL\_DEDUCTIONS.

Write the above data to file for each employee. Read the content of “Emp.csv” and display the details of each employee.

**Program:**

import pymongo

import pandas as pd

client = pymongo.MongoClient("mongodb://localhost:27017")

df = pd.read\_csv("Salary.csv")

data = df.to\_dict(orient="records")

db = client["Salary"]

db.Salary.drop()

db.Salary.insert\_many(data)

for x in db.Salary.find():

print("\n")

print(x)

db.Salary.update\_many(

{}, [{'$set': {'Deductions': {'$add': ["$LIC", "$PF"]}}}])

db.Salary.update\_many(

{}, [{'$set': {'Gross\_Salary': {'$add': ["$Basic\_Salary", "$DA"]}}}])

db.Salary.update\_many(

{}, [{'$set': {'Net\_Salary': {'$subtract': ["$Gross\_Salary", "$Deductions"]}}}])

for x in db.Salary.find():

print("\n")

print(x)

col = db.Salary

cursor = col.find()

docs = pd.DataFrame(cursor)

docs.to\_csv("New\_SalaryA.csv")

**Output:**

{'\_id': ObjectId('64469a484f6489fdafb61336'), 'Emp\_Code': 1001, 'Emp\_Name': 'Joe', 'Basic\_Salary': 55000, 'DA': 45000, 'LIC': 5000, 'PF': 1800}

...

...

{'\_id': ObjectId('64469a484f6489fdafb6133b'), 'Emp\_Code': 1006, 'Emp\_Name': 'Sophy', 'Basic\_Salary': 95000, 'DA': 55000, 'LIC': 9000, 'PF': 1800}

{'\_id': ObjectId('64469a484f6489fdafb61336'), 'Emp\_Code': 1001, 'Emp\_Name': 'Joe', 'Basic\_Salary': 55000, 'DA': 45000, 'LIC': 5000, 'PF': 1800, 'Deductions': 6800, 'Gross\_Salary': 100000, 'Net\_Salary': 93200}

...

...

{'\_id': ObjectId('64469a484f6489fdafb6133b'), 'Emp\_Code': 1006, 'Emp\_Name': 'Sophy', 'Basic\_Salary': 95000, 'DA': 55000, 'LIC': 9000, 'PF': 1800, 'Deductions': 10800, 'Gross\_Salary': 150000, 'Net\_Salary': 139200}