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**Disciplina:** Banco de Dados II

**Questão 1**  
Código

import mysql.connector  
from pymongo import MongoClient  
  
cnxmysql = mysql.connector.connect(user='root', password='141592Pi!',  
 host='localhost',  
 database='employees')  
  
cnxmongo = MongoClient('mongodb://localhost:27017/')  
db = cnxmongo.m2  
collection = db.employees  
  
cursor = cnxmysql.cursor(dictionary=True)  
query = ("select \* from employees")  
cursor.execute(query)  
employees = cursor.fetchall()  
  
for employee in employees:  
 emp\_no = employee['emp\_no']  
  
 query = ("select \* from salaries where emp\_no=%s")  
 cursor.execute(query, (emp\_no,))  
 salaries = cursor.fetchall()  
  
 query = ("select \* from titles where emp\_no=%s")  
 cursor.execute(query, (emp\_no,))  
 titles = cursor.fetchall()  
  
 query = ("select \* from dept\_emp where emp\_no=%s")  
 cursor.execute(query, (emp\_no,))  
 dept\_emp = cursor.fetchall()  
  
 query = ("select \* from dept\_manager where emp\_no=%s")  
 cursor.execute(query, (emp\_no,))  
 dept\_manager = cursor.fetchall()  
  
 query = ("select d.\* from departments d "  
 "join dept\_emp de on d.dept\_no = de.dept\_no "  
 "where de.emp\_no = %s")  
 cursor.execute(query, (emp\_no,))  
 departments\_emp = cursor.fetchall()  
  
 query = ("select d.\* from departments d "  
 "join dept\_manager dm on d.dept\_no = dm.dept\_no "  
 "where dm.emp\_no = %s")  
 cursor.execute(query, (emp\_no,))  
 departments\_manager = cursor.fetchall()  
  
 salaries\_list = []  
 for salary in salaries:  
 salaries\_list.append({  
 'salary': salary['salary'],  
 'from\_date': salary['from\_date'].isoformat(),  
 'to\_date': salary['to\_date'].isoformat()  
 })  
  
 titles\_list = []  
 for title in titles:  
 titles\_list.append({  
 'title': title['title'],  
 'from\_date': title['from\_date'].isoformat(),  
 'to\_date': title['to\_date'].isoformat()  
 })  
  
 departments\_emp\_list = []  
 for de in departments\_emp:  
 departments\_emp\_list.append({  
 'dept\_no': de['dept\_no'],  
 'dept\_name': de['dept\_name']  
 })  
  
 dept\_emp\_list = []  
 for demp in dept\_emp:  
 dept\_emp\_list.append({  
 'departments': departments\_emp\_list,  
 'emp\_no': demp['emp\_no'],  
 'from\_date': title['from\_date'].isoformat(),  
 'to\_date': title['to\_date'].isoformat()  
 })  
  
 departments\_manager\_list = []  
 for dm in departments\_manager:  
 departments\_manager\_list.append({  
 'dept\_no': dm['dept\_no'],  
 'dept\_name': dm['dept\_name']  
 })  
  
 dept\_manager\_list = []  
 for dmanager in dept\_manager:  
 dept\_emp\_list.append({  
 'departments': departments\_manager\_list,  
 'emp\_no': dmanager['emp\_no'],  
 'from\_date': title['from\_date'].isoformat(),  
 'to\_date': title['to\_date'].isoformat()  
 })  
  
 doc\_employee = {  
 'emp\_no': emp\_no,  
 'birth\_date': employee['birth\_date'].isoformat(),  
 'first\_name': employee['first\_name'],  
 'last\_name': employee['last\_name'],  
 'gender': employee['gender'],  
 'hire\_date': employee['hire\_date'].isoformat(),  
 'salaries': salaries\_list,  
 'titles': titles\_list,  
 'dept\_emp': dept\_emp\_list,  
 'dept\_manager': dept\_manager\_list  
 }  
 collection.insert\_one(doc\_employee)  
  
cnxmysql.close()  
cnxmongo.close()

Visualização da migração parcial no MongoDB

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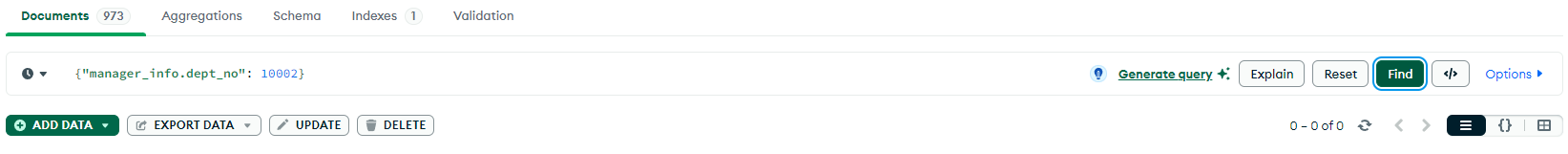
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**Total de dados inseridos:**



# Questão 2

1. 

b) A screenshot of a computer

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c) A screenshot of a computer

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d) A screenshot of a computer

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# Questão 3

**Sem índice:**

**2b)**

**A screenshot of a computer

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Sem índice:**

**A white background with black dots

Description automatically generated**

**Com índice:**

A white background with black and white clouds

Description automatically generated

**2c)  
A white background with blue and yellow text

Description automatically generated  
Sem índice:  
A white background with black dots

Description automatically generated**

**Com índice:**

**A white background with black dots

Description automatically generated**

**2d)**

**A screenshot of a computer

Description automatically generated**

**Sem índice:**

**A white background with black dots

Description automatically generated**

**Com índice:**

**A white background with black dots

Description automatically generated**