LAB ASSIGNMENT – 2

DATE: 29/01/2024

**Question – Create documents with the following attributes: ID, NAME, AGE, SALARY, PHONE, GENDER, DEPARTMENT(IT, FINANCE, HR). The collection should contain 10 documents inside it with variated values. Write queries to perform the following:**

**Ans:**

use adamas

db.createCollection**(**"employees"**)**

const Emp\_id=**[**"E001"**,**"E002"**,**"E003"**,**"E004"**,**"E005"**,**"E006"**,**"E007"**,**"E008"**,**"E009"**,**"E010"**]**

const Name=**[**"Ram"**,**"Yukta"**,**"John"**,**"Trisha"**,**"Manav"**,**"Rohini"**,**"Karan"**,**"Isha"**,**"Mohan"**,**"Siya"**]**

const Age=**[** 20**,**29**,**40**,**55**,**30**,**25**,**38**,**45**,**48**,**37**]**

const Salary=**[**546.7**,**333.4**,**666.7**,**675.4**,**245.6**,**746.7**,**533.4**,**866.7**,**775.4**,**835.6**]**

const Phone\_no=**[**123**,**456**,**122**,**444**,**567**,**121**,**256**,**928**,**464**,**665**]**

const Gender=**[**"Male"**,**"Female"**,**"Male"**,**"Female"**,**"Male"**,**"Female"**,**"Male"**,**"Female"**,**"Male"**,**"Female"**]**

const Department=**[**"IT"**,**"FINANCE"**,**"HR"**,**"IT"**,**"FINANCE"**,**"HR"**,**"IT"**,**"FINANCE"**,**"HR"**,**"IT"**]**

for**(**let i=0**;**i<10**;**i++**)**

**{**

db.employees.insertOne**({**"Emp\_id"**:**Emp\_id**[**i**],**"Name"**:**Name**[**i**],**"Age"**:**Age**[**i**],**"Department"**:**Department**[**i**],**"Salary"**:**Salary**[**i**],**"Gender"**:**Gender**[**i**],**"Phone\_no"**:**Phone\_no**[**i**]})**

**}**

db.employees.find**()**

**Output:**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557156"**),**

"Emp\_id" **:** "E001"**,**

"Name" **:** "Ram"**,**

"Age" **:** NumberInt**(**20**),**

"Department" **:** "IT"**,**

"Salary" **:** 546.7**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**123**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557157"**),**

"Emp\_id" **:** "E002"**,**

"Name" **:** "Yukta"**,**

"Age" **:** NumberInt**(**29**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 333.4**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**456**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557158"**),**

"Emp\_id" **:** "E003"**,**

"Name" **:** "John"**,**

"Age" **:** NumberInt**(**40**),**

"Department" **:** "HR"**,**

"Salary" **:** 666.7**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**122**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557159"**),**

"Emp\_id" **:** "E004"**,**

"Name" **:** "Trisha"**,**

"Age" **:** NumberInt**(**55**),**

"Department" **:** "IT"**,**

"Salary" **:** 675.4**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**444**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715a"**),**

"Emp\_id" **:** "E005"**,**

"Name" **:** "Manav"**,**

"Age" **:** NumberInt**(**30**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 245.6**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**567**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715b"**),**

"Emp\_id" **:** "E006"**,**

"Name" **:** "Rohini"**,**

"Age" **:** NumberInt**(**25**),**

"Department" **:** "HR"**,**

"Salary" **:** 746.7**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**121**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715c"**),**

"Emp\_id" **:** "E007"**,**

"Name" **:** "Karan"**,**

"Age" **:** NumberInt**(**38**),**

"Department" **:** "IT"**,**

"Salary" **:** 533.4**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**256**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715d"**),**

"Emp\_id" **:** "E008"**,**

"Name" **:** "Isha"**,**

"Age" **:** NumberInt**(**45**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 866.7**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**928**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715e"**),**

"Emp\_id" **:** "E009"**,**

"Name" **:** "Mohan"**,**

"Age" **:** NumberInt**(**48**),**

"Department" **:** "HR"**,**

"Salary" **:** 775.4**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**464**)**

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715f"**),**

"Emp\_id" **:** "E010"**,**

"Name" **:** "Siya"**,**

"Age" **:** NumberInt**(**37**),**

"Department" **:** "IT"**,**

"Salary" **:** 835.6**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**665**)**

**}**

1. **To add a new attribute, favourite colour in all the documents such that if the age is even and gender is male, the favourite colour will be a random colour from the following:**
2. **Black**
3. **Blue**
4. **Yellow**

**If the age is odd and gender is male or female, the colour should be Pink.**

**Ans:**

db.employees.find**()**.forEach**(**function**(**d**){**

if**(**d.Age % 2== 0 && d.Gender=='Male'**){**

var colours=**[**'Black'**,**'Blue'**,**'Yellow'**]**

var val=Math.ceil**(**Math.random**()**\*3**)**-1

var final\_colour=colours**[**val**]**

db.employees.updateOne**({**"Emp\_id"**:**d.Emp\_id**},{**$set**:{**"Fav\_Colour"**:**final\_colour**}})**

**}**

else if**(**d.Age % 2!= 0**){**

db.employees.updateOne**({**"Emp\_id"**:**d.Emp\_id**},{**$set**:{**"Fav\_Colour"**:** 'Pink'**}})**

**}**

**})**

db.employees.find**()**

**Output:**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557156"**),**

"Emp\_id" **:** "E001"**,**

"Name" **:** "Ram"**,**

"Age" **:** NumberInt**(**20**),**

"Department" **:** "IT"**,**

"Salary" **:** 546.7**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**123**),**

"Fav\_Colour" **:** "Black"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557157"**),**

"Emp\_id" **:** "E002"**,**

"Name" **:** "Yukta"**,**

"Age" **:** NumberInt**(**29**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 333.4**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**456**),**

"Fav\_Colour" **:** "Pink"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557158"**),**

"Emp\_id" **:** "E003"**,**

"Name" **:** "John"**,**

"Age" **:** NumberInt**(**40**),**

"Department" **:** "HR"**,**

"Salary" **:** 666.7**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**122**),**

"Fav\_Colour" **:** "Yellow"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f3496557159"**),**

"Emp\_id" **:** "E004"**,**

"Name" **:** "Trisha"**,**

"Age" **:** NumberInt**(**55**),**

"Department" **:** "IT"**,**

"Salary" **:** 675.4**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**444**),**

"Fav\_Colour" **:** "Pink"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715a"**),**

"Emp\_id" **:** "E005"**,**

"Name" **:** "Manav"**,**

"Age" **:** NumberInt**(**30**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 245.6**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**567**),**

"Fav\_Colour" **:** "Blue"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715b"**),**

"Emp\_id" **:** "E006"**,**

"Name" **:** "Rohini"**,**

"Age" **:** NumberInt**(**25**),**

"Department" **:** "HR"**,**

"Salary" **:** 746.7**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**121**),**

"Fav\_Colour" **:** "Pink"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715c"**),**

"Emp\_id" **:** "E007"**,**

"Name" **:** "Karan"**,**

"Age" **:** NumberInt**(**38**),**

"Department" **:** "IT"**,**

"Salary" **:** 533.4**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**256**),**

"Fav\_Colour" **:** "Black"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715d"**),**

"Emp\_id" **:** "E008"**,**

"Name" **:** "Isha"**,**

"Age" **:** NumberInt**(**45**),**

"Department" **:** "FINANCE"**,**

"Salary" **:** 866.7**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**928**),**

"Fav\_Colour" **:** "Pink"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715e"**),**

"Emp\_id" **:** "E009"**,**

"Name" **:** "Mohan"**,**

"Age" **:** NumberInt**(**48**),**

"Department" **:** "HR"**,**

"Salary" **:** 775.4**,**

"Gender" **:** "Male"**,**

"Phone\_no" **:** NumberInt**(**464**),**

"Fav\_Colour" **:** "Yellow"

**}**

**{**

"\_id" **:** ObjectId**(**"65be183234197f349655715f"**),**

"Emp\_id" **:** "E010"**,**

"Name" **:** "Siya"**,**

"Age" **:** NumberInt**(**37**),**

"Department" **:** "IT"**,**

"Salary" **:** 835.6**,**

"Gender" **:** "Female"**,**

"Phone\_no" **:** NumberInt**(**665**),**

"Fav\_Colour" **:** "Pink"

**}**

1. **Display the total counts as per gender wise and department wise.**

**Ans:**

db.employees.aggregate**([{**"$group"**:{**\_id**:**"$Gender"**,**count**:{**"$sum"**:**1**}}}])**

db.employees.aggregate**([{**"$group"**:{**\_id**:**"$Department"**,**count**:{**"$sum"**:**1**}}}])**

**Output:**

**{**

"\_id" **:** "Male"**,**

"count" **:** 5.0

**}**

**{**

"\_id" **:** "Female"**,**

"count" **:** 5.0

**}**

**{**

"\_id" **:** "HR"**,**

"count" **:** 3.0

**}**

**{**

"\_id" **:** "IT"**,**

"count" **:** 4.0

**}**

**{**

"\_id" **:** "FINANCE"**,**

"count" **:** 3.0

**}**