Database for Power BI

Truong Hoai Nam

General database

Link database: https://dbdiagram.io/d/PowerBI-66367af75b24a634d08297b4

Headcount

Employees

Headcount
3,234
▲ 0.68%

Headcount by Contract Type
Fixed term 124
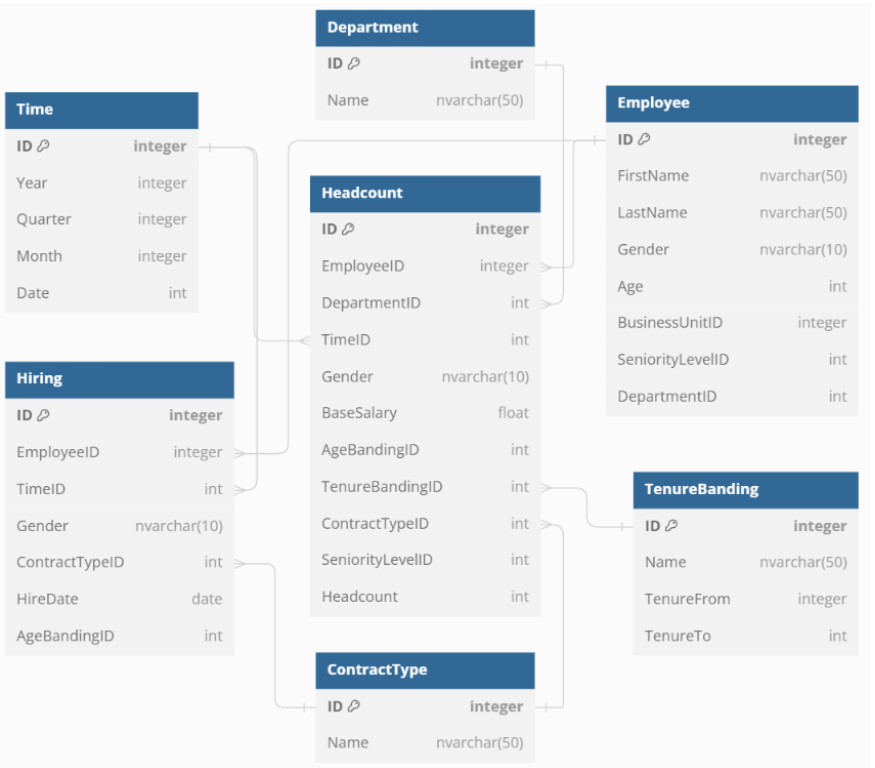Regular 2,865

Headcount by Seniority
Junior 1,643
Mid-Level 1,117
Senior 474

Average Tenure
9.6 years
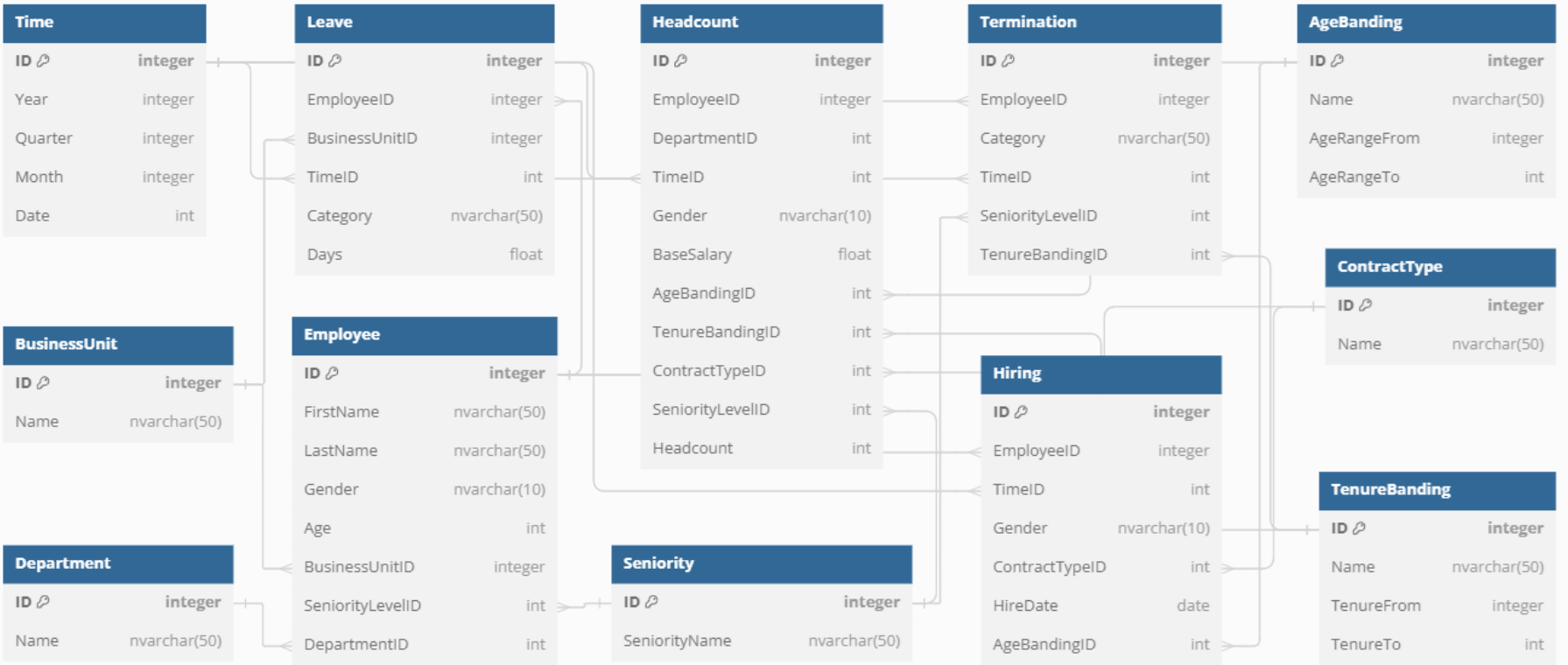
```sql
--Employees
SELECT
    --Headcount
    SUM(h.Headcount) AS Headcount,
    --Headcount by Contract Type
    SUM(CASE WHEN h.ContractTypeID = 1 THEN 1 ELSE 0 END) AS 'Fixed term',
    SUM(CASE WHEN h.ContractTypeID = 2 THEN 1 ELSE 0 END) AS Regular,
    --Headcount by Seniority
    SUM(CASE WHEN h.SeniorityLevelID = 1 THEN 1 ELSE 0 END) AS Junior,
    SUM(CASE WHEN h.SeniorityLevelID = 2 THEN 1 ELSE 0 END) AS MidLevel,
    SUM(CASE WHEN h.SeniorityLevelID = 3 THEN 1 ELSE 0 END) AS Senior,
    --Average Tenure
    SUM(CASE WHEN h.TenureBandingID = 1 THEN t.TenureFrom
             WHEN h.TenureBandingID = 2 THEN t.TenureFrom
             WHEN h.TenureBandingID = 3 THEN t.TenureFrom
             WHEN h.TenureBandingID = 4 THEN t.TenureFrom
             WHEN h.TenureBandingID = 5 THEN t.TenureFrom END)
    / COUNT(h.TenureBandingID) AS AverageTenure
FROM Headcount h
JOIN Department d ON h.DepartmentID = d.ID
JOIN TenureBanding t ON t.ID = h.TenureBandingID
JOIN [Time] ON [Time].ID = h.TimeID
WHERE [Time].[Year] = 2024
GROUP BY h.Headcount, h.ContractTypeID, h.SeniorityLevelID
```
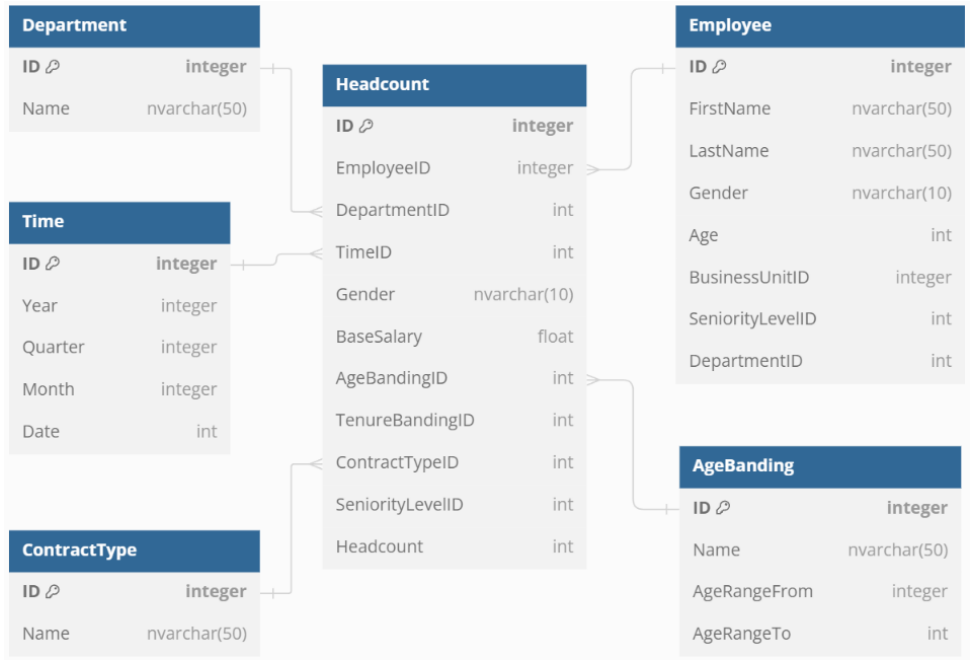
Department
| ID | integer |
| Name | nvarchar(50) |

Time
ID	integer
Year	integer
Quarter	integer
Month	integer
Date	int

Headcount
ID	integer
EmployeeID	integer
DepartmentID	int
TimeID	int
Gender	nvarchar(10)
BaseSalary	float
AgeBandingID	int
TenureBandingID	int
ContractTypeID	int
SeniorityLevelID	int
Headcount	int

Employee
ID	integer
FirstName	nvarchar(50)
LastName	nvarchar(50)
Gender	nvarchar(10)
Age	int
BusinessUnitID	integer
SeniorityLevelID	int
DepartmentID	int

Hiring
ID	integer
EmployeeID	integer
TimeID	int
Gender	nvarchar(10)
ContractTypeID	int
HireDate	date
AgeBandingID	int

TenureBanding
ID	integer
Name	nvarchar(50)
TenureFrom	integer
TenureTo	int

ContractType
| ID | integer |
| Name | nvarchar(50) |

Diversity

Female % of Seniors

38.0%

▲ 0.21%

Headcount by Gender

Male 1,399 — Female 1,835

Headcount by Age Range

20-	20-30	30-40	40-50	50-60	60+
667	294	753	761	520	239

Average Age

44.1 years

```sql
--Diversity
SELECT
    --Female % of Seniors
    COUNT(CASE WHEN h.Gender = 'Female' THEN 1 END) * 100.0 /
    SUM(CASE WHEN h.SeniorityLevelID = 3 THEN 1 END)
    AS 'Female % of Seniors',
    --Headcount by Gender
    COUNT(CASE WHEN h.Gender = 'Female' THEN 1 END) AS Female,
    COUNT(CASE WHEN h.Gender = 'Male' THEN 1 END) AS Male,
    --Headcount by Age Range
    SUM(CASE WHEN h.AgeBandingID = 1 THEN 1 ELSE 0 END) AS '20-',
    SUM(CASE WHEN h.AgeBandingID = 2 THEN 1 ELSE 0 END) AS '20-30',
    SUM(CASE WHEN h.AgeBandingID = 3 THEN 1 ELSE 0 END) AS '30-40',
    SUM(CASE WHEN h.AgeBandingID = 4 THEN 1 ELSE 0 END) AS '40-50',
    SUM(CASE WHEN h.AgeBandingID = 5 THEN 1 ELSE 0 END) AS '50-60',
    SUM(CASE WHEN h.AgeBandingID = 6 THEN 1 ELSE 0 END) AS '60+',
    -- Average Age
    AVG(e.Age) AS 'Average Age'
FROM Headcount h
JOIN ContractType ct ON ct.ID = h.ContractTypeID
JOIN Employee e ON e.ID = h.EmployeeID
JOIN [Time] ON [Time].ID = h.TimeID
WHERE [Time].[Year] = 2024
GROUP BY h.Gender, h.AgeBandingID
```

Department

ID	integer
Name	nvarchar(50)

Time

ID	integer
Year	integer
Quarter	integer
Month	integer
Date	int

ContractType

ID	integer
Name	nvarchar(50)

Headcount

ID	integer
EmployeeID	integer
DepartmentID	int
TimeID	int
Gender	nvarchar(10)
BaseSalary	float
AgeBandingID	int
TenureBandingID	int
ContractTypeID	int
SeniorityLevelID	int
Headcount	int

Employee

ID	integer
FirstName	nvarchar(50)
LastName	nvarchar(50)
Gender	nvarchar(10)
Age	int
BusinessUnitID	integer
SeniorityLevelID	int
DepartmentID	int

AgeBanding

ID	integer
Name	nvarchar(50)
AgeRangeFrom	integer
AgeRangeTo	int

Hiring


```sql
--Hiring
SELECT
    -- Hires
    COUNT(*) AS Hires,
    -- Hires by Contract Type
    SUM(CASE WHEN h.ContractTypeID = 1 THEN 1 ELSE 0 END) AS 'Fixed term',
    SUM(CASE WHEN h.ContractTypeID = 2 THEN 1 ELSE 0 END) AS Regular,
    --Hires by Age Range
    SUM(CASE WHEN h.AgeBandingID = 1 THEN 1 ELSE 0 END) AS '20-',
    SUM(CASE WHEN h.AgeBandingID = 2 THEN 1 ELSE 0 END) AS '20-30',
    SUM(CASE WHEN h.AgeBandingID = 3 THEN 1 ELSE 0 END) AS '30-40',
    SUM(CASE WHEN h.AgeBandingID = 4 THEN 1 ELSE 0 END) AS '40-50',
    SUM(CASE WHEN h.AgeBandingID = 5 THEN 1 ELSE 0 END) AS '50-60',
    SUM(CASE WHEN h.AgeBandingID = 6 THEN 1 ELSE 0 END) AS '60+',
    --Hires by Gender
    COUNT(CASE WHEN h.Gender = 'Female' THEN 1 END) AS Female,
    COUNT(CASE WHEN h.Gender = 'Male' THEN 1 END) AS Male
FROM Hiring h
JOIN [Time] ON [Time].ID = h.TimeID
WHERE [Time].[Year] = 2024
GROUP BY h.ContractTypeID, h.AgeBandingID
```
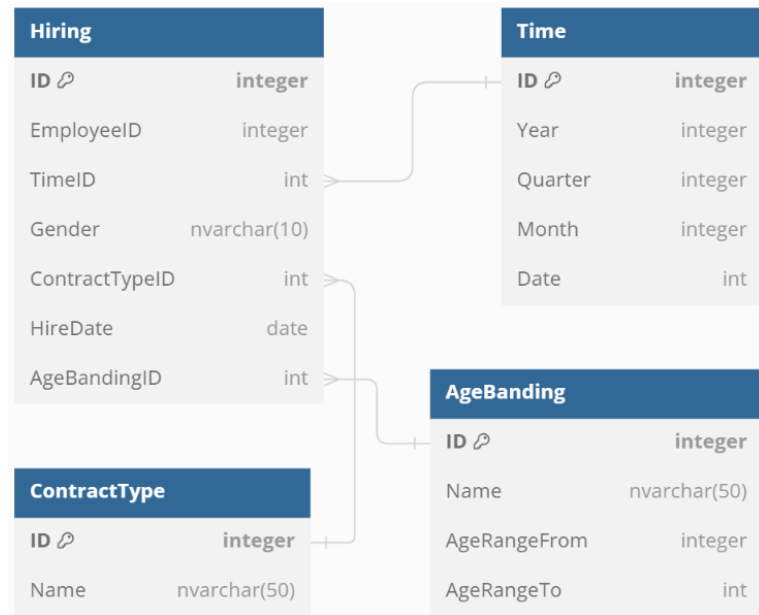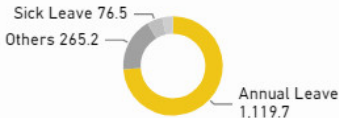
Leave Days

	Leave Taken	Leave Taken by Category	Total remaining annual leave	Avg. remaining annual leave per person	Cost of total remaining annual leave
Leave Days	1,515 days	Sick Leave 76.5 / Others 265.2 / Annual Leave 1,119.7	63,165 days	19.5 days	$69.3M

```sql
-- Leave Days
SELECT
    -- Leave Taken
    SUM(l.[Days]) AS 'Leave Taken',
    -- Leave Taken by Category
    SUM(CASE WHEN l.Category = 'Sick' THEN 1 ELSE 0 END)
    AS 'Sick Leave',
    SUM(CASE WHEN l.Category = 'Anual Leave' THEN 1 ELSE 0 END)
    AS 'Anual Leave',
    SUM(CASE WHEN (l.Category != 'Sick' AND l.Category != 'Anual Leave')
    THEN 1 ELSE 0 END) AS 'Others',
    -- Total remaining annual leave (employees được nghỉ phép 12 ngày/năm)
    COUNT(l.[Days]) * 12 - SUM(l.[Days]) AS 'Total remaining annual leave',
    -- Avg remaining annual leave per person
    SUM(l.[Days]) / COUNT(l.[Days]) AS 'Avg remaining annual leave per person',
    -- Cost of total remaining annual leave
    SUM(h.BaseSalary / 353) * COUNT(l.[Days]) * 12 - SUM(l.[Days])
    AS 'Cost of total remaining annual leave'
FROM Leave l
JOIN Employee e ON e.ID = l.EmployeeID
JOIN Headcount h ON e.ID = h.EmployeeID
JOIN [Time] ON [Time].ID = h.TimeID
WHERE [Time].[Year] = 2024
GROUP BY l.[Days], l.Category
```
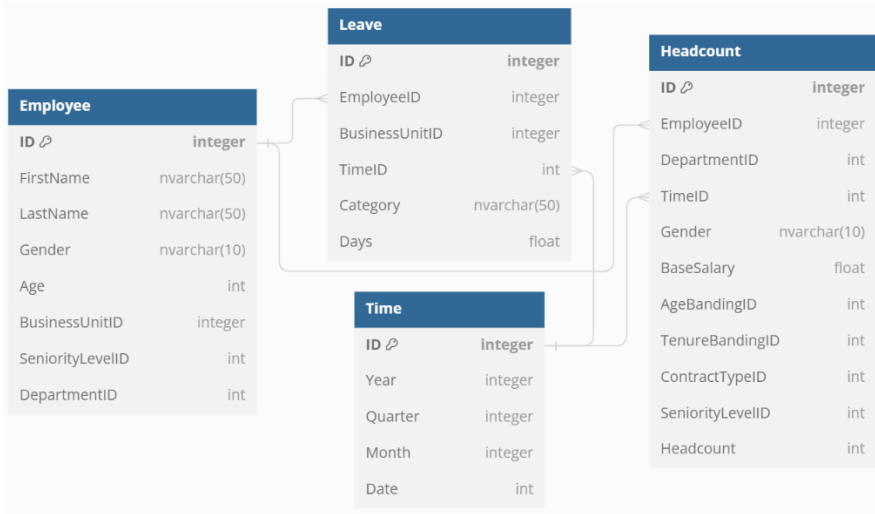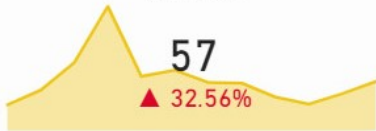
Employee

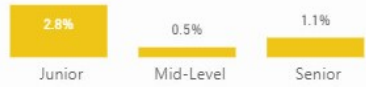| ID 🔑	integer
FirstName	nvarchar(50)
LastName	nvarchar(50)
Gender	nvarchar(10)
Age	int
BusinessUnitID	integer
SeniorityLevelID	int
DepartmentID	int

Leave

ID 🔑	integer
EmployeeID	integer
BusinessUnitID	integer
TimeID	int
Category	nvarchar(50)
Days	float

Time

ID 🔑	integer
Year	integer
Quarter	integer
Month	integer
Date	int

Headcount

ID 🔑	integer
EmployeeID	integer
DepartmentID	int
TimeID	int
Gender	nvarchar(10)
BaseSalary	float
AgeBandingID	int
TenureBandingID	int
ContractTypeID	int
SeniorityLevelID	int
Headcount	int

Termination

Termination — Terminations **57** ▲ 32.56%

Terminations by Category: Planned 19, Unplanned 38

Attrition Rate by Seniority: Junior 2.8%, Mid-Level 0.5%, Senior 1.1%

Attrition Rate by Tenure Range: 1-3 years 2.5%, 3-5 years 1.3%, 5-10 years 0.8%, 10+ years 1.9%

```sql
-- Termination
SELECT
    -- Terminations
    COUNT(*) AS Terminations,
    -- Terminations by Category
    SUM(CASE WHEN t.Category = 'Planned' THEN 1 ELSE 0 END) AS 'Planned',
    SUM(CASE WHEN t.Category = 'Unplaned' THEN 1 ELSE 0 END) AS 'Anual Leave',
    -- Attrition Rate by Seniority
    SUM(CASE WHEN t.SeniorityLevelID = 1 THEN 1 ELSE 0 END) * 100
    / SUM(CASE WHEN h.SeniorityLevelID = 1 THEN 1 ELSE 0 END) AS Junior,
    SUM(CASE WHEN t.SeniorityLevelID = 2 THEN 1 ELSE 0 END) * 100
    / SUM(CASE WHEN h.SeniorityLevelID = 2 THEN 1 ELSE 0 END) AS MidLevel,
    SUM(CASE WHEN t.SeniorityLevelID = 3 THEN 1 ELSE 0 END) * 100
    / SUM(CASE WHEN h.SeniorityLevelID = 3 THEN 1 ELSE 0 END) AS Senior,
    -- Attrition Rate by Tenure Range
    SUM(CASE WHEN h.TenureBandingID = 2 THEN tb.TenureFrom END)
    / SUM(CASE WHEN h.TenureBandingID = 2 THEN 1 ELSE 0 END) AS '1-3 Year',
    SUM(CASE WHEN h.TenureBandingID = 3 THEN tb.TenureFrom END)
    / SUM(CASE WHEN h.TenureBandingID = 3 THEN 1 ELSE 0 END) AS '3-6 Year',
    SUM(CASE WHEN h.TenureBandingID = 4 THEN tb.TenureFrom END)
    / SUM(CASE WHEN h.TenureBandingID = 4 THEN 1 ELSE 0 END) AS '6-10 Year',
    SUM(CASE WHEN h.TenureBandingID = 5 THEN tb.TenureFrom END)
    / SUM(CASE WHEN h.TenureBandingID = 2 THEN 1 ELSE 0 END) AS '10+ Year'
FROM Termination t, Headcount h
JOIN TenureBanding tb ON tb.ID = h.TenureBandingID
JOIN [Time] ON [Time].ID = h.TimeID
WHERE [Time].[Year] = 2024
GROUP BY t.Category,t.SeniorityLevelID, h.SeniorityLevelID
```

Termination	
ID	integer
EmployeeID	integer
Category	nvarchar(50)
TimeID	int
SeniorityLevelID	int
TenureBandingID	int

Headcount	
ID	integer
EmployeeID	integer
DepartmentID	int
TimeID	int
Gender	nvarchar(10)
BaseSalary	float
AgeBandingID	int
TenureBandingID	int
ContractTypeID	int
SeniorityLevelID	int
Headcount	int

Time	
ID	integer
Year	integer
Quarter	integer
Month	integer
Date	int

Thanks for watching