



# BI TERM PROJECT

YAYUAN ZHANG



# — CONTENT —

BUSINESS JUSTIFICATION

ORIGINAL ERD

BUSINESS SOLUTION

STAR SCHEME

PIVOTTABLES WITH LIVE DATA

ANSWER 3Ws



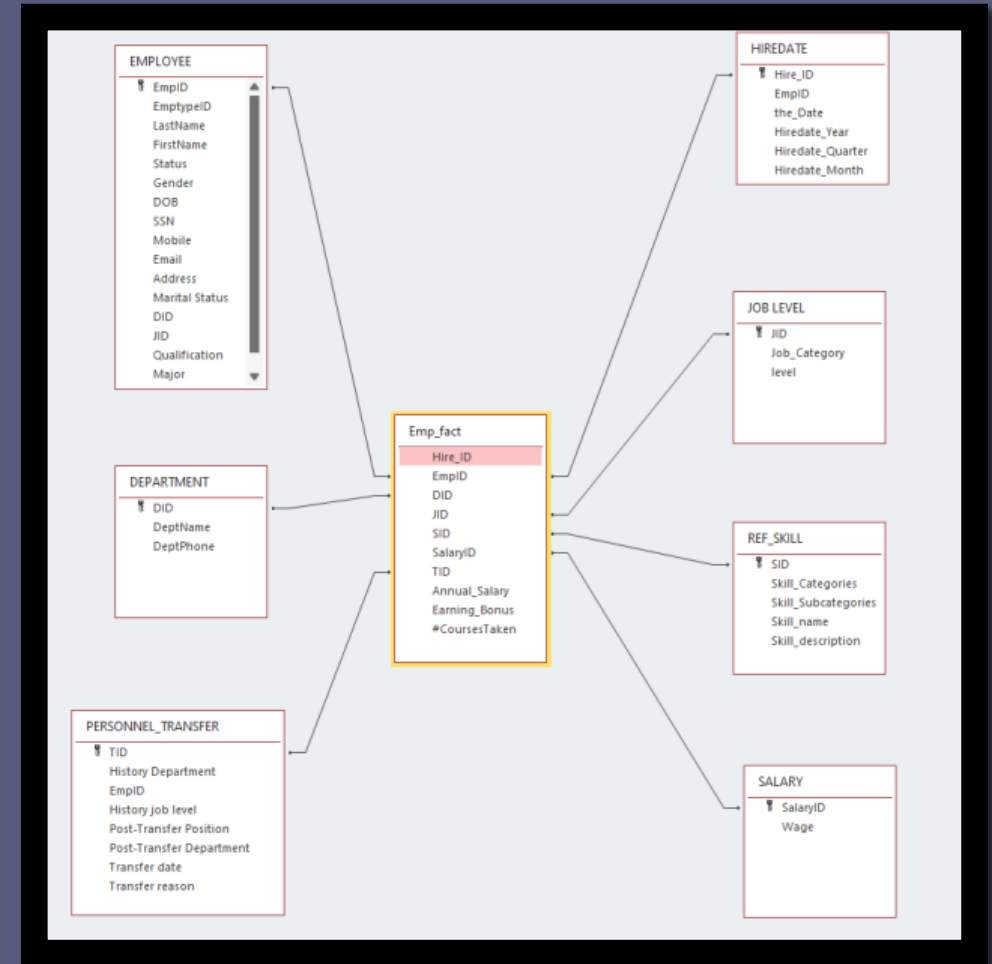
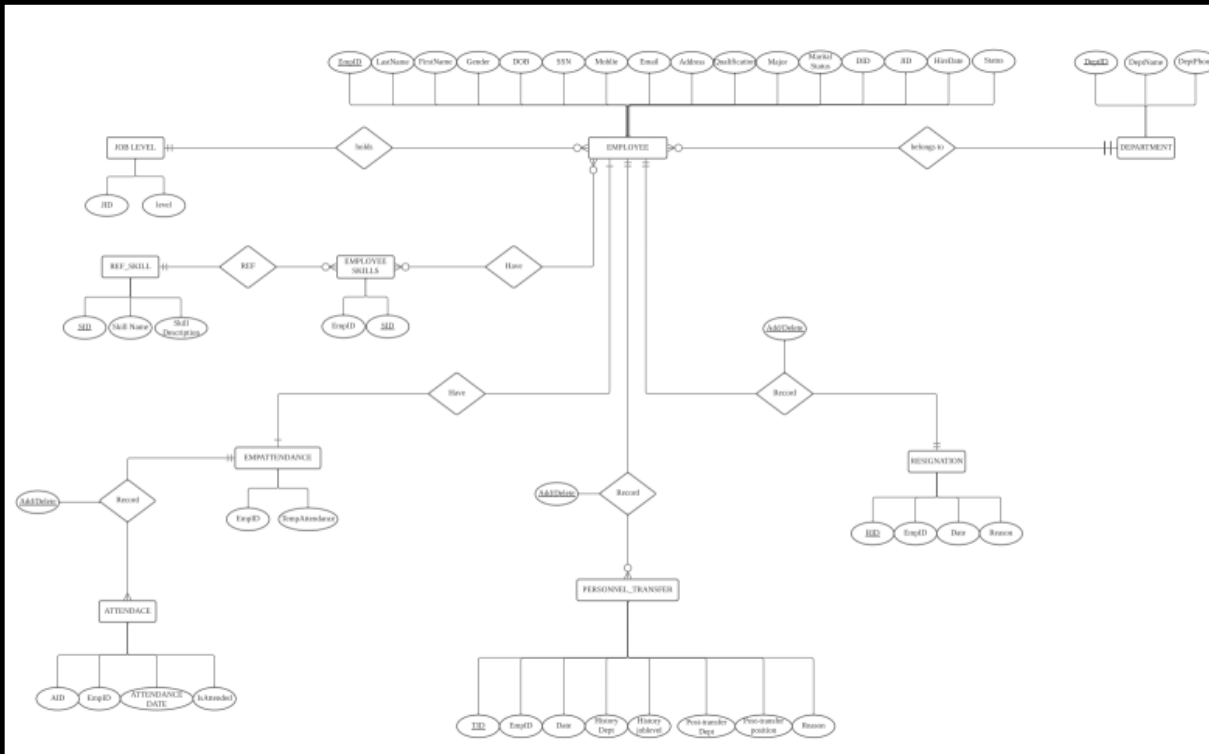
# BUSINESS JUSTIFICATION

Deployment purpose

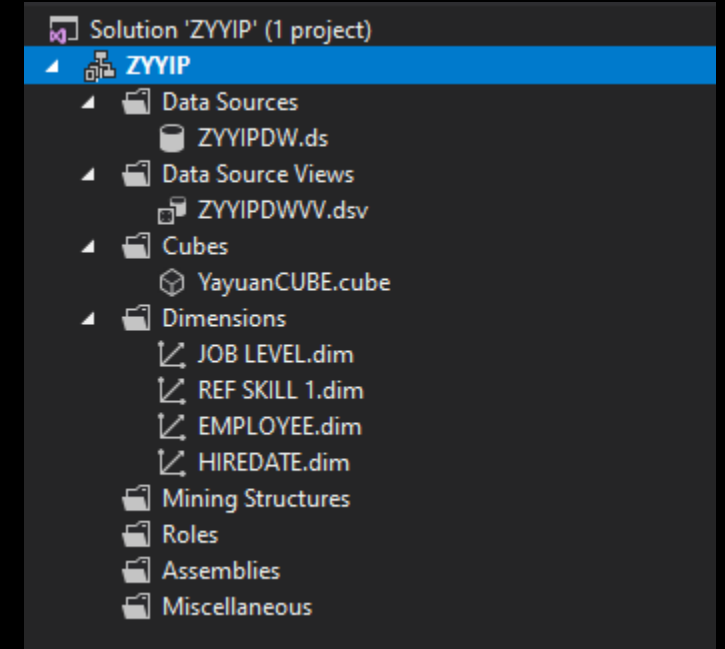
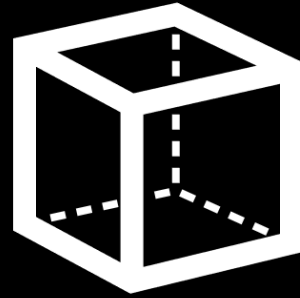
Goals

Positive outcomes

# ERD



# Multidimensionality Business Solution

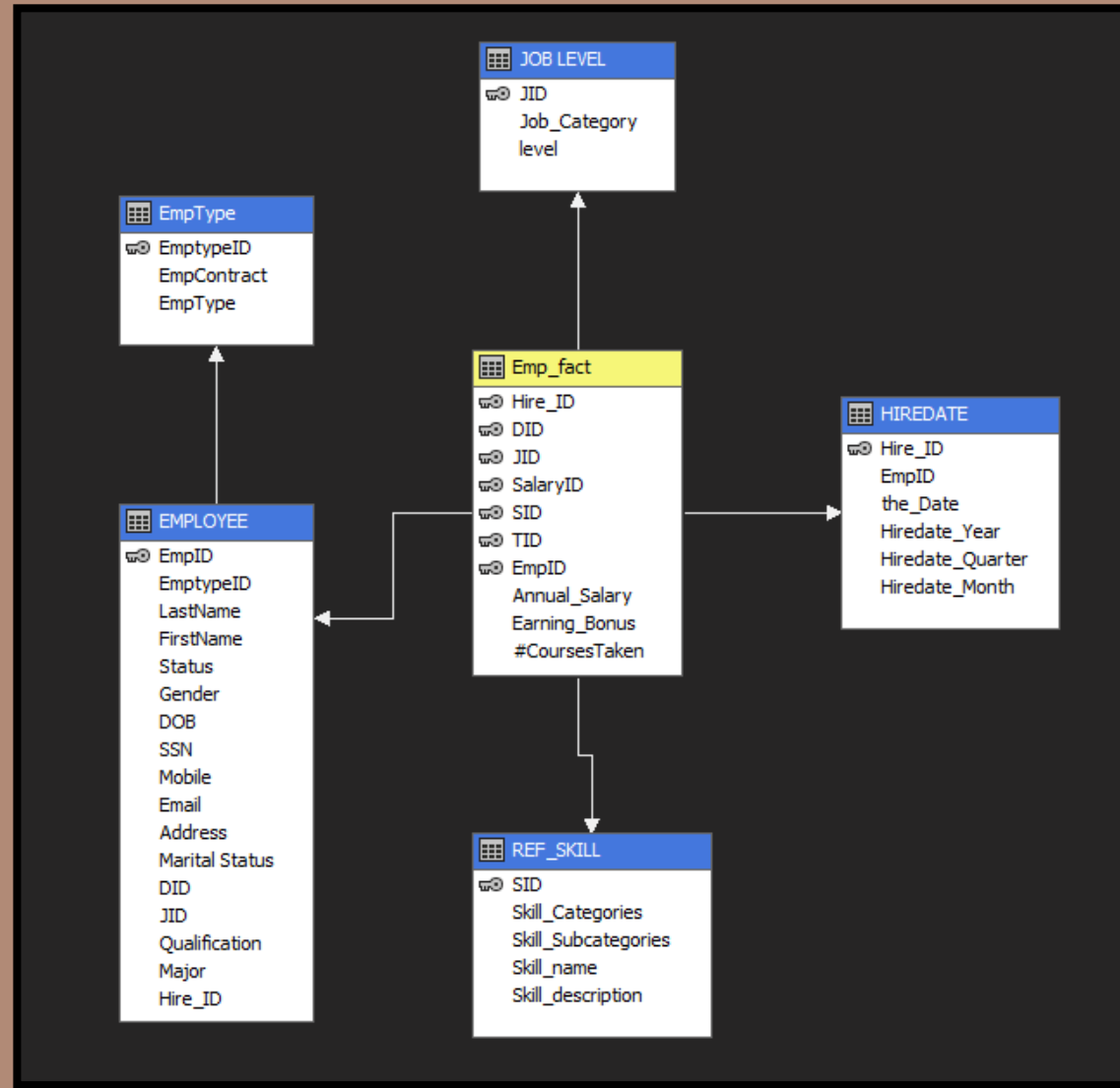


Emp\_fact TABLE

MEASURES

DIMENSIONS

# STAR SCHEMA



## Showing the data of my SQL Server

The screenshot shows the SQL Server Data Tools (SSDT) interface with the 'YayuanCUBE.cube' design view. The Solution Explorer on the right shows the project structure, including dimensions like 'JOB LEVEL.dim', 'REF SKILL 1.dim', 'EMPLOYEE.dim', and 'HIREDATE.dim'. The metadata pane on the left shows the cube's measures: '# Courses Taken', 'Annual Salary', 'Earning Bonus', and 'Emp Fact Count'. The central table view displays the following data:

Dimension	Hierarchy	Operator	Filter Expression
HIREDATE	Hiredate Year	Equal	{ 2021 }
HIREDATE	Hiredate Quarter	Equal	{ Q1 }

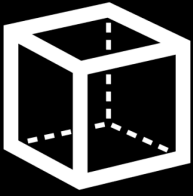
  

Emp Contract	Emp Type	Qualification	Last Name	Job Category	Level	Skill Categories	Skill Subcategories	Skill Name	Annual Salary	Earning Bonus	# Courses Taken	Emp Fact Count
Consultant	Commision	Bachelor's ...	Xiu	Professional	Intermediate staff	Hard Skill	Knowledge-based	Accounting	0	1600	0	1
Salaried Employee	Annual Salary	Doctorate ...	Liu	C-level	CEO	Soft Skill	Interpersonal skill	Manage...	240000	1058	5	1
Salaried Employee	Monthly Salary	Master's De...	Chen	Professional	Senior Executive	Soft Skill	Interpersonal skill	Emotiona...	216000	805	2	1
Salaried Employee	Monthly Salary	Master's De...	Zhang	Supervisors ...	Director	Soft Skill	Functional	Marketin...	180000	1120	3	1



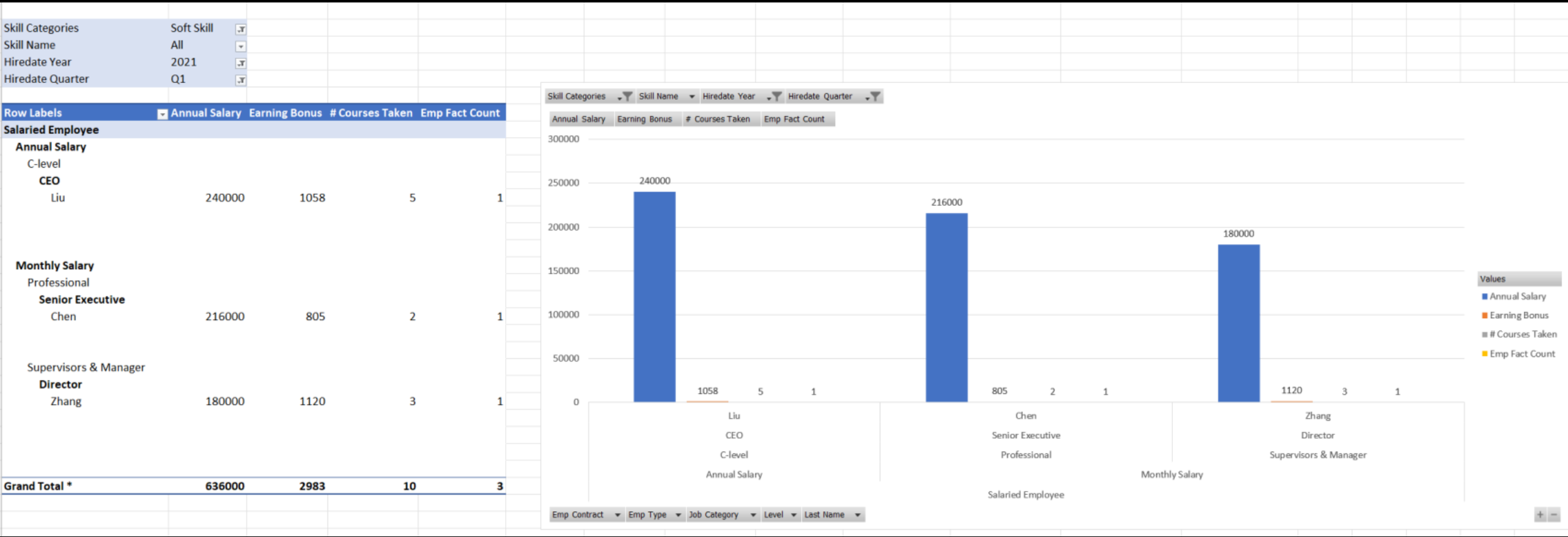
4 business solution on the next  
page

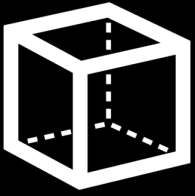




# Business Solution

1. Soft skill holder | Hired in 2021 Quarter1  
All Emp type | All job level  
Annual Salary – Earning Bonus - # Courses Taken



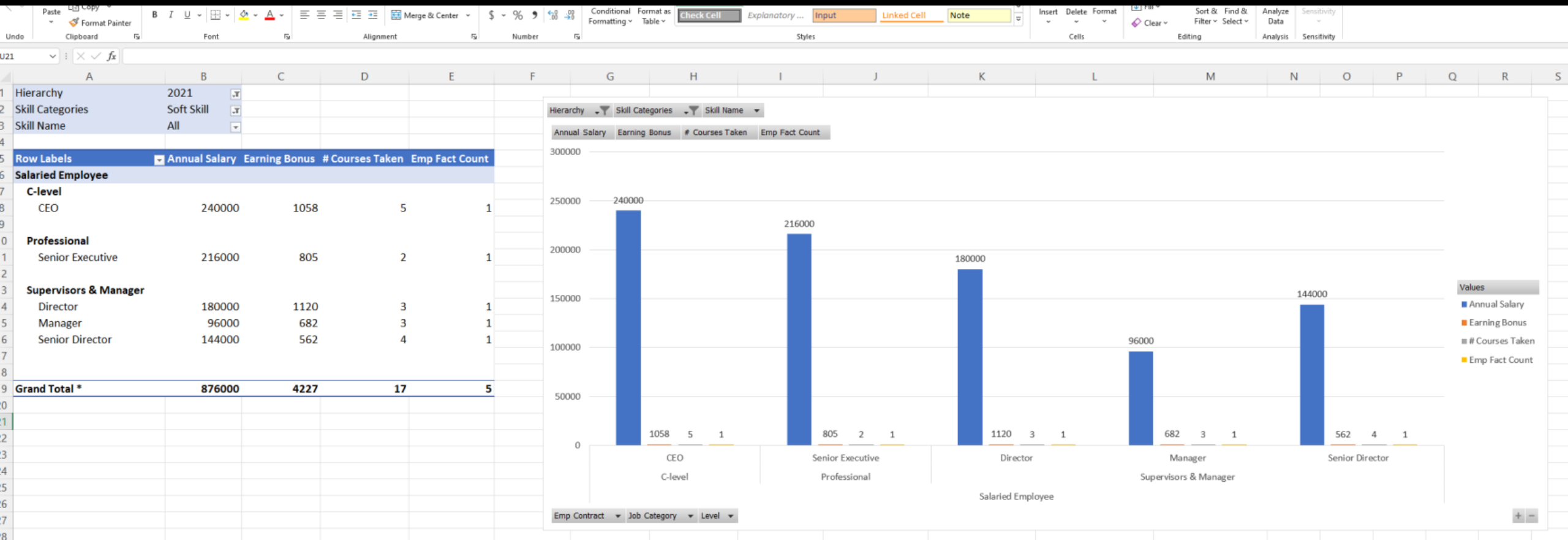


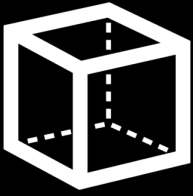
# Business Solution

2. Soft skills holder | Number of employees hired in 2021

All employee type | All job level

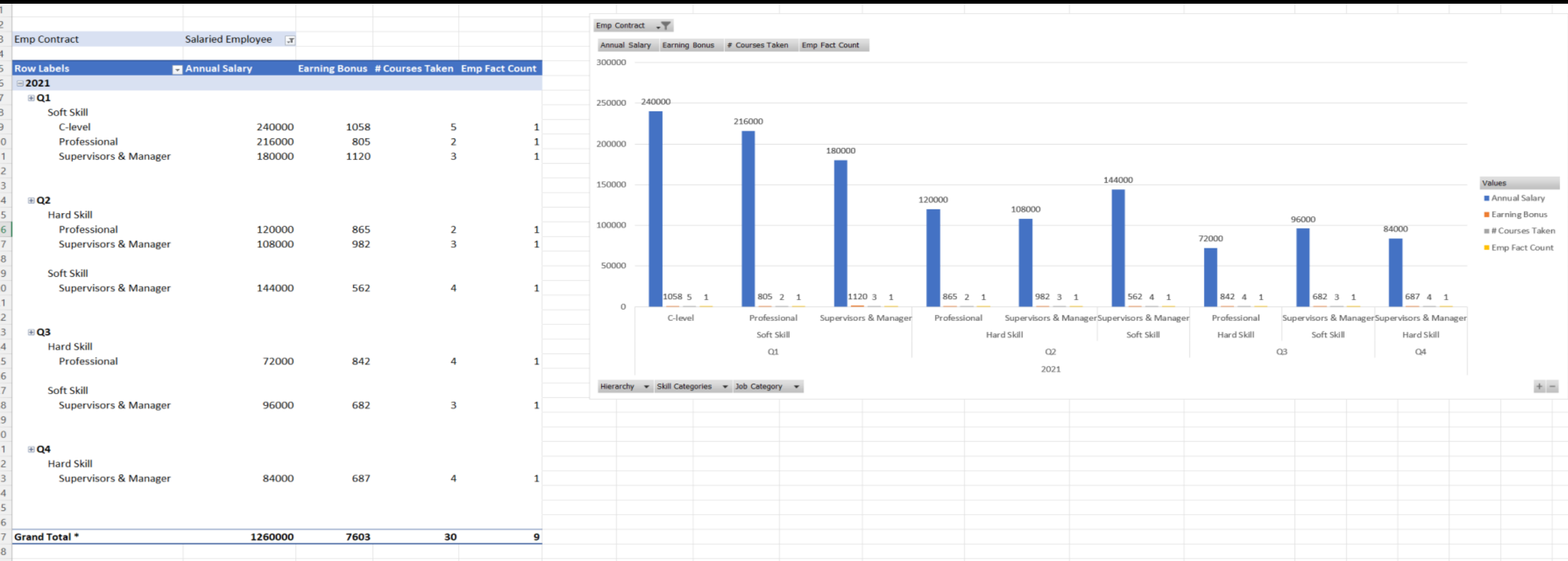
Annual Salary – Earning Bonus - # Courses Taken

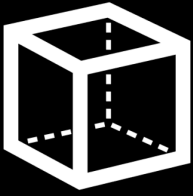




# Business Solution

## 3. Salaried employee, Emp Contract | All time and each quarter All job level | All skill Annual Salary – Earning Bonus - # Courses Taken

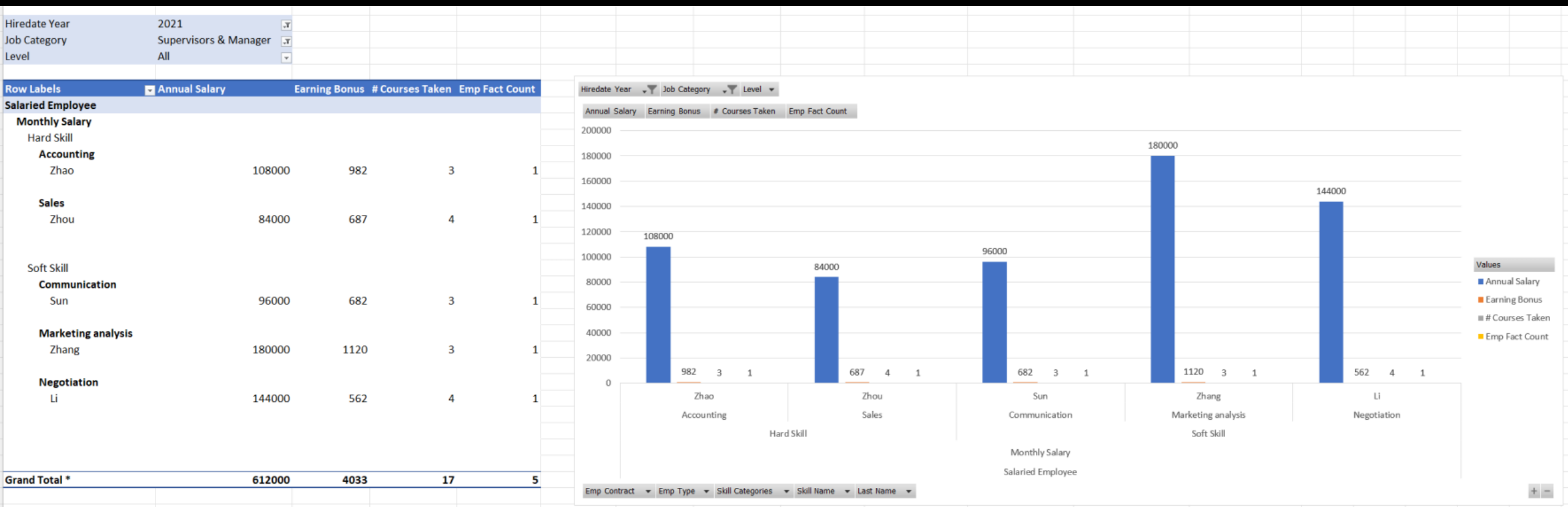




# Business Solution

## 4. All job level of Supervisors & Managers | Number of employees hired in 2021

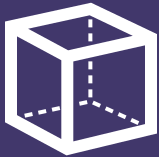
All Employee type | All skill  
Annual Salary – Earning Bonus - # Courses Taken



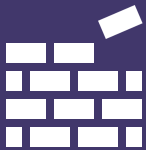
## 3W-What went well?



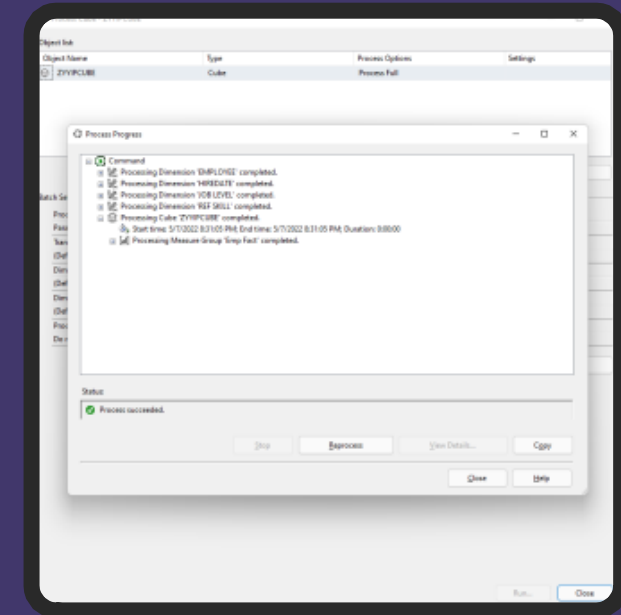
Find the measures – what information will I need?



Operate VS – build a cube, remove the error



Build the PivotTable in Excel



## 3W-What did no go well?



Sort out and comb the original database

Fact table: Build a fact table

Dimension: Adding more field name in table



Reworking when doing star schema

Data type of field name in design view

Field Name	Data Type
EmpID	Short Text
EmptypeID	Short Text
LastName	Short Text
FirstName	Short Text
Status	Short Text
Gender	Short Text
DOB	Date/Time
SSN	Short Text

## 3W-learn a lesson

### Refine

- All raw data, attributes, tables as much detail as possible

### Check

- Data file(.accdb) has not changed before database up to SQL server

### Ensure

- The same ID from different table should be set to same data type (PK&FK)

### Do not rush

- Do next step until almost done

**Thank**

