SALARY SURVEY DATASET REPORT SUMMERY

Project Objective:

The objective of this project is to analyze and interpret salary survey data using Excel & SQL. Excel for advanced data visualization and reporting data. SQL for data extraction, transformation, and basic analysis. Clean and structure the raw salary Survey dataset to ensure data integrity and consistency. Visualize findings using excel charts, pivot tables, and dashboards for easier interpretation by stakeholders.

Dataset Description:

The dataset contains **5,092 entries** and **16 columns**, including:

- **Demographics**: Gender, Age Range, Country, State, City.
- **Compensation**: Annual Salary, Additional Compensation, Currency.
- **Professional Info**: Industry, Job Title, Years of Experience, Education Level.

Steps Involved:

Step 1: Data Cleaning:

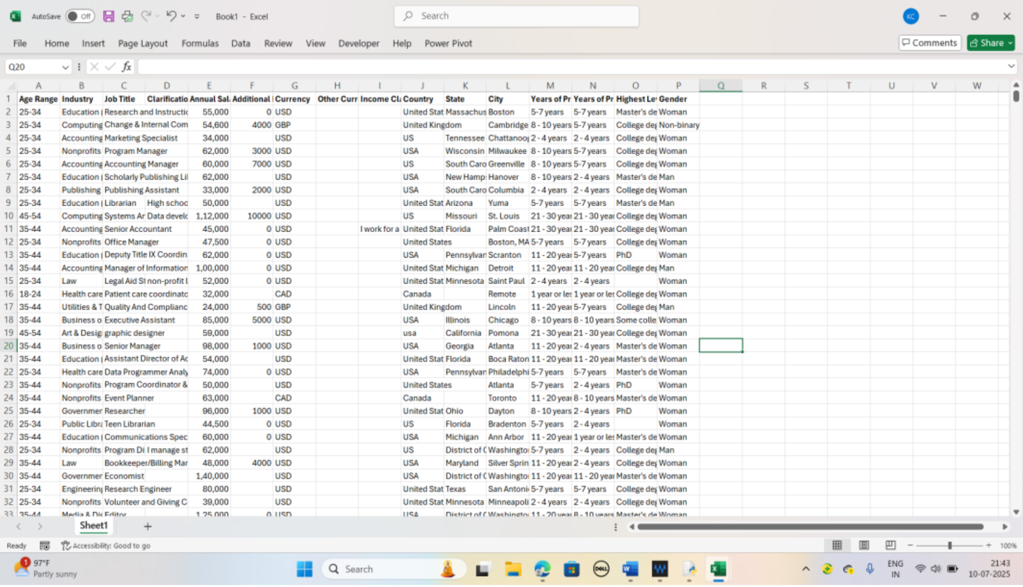
- ➢ Identify columns with missing data & to clean the dataset by handling missing values, standardizing data types, handling inconsistent values.
- ➢ For numerical columns (like Annual Salary), either fill the missing values with the mean or median, or to remove rows with missing values.
- ➢ For categorical columns (like Industry, Job Title), to replace missing values with a placeholder like "Unknown" or remove the rows.

Handle Inconsistent Values:

Review each column for inconsistencies, such as:

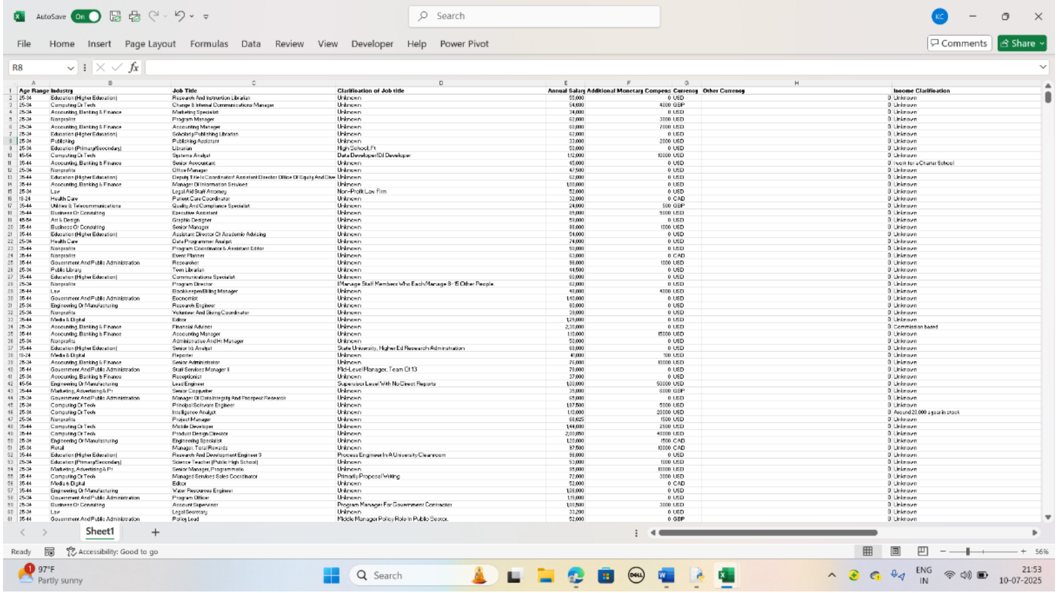
- Variations in spelling for job titles to change the (e.g., "Researcher" vs. "researcher").
- Different formats for location (e.g., USA vs. United States).
- Ensure consistent capitalization all lowercase or proper case for categorical values

Row Data:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Age Range	Industry	Job Title	Clarificatio	Annual Sal	Additional	Currency	Other Curr	Income Cl	Country	State	City	Years of Pr	Years of Pr	Highest Le	Gender
2	25-34	Education (	Research and Instructi		55,000	0	USD			United Stat	Massachus	Boston	5-7 years	5-7 years	Master's de	Woman
3	25-34	Computing	Change & Internal Com		54,600	4000	GBP			United Kingdom		Cambridge	8 - 10 years	5-7 years	College deg	Non-binary
4	25-34	Accounting	Marketing Specialist		34,000		USD			US	Tennessee	Chattanoo	2 - 4 years	2 - 4 years	College deg	Woman
5	25-34	Nonprofits	Program Manager		62,000	3000	USD			USA	Wisconsin	Milwaukee	8 - 10 years	5-7 years	College deg	Woman
6	25-34	Accounting	Accounting Manager		60,000	7000	USD			US	South Caro	Greenville	8 - 10 years	5-7 years	College deg	Woman
7	25-34	Education (	Scholarly Publishing Li		62,000		USD			USA	New Hamp	Hanover	8 - 10 years	2 - 4 years	Master's de	Man
8	25-34	Publishing	Publishing Assistant		33,000	2000	USD			USA	South Caro	Columbia	2 - 4 years	2 - 4 years	College deg	Woman
9	25-34	Education (	Librarian	High schoo	50,000		USD			United Stat	Arizona	Yuma	5-7 years	5-7 years	Master's de	Man
10	45-54	Computing	Systems Ar	Data devel	1,12,000	10000	USD			US	Missouri	St. Louis	21 - 30 year	21 - 30 year	College deg	Woman
11	35-44	Accounting	Senior Accountant		45,000	0	USD		I work for a	United Stat	Florida	Palm Coast	21 - 30 year	21 - 30 year	College deg	Woman
12	25-34	Nonprofits	Office Manager		47,500	0	USD			United States		Boston, MA	5-7 years	5-7 years	College deg	Woman
13	35-44	Education (	Deputy Title IX Coordin		62,000	0	USD			USA	Pennsylvan	Scranton	11 - 20 year	5-7 years	PhD	Woman
14	35-44	Accounting	Manager of Information		1,00,000	0	USD			United Stat	Michigan	Detroit	11 - 20 year	11 - 20 year	College deg	Man
15	25-34	Law	Legal Aid St	non-profit l	52,000	0	USD			United Stat	Minnesota	Saint Paul	2 - 4 years	2 - 4 years		Woman
16	18-24	Health care	Patient care coordinato		32,000		CAD			Canada		Remote	1 year or les	1 year or les	College deg	Woman
17	35-44	Utilities & T	Quality And Complianc		24,000	500	GBP			United Kingdom		Lincoln	11 - 20 year	5-7 years	College deg	Man
18	35-44	Business o	Executive Assistant		85,000	5000	USD			USA	Illinois	Chicago	8 - 10 years	8 - 10 years	Some colle	Woman
19	45-54	Art & Desig	graphic designer		59,000		USD			usa	California	Pomona	21 - 30 year	21 - 30 year	College deg	Woman
20	35-44	Business o	Senior Manager		98,000	1000	USD			USA	Georgia	Atlanta	11 - 20 year	2 - 4 years	Master's de	Woman
21	35-44	Education (	Assistant Director of Ac		54,000		USD			United Stat	Florida	Boca Raton	11 - 20 year	11 - 20 year	Master's de	Woman
22	25-34	Health care	Data Programmer Analy		74,000	0	USD			USA	Pennsylvan	Philadelphi	5-7 years	5-7 years	Master's de	Woman
23	35-44	Nonprofits	Program Coordinator &		50,000		USD			United States		Atlanta	5-7 years	2 - 4 years	PhD	Woman
24	35-44	Nonprofits	Event Planner		63,000		CAD			Canada		Toronto	11 - 20 year	8 - 10 years	Master's de	Woman
25	35-44	Governmer	Researcher		96,000	1000	USD			United Stat	Ohio	Dayton	8 - 10 years	2 - 4 years	PhD	Woman
26	25-34	Public Libr	Teen Librarian		44,500	0	USD			US	Florida	Bradenton	5-7 years	2 - 4 years		Woman
27	35-44	Education (	Communications Spec		60,000	0	USD			USA	Michigan	Ann Arbor	11 - 20 year	1 year or les	Master's de	Woman
28	25-34	Nonprofits	Program Di	I manage st	62,000		USD			US	District of (	Washingto	5-7 years	2 - 4 years	College deg	Man
29	35-44	Law	Bookkeeper/Billing Mar		48,000	4000	USD			USA	Maryland	Silver Sprin	11 - 20 year	2 - 4 years	College deg	Woman
30	35-44	Governmer	Economist		1,40,000		USD			USA	District of (	Washingto	11 - 20 year	11 - 20 year	Master's de	Woman
31	25-34	Engineerin	Research Engineer		80,000		USD			United Stat	Texas	San Antoni	5-7 years	5-7 years	College deg	Woman
32	25-34	Nonprofits	Volunteer and Giving C		39,000		USD			United Stat	Minnesota	Minneapoli	2 - 4 years	2 - 4 years	College deg	Woman
33	35-44	Media & Dis	Editor		1,25,000	0	USD			USA	District of (	Washingto	11 - 20 year	8 - 10 years	Master's de	Woman

Clean Data:



	A	B	C	D	E	F	G	H	I
1	Age Range	Industry	Job Title	Clarification of Job title	Annual Salar	Additional Monetary Compens	Currency	Other Currency	Income Clarification
2	25-34	Education (Higher Education)	Research And Instruction Librarian	Unknown	55,000	0	USD	0	Unknown
3	25-34	Computing Or Tech	Change & Internal Communications Manager	Unknown	54,600	4000	GBP	0	Unknown
4	25-34	Accounting, Banking & Finance	Marketing Specialist	Unknown	34,000	0	USD	0	Unknown
5	25-34	Nonprofits	Program Manager	Unknown	62,000	3000	USD	0	Unknown
6	25-34	Accounting, Banking & Finance	Accounting Manager	Unknown	60,000	7000	USD	0	Unknown
7	25-34	Education (Higher Education)	Scholarly Publishing Librarian	Unknown	62,000	0	USD	0	Unknown
8	25-34	Publishing	Publishing Assistant	Unknown	33,000	2000	USD	0	Unknown
9	25-34	Education (Primary/Secondary)	Librarian	High School, Ft	50,000	0	USD	0	Unknown
10	45-54	Computing Or Tech	Systems Analyst	Data Developer/Etl Developer	1,12,000	10000	USD	0	Unknown
11	35-44	Accounting, Banking & Finance	Senior Accountant	Unknown	45,000	0	USD	0	I work for a Charter School
12	25-34	Nonprofits	Office Manager	Unknown	47,500	0	USD	0	Unknown
13	35-44	Education (Higher Education)	Deputy Title Ix Coordinator/ Assistant Director Office Of Equity And Dive	Unknown	62,000	0	USD	0	Unknown
14	35-44	Accounting, Banking & Finance	Manager Of Information Services	Unknown	1,00,000	0	USD	0	Unknown
15	25-34	Law	Legal Aid Staff Attorney	Non-Profit Law Firm	52,000	0	USD	0	Unknown
16	18-24	Health Care	Patient Care Coordinator	Unknown	32,000	0	CAD	0	Unknown
17	35-44	Utilities & Telecommunications	Quality And Compliance Specialist	Unknown	24,000	500	GBP	0	Unknown
18	35-44	Business Or Consulting	Executive Assistant	Unknown	85,000	5000	USD	0	Unknown
19	45-54	Art & Design	Graphic Designer	Unknown	59,000	0	USD	0	Unknown
20	35-44	Business Or Consulting	Senior Manager	Unknown	98,000	1000	USD	0	Unknown
21	35-44	Education (Higher Education)	Assistant Director Of Academic Advising	Unknown	54,000	0	USD	0	Unknown
22	25-34	Health Care	Data Programmer Analyst	Unknown	74,000	0	USD	0	Unknown
23	35-44	Nonprofits	Program Coordinator & Assistant Editor	Unknown	50,000	0	USD	0	Unknown
24	35-44	Nonprofits	Event Planner	Unknown	63,000	0	CAD	0	Unknown
25	35-44	Government And Public Administration	Researcher	Unknown	96,000	1000	USD	0	Unknown
26	25-34	Public Library	Teen Librarian	Unknown	44,500	0	USD	0	Unknown
27	35-44	Education (Higher Education)	Communications Specialist	Unknown	60,000	0	USD	0	Unknown
28	25-34	Nonprofits	Program Director	I Manage Staff Members Who Each Manage 8-15 Other People.	62,000	0	USD	0	Unknown
29	35-44	Law	Bookkeeper/Billing Manager	Unknown	48,000	4000	USD	0	Unknown
30	35-44	Government And Public Administration	Economist	Unknown	1,40,000	0	USD	0	Unknown
31	25-34	Engineering Or Manufacturing	Research Engineer	Unknown	80,000	0	USD	0	Unknown
32	25-34	Nonprofits	Volunteer And Giving Coordinator	Unknown	39,000	0	USD	0	Unknown
33	35-44	Media & Digital	Editor	Unknown	1,25,000	0	USD	0	Unknown
34	25-34	Accounting, Banking & Finance	Financial Advisor	Unknown	2,30,000	0	USD	0	Commission based
35	35-44	Accounting, Banking & Finance	Accounting Manager	Unknown	1,10,000	15000	USD	0	Unknown
36	25-34	Nonprofits	Administrative And Hr Manager	Unknown	50,000	0	USD	0	Unknown
37	35-44	Education (Higher Education)	Senior Irb Analyst	State University, Higher Ed Research Administration	68,000	0	USD	0	Unknown
38	18-24	Media & Digital	Reporter	Unknown	41,000	100	USD	0	Unknown
39	25-34	Accounting, Banking & Finance	Senior Administrator	Unknown	76,000	10000	USD	0	Unknown
40	35-44	Government And Public Administration	Staff Services Manager II	Mid-Level Manager, Team Of 13	78,000	0	USD	0	Unknown
41	25-34	Accounting, Banking & Finance	Receptionist	Unknown	37,000	0	USD	0	Unknown
42	45-54	Engineering Or Manufacturing	Lead Engineer	Supervisor Level With No Direct Reports	1,00,000	50000	USD	0	Unknown
43	35-44	Marketing, Advertising & Pr	Senior Copywriter	Unknown	35,000	6000	GBP	0	Unknown
44	25-34	Government And Public Administration	Manager Of Data Integrity And Prospect Research	Unknown	65,000	0	USD	0	Unknown
45	25-34	Computing Or Tech	Principal Software Engineer	Unknown	1,37,500	5000	USD	0	Unknown
46	25-34	Computing Or Tech	Intelligence Analyst	Unknown	1,10,000	20000	USD	0	Around 20,000 a year in stock
47	25-34	Nonprofits	Project Manager	Unknown	86,625	1500	USD	0	Unknown
48	35-44	Computing Or Tech	Mobile Developer	Unknown	1,44,600	2500	USD	0	Unknown
49	35-44	Computing Or Tech	Product Design Director	Unknown	2,00,850	40000	USD	0	Unknown
50	25-34	Engineering Or Manufacturing	Engineering Specialist	Unknown	1,20,000	1500	CAD	0	Unknown
51	25-34	Retail	Manager, Total Rewards	Unknown	97,500	10000	CAD	0	Unknown
52	35-44	Education (Higher Education)	Research And Development Engineer 3	Process Engineer In A University Cleanroom	96,000	0	USD	0	Unknown
53	25-34	Education (Primary/Secondary)	Science Teacher (Public High School)	Unknown	53,000	1000	USD	0	Unknown
54	25-34	Marketing, Advertising & Pr	Senior Manager, Programmatic	Unknown	95,000	10000	USD	0	Unknown
55	35-44	Computing Or Tech	Managed Services Sales Coordinator	Primarily Proposal Writing	72,000	3000	USD	0	Unknown
56	35-44	Media & Digital	Editor	Unknown	52,000	0	CAD	0	Unknown
57	35-44	Engineering Or Manufacturing	Water Resources Engineer	Unknown	1,06,000	0	USD	0	Unknown
58	25-34	Government And Public Administration	Program Officer	Unknown	1,15,000	0	USD	0	Unknown
59	25-34	Business Or Consulting	Account Supervisor	Program Manager For Government Contractor	1,00,500	3000	USD	0	Unknown
60	25-34	Law	Legal Secretary	Unknown	33,200	0	USD	0	Unknown
61	35-44	Government And Public Administration	Policy Lead	Middle Manager Policy Role In Public Sector.	52,000	0	GBP	0	Unknown

Step 2: Incorporating the Cleaned Data into MySQL:

Upload the cleaned dataset into a MySQL database and create a single table.

1. Create a Database in MySQL:

o Open MySQL Workbench.

o Create a new database.

2. Create a Table:

o Design a table to hold the dataset with appropriate column names and data types.

3. Upload the Data:

o Import the cleaned data from the CSV or Excel file into the MySQL table using the LOAD DATA command or the MySQL Workbench import tools.

Step 3: Query The Data Required For Dashboard Creation:

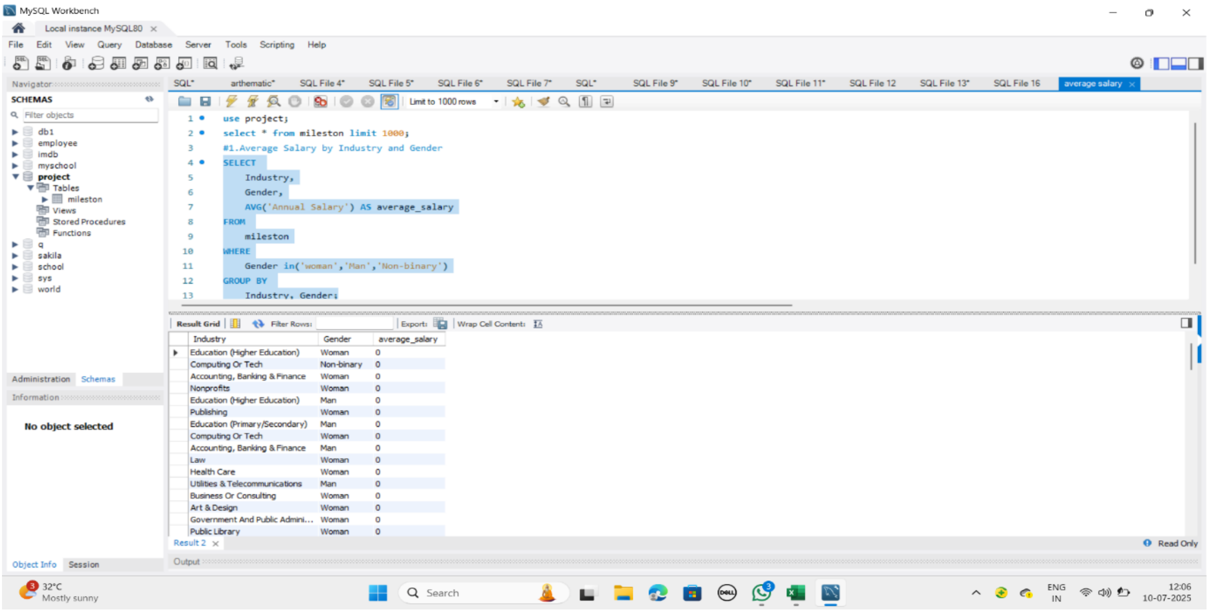
1.Average Salary by Industry and Gender

```
SELECT
   Industry,
   Gender,
   AVG('Annual Salary') AS average_salary
FROM
   mileston
WHERE
   Gender in('woman','Man','Non-binary')
GROUP BY
   Industry, Gender;
```

Explanation:

- Calculates the average salary for each combination of industry and gender.
- Filters only rows with valid gender values. Make sure the case matches the data.
- Groups the data by both industry and gender to calculate the average for each group.

Result:



```
use project;
select * from mileston limit 1000;
#1.Average Salary by Industry and Gender
SELECT
    Industry,
    Gender,
    AVG('Annual Salary') AS average_salary
FROM
    mileston
WHERE
    Gender in('woman','Man','Non-binary')
GROUP BY
    Industry, Gender;
```

Industry	Gender	average_salary
Education (Higher Education)	Woman	0
Computing Or Tech	Non-binary	0
Accounting, Banking & Finance	Woman	0
Nonprofits	Woman	0
Education (Higher Education)	Man	0
Publishing	Woman	0
Education (Primary/Secondary)	Man	0
Computing Or Tech	Woman	0
Accounting, Banking & Finance	Man	0
Law	Woman	0
Health Care	Woman	0
Utilities & Telecommunications	Man	0
Business Or Consulting	Woman	0
Art & Design	Woman	0
Government And Public Admini...	Woman	0
Public Library	Woman	0

2.Total Salary Compensation by Job Title

SELECT `Job Title` ,SUM(`Annual Salary`+`Additional Monetary Compensation`)

AS TOTAL_SALARY

FROM

mileston

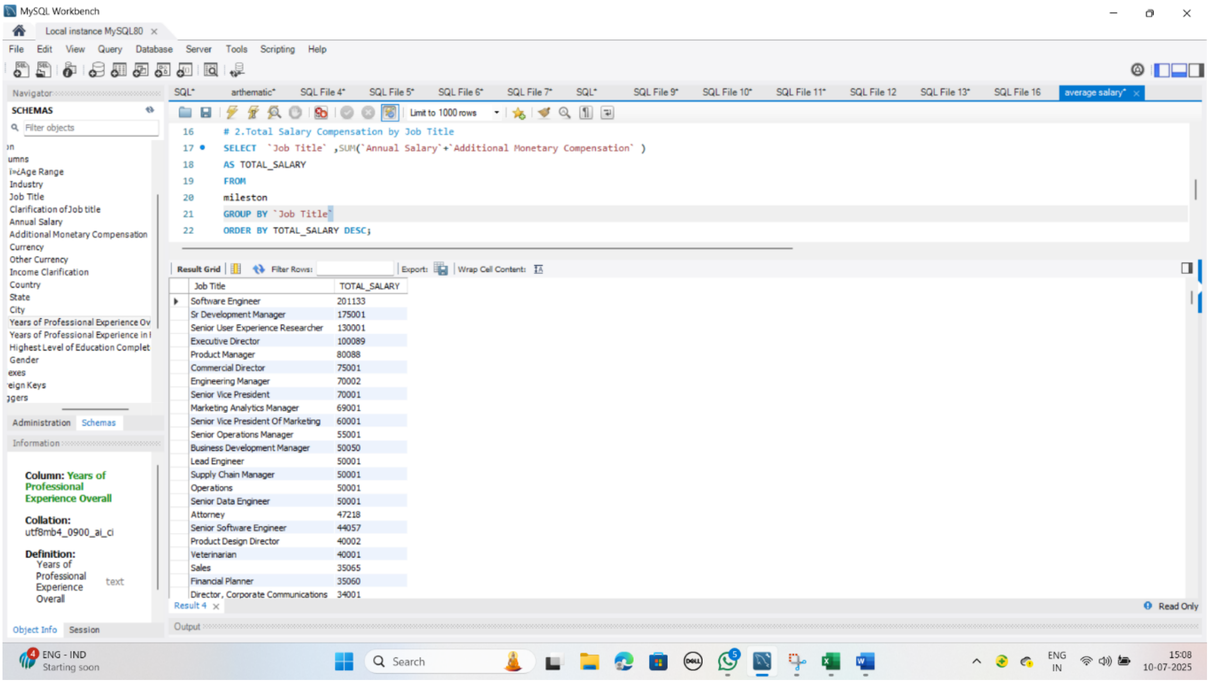
GROUP BY `Job Title`

ORDER BY TOTAL_SALARY DESC;

Explanation:

- Returns the job title from the dataset.
- Calculates the total of base salary plus extra compensation for each job title.
- Assigns a name to the calculated column.
- Groups all rows that have the same job title together, so the sum can be computed per job.
- Sorts the results from highest to lowest total salary.

Result:



```
# 2.Total Salary Compensation by Job Title
SELECT  `Job Title` ,SUM(`Annual Salary`+`Additional Monetary Compensation` )
AS TOTAL_SALARY
FROM
mileston
GROUP BY `Job Title`
ORDER BY TOTAL_SALARY DESC;
```

Job Title	TOTAL_SALARY
Software Engineer	201133
Sr Development Manager	175001
Senior User Experience Researcher	130001
Executive Director	100089
Product Manager	80088
Commercial Director	75001
Engineering Manager	70002
Senior Vice President	70001
Marketing Analytics Manager	69001
Senior Vice President Of Marketing	60001
Senior Operations Manager	55001
Business Development Manager	50050
Lead Engineer	50001
Supply Chain Manager	50001
Operations	50001
Senior Data Engineer	50001
Attorney	47218
Senior Software Engineer	44057
Product Design Director	40002
Veterinarian	40001
Sales	35065
Financial Planner	35060
Director, Corporate Communications	34001

3.Salary Distribution by Education Level

SELECT `Highest Level of Education Completed` AS EDUCATION_LEVEL,

AVG(`Annual Salary`),

MIN(`Annual Salary`),

MAX(`Annual Salary`)

FROM

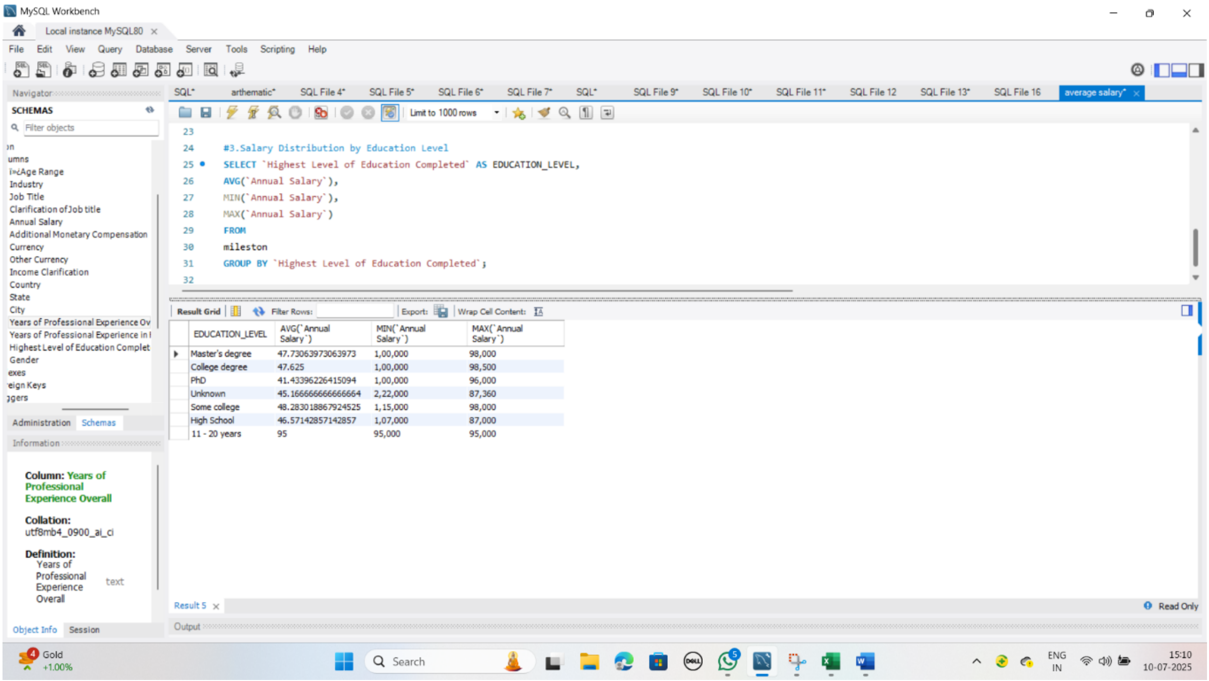
mileston

GROUP BY `Highest Level of Education Completed`;

Explanation:

- Calculates the average salary for each education level.
- Finds the minimum salary reported for each level.
- Finds the maximum salary reported for each level.
- Groups the results by each distinct education level so aggregation functions (AVG, MIN, MAX) work per group.

Result:



```
#3.Salary Distribution by Education Level
SELECT `Highest Level of Education Completed` AS EDUCATION_LEVEL,
AVG(`Annual Salary`),
MIN(`Annual Salary`),
MAX(`Annual Salary`)
FROM
mileston
GROUP BY `Highest Level of Education Completed`;
```

EDUCATION_LEVEL	AVG(`Annual Salary`)	MIN(`Annual Salary`)	MAX(`Annual Salary`)
Master's degree	47.73063973063973	1,00,000	98,000
College degree	47.625	1,00,000	98,500
PhD	41.43396226415094	1,00,000	96,000
Unknown	45.166666666666664	2,22,000	87,360
Some college	48.283018867924525	1,15,000	98,000
High School	46.57142857142857	1,07,000	87,000
11 - 20 years	95	95,000	95,000

Column: Years of Professional Experience Overall

Collation: utf8mb4_0900_ai_ci

Definition: Years of Professional Experience Overall text

4.Number of Employees by Industry and Years of Experience

SELECT `Industry`,`Years of Professional Experience Overall`

AS OVERALL_EXPERIENCE,

COUNT(*) AS NUMBER_OF_EMPLOYEES

FROM mileston

GROUP BY `Industry`,`Years of Professional Experience Overall`

ORDER BY

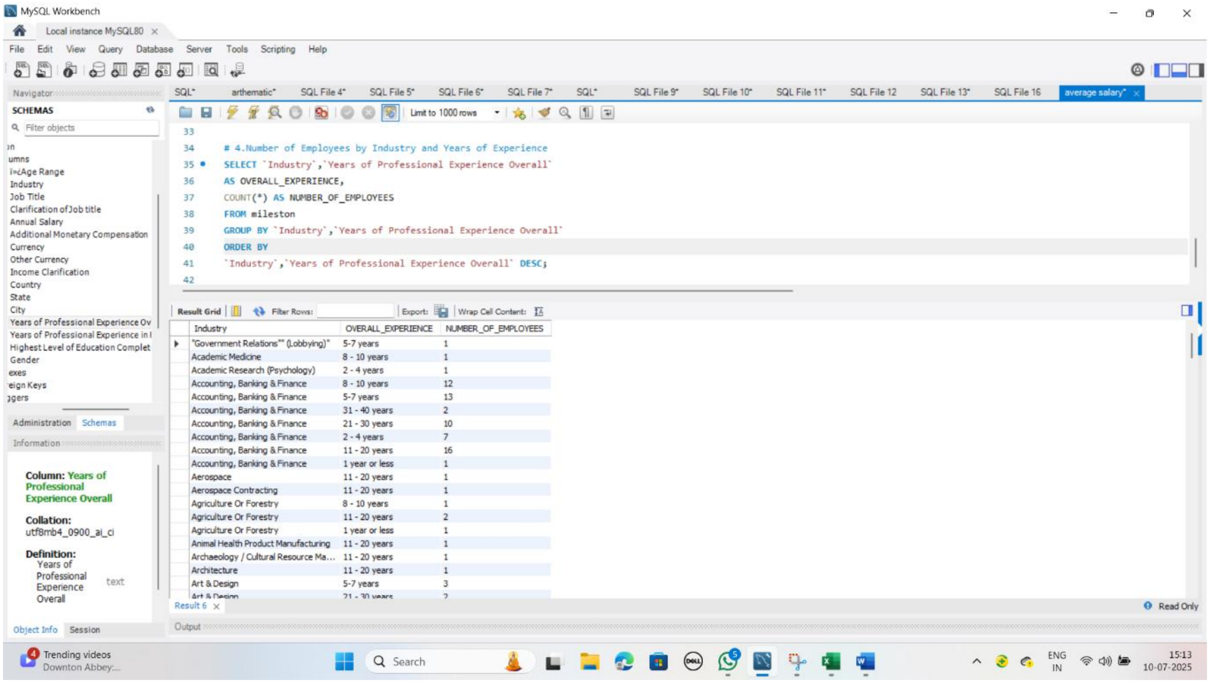
`Industry`,`Years of Professional Experience Overall` DESC;

Explanation:

- Selects the industry and total years of experience columns for analysis.
- Counts the number of rows (i.e., people) in each group — how many pepoles fall into that experience level within that industry.
- Groups data by each unique pair of Industry + Experience, so that COUNT(*) applies to each group.

- Sorts first by Industry name, and then within each industry, by experience level in descending order (most experienced first).

Result:



```
# 4.Number of Employees by Industry and Years of Experience
SELECT `Industry`,`Years of Professional Experience Overall`
AS OVERALL_EXPERIENCE,
COUNT(*) AS NUMBER_OF_EMPLOYEES
FROM mileston
GROUP BY `Industry`,`Years of Professional Experience Overall`
ORDER BY
`Industry`,`Years of Professional Experience Overall` DESC;
```

Column: Years of Professional Experience Overall

Collation: utf8mb4_0900_ai_ci

Definition: Years of Professional Experience Overall text

Industry	OVERALL_EXPERIENCE	NUMBER_OF_EMPLOYEES
"Government Relations"" (Lobbying)"	5-7 years	1
Academic Medicine	8 - 10 years	1
Academic Research (Psychology)	2 - 4 years	1
Accounting, Banking & Finance	8 - 10 years	12
Accounting, Banking & Finance	5-7 years	13
Accounting, Banking & Finance	31 - 40 years	2
Accounting, Banking & Finance	21 - 30 years	10
Accounting, Banking & Finance	2 - 4 years	7
Accounting, Banking & Finance	11 - 20 years	16
Accounting, Banking & Finance	1 year or less	1
Aerospace	11 - 20 years	1
Aerospace Contracting	11 - 20 years	1
Agriculture Or Forestry	8 - 10 years	1
Agriculture Or Forestry	11 - 20 years	2
Agriculture Or Forestry	1 year or less	1
Animal Health Product Manufacturing	11 - 20 years	1
Archaeology / Cultural Resource Ma...	11 - 20 years	1
Architecture	11 - 20 years	1
Art & Design	5-7 years	3
Art & Design	21 - 30 years	2

5.Median Salary by Age Range and Gender

```
WITH ranked_salaries AS (
    SELECT
        `ï»¿Age Range`,
        Gender,
        `Annual Salary`,
        ROW_NUMBER() OVER (PARTITION BY `ï»¿Age Range`, Gender ORDER BY `Annual Salary`) AS rn,
        COUNT(*) OVER (PARTITION BY `ï»¿Age Range`, Gender) AS total_rows
    FROM mileston
)
SELECT
```

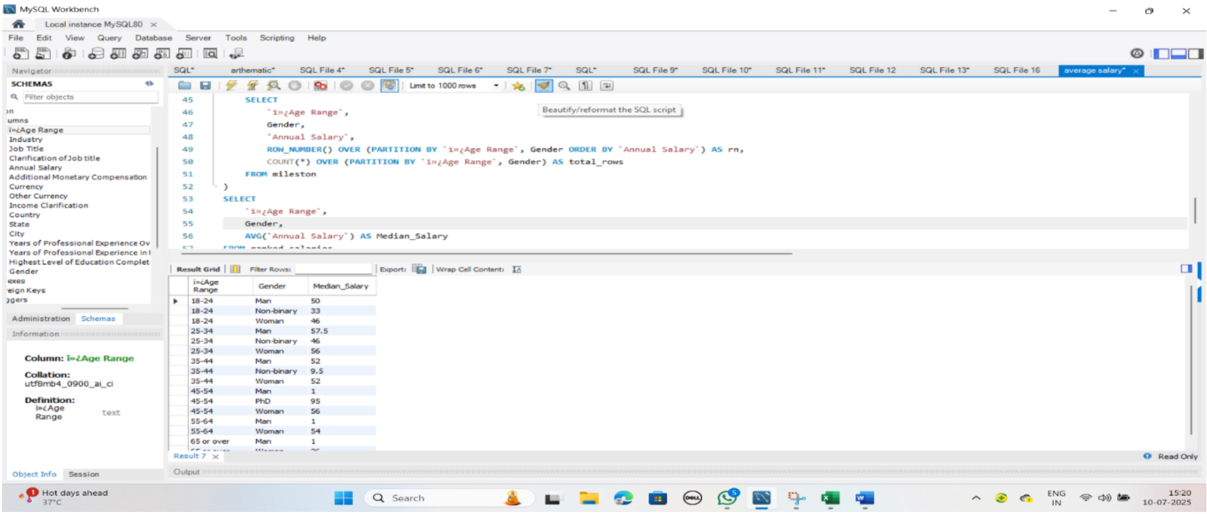
```
    `ï»¿Age Range`,
    Gender,
    AVG(`Annual Salary`) AS Median_Salary
FROM ranked_salaries
WHERE rn IN (
    FLOOR((total_rows + 1) / 2),
    CEIL((total_rows + 1) / 2)
)
GROUP BY `ï»¿Age Range`, Gender
ORDER BY `ï»¿Age Range`, Gender;
```

Median Salary by Age Range and Gender

Explanation:

- Assigns a row number to each entry **within each age range and gender group**, sorted by salary.
- This helps us identify the **middle salary or salaries**.
- Counts how many entries are in each group.
- We use this to know which row(s) represent the median.
- Returns one row per **Age Range + Gender**.
- Shows the **median salary** in that group.

Result:



```
    SELECT
        `ï»¿Age Range`,
        Gender,
        `Annual Salary`,
        ROW_NUMBER() OVER (PARTITION BY `ï»¿Age Range`, Gender ORDER BY `Annual Salary`) AS rn,
        COUNT(*) OVER (PARTITION BY `ï»¿Age Range`, Gender) AS total_rows
    FROM mileston
)
SELECT
    `ï»¿Age Range`,
    Gender,
    AVG(`Annual Salary`) AS Median_Salary
```

ï»¿Age Range	Gender	Median_Salary
18-24	Man	50
18-24	Non-binary	33
18-24	Woman	46
25-34	Man	57.5
25-34	Non-binary	46
25-34	Woman	56
35-44	Man	52
35-44	Non-binary	9.5
35-44	Woman	52
45-54	Man	1
45-54	PhD	95
45-54	Woman	56
55-64	Man	1
55-64	Woman	54
65 or over	Man	1

MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SQL* arthematic* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL* SQL File 9* SQL File 10* SQL File 11* SQL File 12 SQL File 13* SQL File 16 average salary*
Limit to 1000 rows
Beautify/reformat the SQL script
Result Grid Filter Rows: Export: Wrap Cell Content:
Result 7
Output
Read Only
Hot days ahead 37°C
Search
15:20 10-07-2025

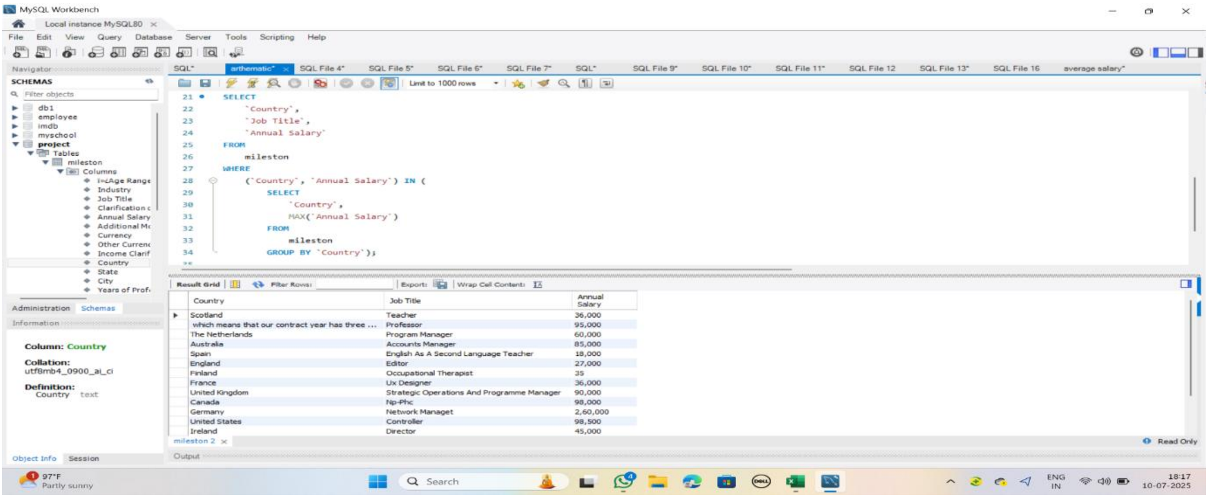
6. Job Titles with the Highest Salary in Each Country.

```
SELECT
    `Country`,
    `Job Title`,
    `Annual Salary`
FROM
    mileston
WHERE
    (`Country`, `Annual Salary`) IN (
        SELECT
            `Country`,
            MAX(`Annual Salary`)
        FROM
            mileston
        GROUP BY `Country`);
```

Explanation:

- Finds the maximum salary for each country.
- Joins this result back to the original table to get the job title and salary of those individuals who earn that max salary.
- Matches both the country and the salary to make sure only top earners in each country are selected.

Result:



```
SELECT
    `Country`,
    `Job Title`,
    `Annual Salary`
FROM
    mileston
WHERE
    (`Country`, `Annual Salary`) IN (
        SELECT
            `Country`,
            MAX(`Annual Salary`)
        FROM
            mileston
        GROUP BY `Country`);
```

Country	Job Title	Annual Salary
Scotland	Teacher	36,000
which means that our contract year has three ...	Professor	95,000
The Netherlands	Program Manager	60,000
Australia	Accounts Manager	85,000
Spain	English As A Second Language Teacher	18,000
England	Editor	27,000
Finland	Occupational Therapist	35
France	Ux Designer	36,000
United Kingdom	Strategic Operations And Programme Manager	90,000
Canada	Np-Phc	98,000
Germany	Network Managet	2,60,000
United States	Controller	98,500
Ireland	Director	45,000

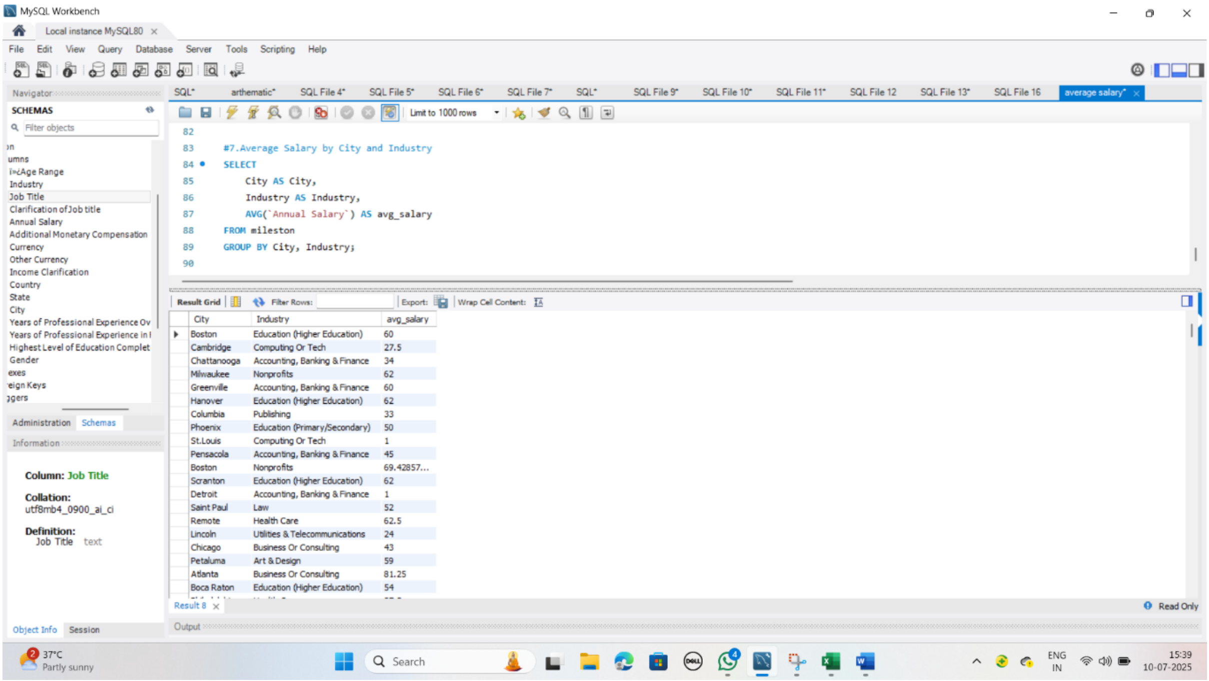
7.Average Salary by City and Industry

```
SELECT
    City AS City,
    Industry AS Industry,
    AVG(`Annual Salary`) AS avg_salary
FROM mileston
GROUP BY City, Industry;
```

Explanation:

- Chooses the city and industry columns to group and report.
- Calculates the average annual salary for each city–industry pair.

Result:


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SQL* arthematic* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL* SQL File 9* SQL File 10* SQL File 11* SQL File 12 SQL File 13* SQL File 16 average salary*
Limit to 1000 rows
Result Grid Filter Rows: Export: Wrap Cell Content:
Result 8
Output
Read Only
Column: Job Title
Collation: utf8mb4_0900_ai_ci
Definition: Job Title text
37°C Partly sunny
15:39 10-07-2025

```
#7.Average Salary by City and Industry
SELECT
    City AS City,
    Industry AS Industry,
    AVG(`Annual Salary`) AS avg_salary
FROM mileston
GROUP BY City, Industry;
```

City	Industry	avg_salary
Boston	Education (Higher Education)	60
Cambridge	Computing Or Tech	27.5
Chattanooga	Accounting, Banking & Finance	34
Milwaukee	Nonprofits	62
Greenville	Accounting, Banking & Finance	60
Hanover	Education (Higher Education)	62
Columbia	Publishing	33
Phoenix	Education (Primary/Secondary)	50
St.Louis	Computing Or Tech	1
Pensacola	Accounting, Banking & Finance	45
Boston	Nonprofits	69.42857...
Scranton	Education (Higher Education)	62
Detroit	Accounting, Banking & Finance	1
Saint Paul	Law	52
Remote	Health Care	62.5
Lincoln	Utilities & Telecommunications	24
Chicago	Business Or Consulting	43
Petaluma	Art & Design	59
Atlanta	Business Or Consulting	81.25
Boca Raton	Education (Higher Education)	54

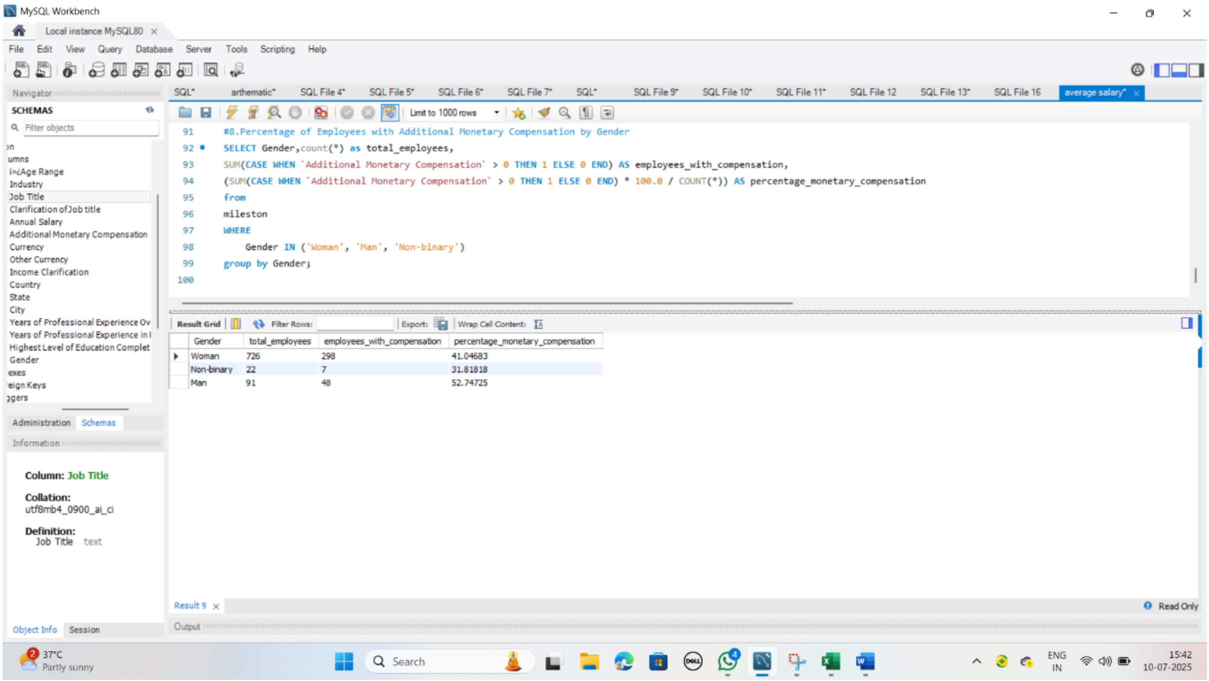
8.Percentage of Employees with Additional Monetary Compensation by Gender

```
SELECT Gender,count(*) as total_employees,
SUM(CASE WHEN `Additional Monetary Compensation` > 0 THEN 1 ELSE 0 END) AS employees_with_compensation,
(SUM(CASE WHEN `Additional Monetary Compensation` > 0 THEN 1 ELSE 0 END) * 100.0 / COUNT(*)) AS percentage_monetary_compensation
from
mileston
WHERE
   Gender IN ('Woman', 'Man', 'Non-binary')
group by Gender;
```

Explanation:

1. SELECT Gender: Retrieves the gender of employees. The WHERE clause ensures only 'Woman', 'Man', and 'Non-binary' entries are considered.
2. COUNT(*) AS total_employees: Counts the total number of employees for each gender group.
3. SUM(CASE WHEN 'Additional Monetary Compensation' > 0 THEN 1 ELSE 0 END) AS employees_with_compensation:
    - This uses a CASE WHEN statement to assign a value of 1 to employees who received additional monetary compensation and 0 otherwise.
    - The SUM function then totals these values, giving the count of employees with additional compensation per gender group.
4. (SUM(CASE WHEN 'Additional Monetary Compensation' > 0 THEN 1 ELSE 0 END) * 100.0 / COUNT(*)) AS percentage_monetary_compensation:
    - Calculates the percentage of employees with additional compensation within each gender group.
    - Multiplying by 100.0 ensures the result is a floating-point number, providing a precise percentage.
5. WHERE Gender IN ('Woman', 'Man', 'Non-binary'): Filters the data to include only the specified gender categories.
6. GROUP BY Gender: Groups the results by gender, allowing aggregate functions like COUNT and SUM to operate within each group.

Result:



```
#8.Percentage of Employees with Additional Monetary Compensation by Gender
SELECT Gender,count(*) as total_employees,
SUM(CASE WHEN `Additional Monetary Compensation` > 0 THEN 1 ELSE 0 END) AS employees_with_compensation,
(SUM(CASE WHEN `Additional Monetary Compensation` > 0 THEN 1 ELSE 0 END) * 100.0 / COUNT(*)) AS percentage_monetary_compensation
from
mileston
WHERE
    Gender IN ('Woman', 'Man', 'Non-binary')
group by Gender;
```

Gender	total_employees	employees_with_compensation	percentage_monetary_compensation
Woman	726	298	41.04683
Non-binary	22	7	31.81818
Man	91	48	52.74725

Column: Job Title

Collation: utf8mb4_0900_ai_ci

Definition: Job Title text

MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SQL* arthematic* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL* SQL File 9* SQL File 10* SQL File 11* SQL File 12 SQL File 13* SQL File 16 average salary*
Limit to 1000 rows
Result Grid Filter Rows: Export: Wrap Cell Content:
Result 9
Read Only
Output
Administration Schemas
Information
Object Info Session
37°C Partly sunny
Search
ENG IN
15:42 10-07-2025

9.Total Compensation by Job Title and Years of Experience

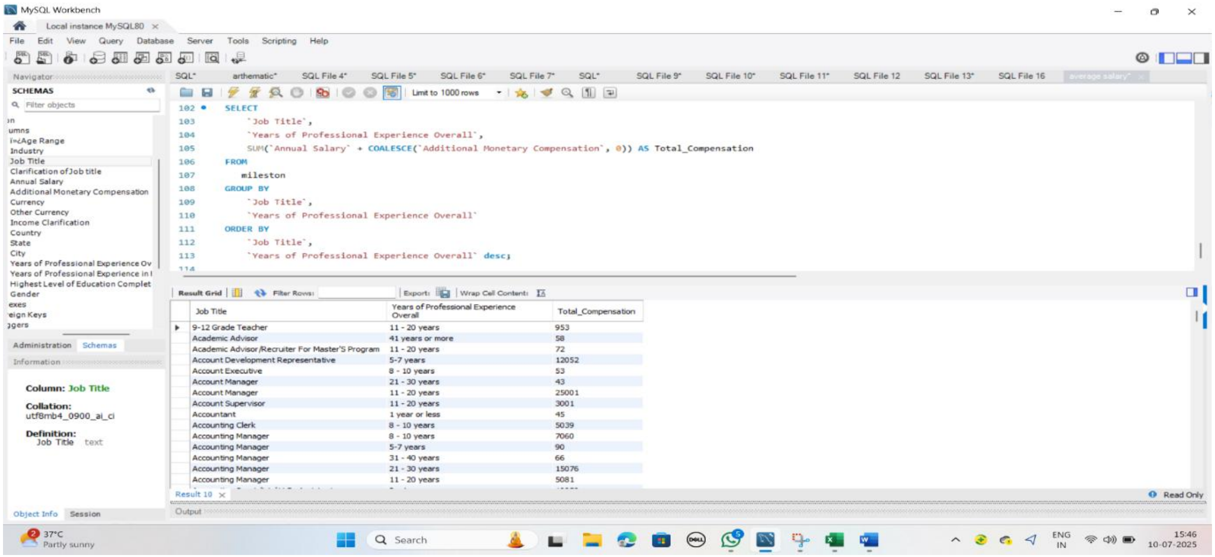
```
SELECT
    `Job Title`,
    `Years of Professional Experience Overall`,
    SUM(`Annual Salary` + COALESCE(`Additional Monetary Compensation`, 0)) AS Total_Compensation
FROM
   mileston
GROUP BY
    `Job Title`,
    `Years of Professional Experience Overall`
ORDER BY
    `Job Title`,
    `Years of Professional Experience Overall` desc;
```

Explanation:

Retrieves the job title and total years of experience.

- SUM(...) AS Total_Compensation: adds up annual salary plus any extra monetary compensation for all rows in each group.
- Ensures that if the extra compensation field is NULL, it's treated as zero—so Annual Salary + NULL doesn't become NULL.
- Groups rows by both **Job Title** and **Years of Professional Experience Overall**.
- For each group, the query sums up the combined compensation (Annual Salary + extra pay) across all employees fitting that exact job-and-experience pairing.
- Sorts output first alphabetically by Job Title, then by Years of Experience in **descending** order.
- That means within each job title, you'll see the most-experienced groups at the top

Result:



Column: Job Title

Collation: utf8mb4_0900_ai_ci

Definition: Job Title text

```
SELECT
    `Job Title`,
    `Years of Professional Experience Overall`,
    SUM(`Annual Salary` + COALESCE(`Additional Monetary Compensation`, 0)) AS Total_Compensation
FROM
   mileston
GROUP BY
    `Job Title`,
    `Years of Professional Experience Overall`
ORDER BY
    `Job Title`,
    `Years of Professional Experience Overall` desc;
```

Job Title	Years of Professional Experience Overall	Total_Compensation
9-12 Grade Teacher	11 - 20 years	953
Academic Advisor	41 years or more	58
Academic Advisor /Recruiter For Master'S Program	11 - 20 years	72
Account Development Representative	5-7 years	12052
Account Executive	8 - 10 years	53
Account Manager	21 - 30 years	43
Account Manager	11 - 20 years	25001
Account Supervisor	11 - 20 years	3001
Accountant	1 year or less	45
Accounting Clerk	8 - 10 years	5039
Accounting Manager	8 - 10 years	7060
Accounting Manager	5-7 years	90
Accounting Manager	31 - 40 years	66
Accounting Manager	21 - 30 years	15076
Accounting Manager	11 - 20 years	5081

10. Average Salary by Industry, Gender, and Education Level

Select `Industry`,`Gender`,`Highest Level of Education Completed`,

avg(`Annual Salary`) as avg_salary

```
from mileston
WHERE
    `gender` IN ('Woman', 'Man', 'Non-binary')
    group by `Gender`,`Highest Level of Education Completed`,`industry`;
```

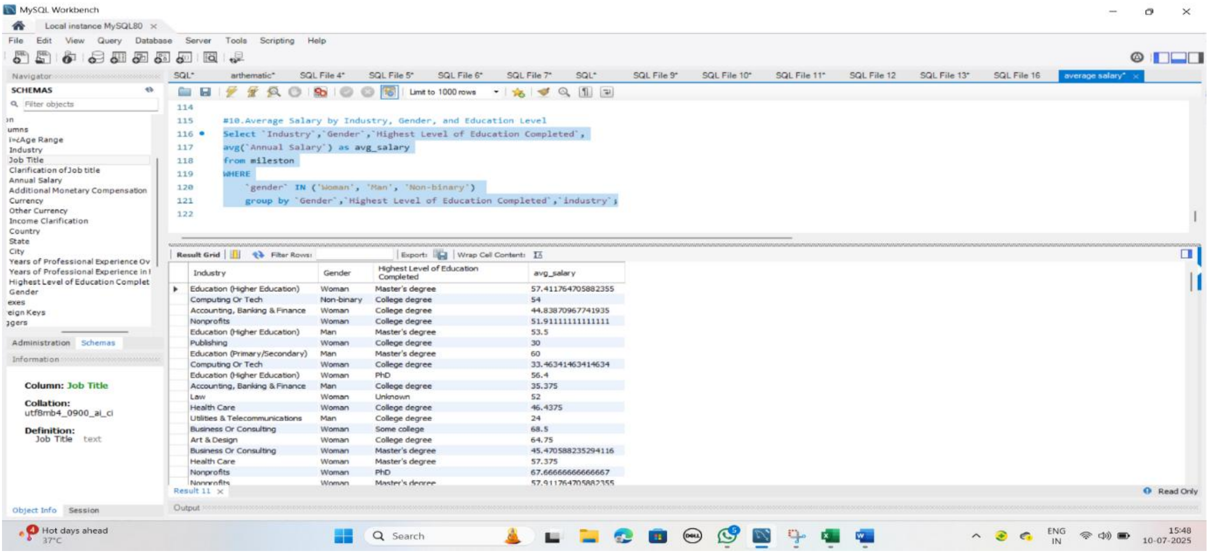
Explanation:

Retrieves four pieces of information per row:

Industry – sector of employment, Gender – must be one of Woman, Man, or Non-binary, Highest Level of Education Completed – educational attainment, AVG(Annual Salary) – compute the average annual salary for each group

- Filters the dataset to only include employees whose Gender is 'Woman', 'Man', or 'Non-binary'.
- Results are aggregated by three dimensions: Gender, Education Level, and Industry.
- This means you'll get one row per unique combination of these three attributes.
- Calculates the mean salary for each group.
- By default, AVG() ignores NULL values in Annual Salary.

Result:



MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SQL* arthematic* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL* SQL File 9* SQL File 10* SQL File 11* SQL File 12 SQL File 13* SQL File 16 average salary*
Limit to 1000 rows
Result Grid Filter Rows: Export: Wrap Cell Content:
Result 11
Output
Read Only

```
#10.Average Salary by Industry, Gender, and Education Level
Select `Industry`,`Gender`,`Highest Level of Education Completed`,
avg(`Annual Salary`) as avg_salary
from mileston
WHERE
    `gender` IN ('Woman', 'Man', 'Non-binary')
    group by `Gender`,`Highest Level of Education Completed`,`industry`;
```

Industry	Gender	Highest Level of Education Completed	avg_salary
Education (Higher Education)	Woman	Master's degree	57.411764705882355
Computing Or Tech	Non-binary	College degree	54
Accounting, Banking & Finance	Woman	College degree	44.83870967741935
Nonprofits	Woman	College degree	51.91111111111111
Education (Higher Education)	Man	Master's degree	53.5
Publishing	Woman	College degree	30
Education (Primary/Secondary)	Man	Master's degree	60
Computing Or Tech	Woman	College degree	33.46341463414634
Education (Higher Education)	Woman	PhD	56.4
Accounting, Banking & Finance	Man	College degree	35.375
Law	Woman	Unknown	52
Health Care	Woman	College degree	46.4375
Utilities & Telecommunications	Man	College degree	24
Business Or Consulting	Woman	Some college	68.5
Art & Design	Woman	College degree	64.75
Business Or Consulting	Woman	Master's degree	45.470588235294116
Health Care	Woman	Master's degree	57.375
Nonprofits	Woman	PhD	67.66666666666667
Nonprofits	Woman	Master's degree	57.911764705882355

Step 4: Create Tables in Excel

Export the data from MySQL and create separate sheets in Excel for each query result.

1. Export Data from MySQL:

o After running each SQL query, export the result to a CSV file.

2. Import into Excel:

o Open Excel and create a new workbook.

o For each query result create a new sheet.

o Import the respective CSV file into each sheet.

o You should have one sheet for each query result.

Step 5: Dashboard Creation

Create pivot tables and a dashboard to visualize the results.

1. Create Pivot Tables:

o In Excel, create pivot tables from the data in each sheet to summarize and analyze the key metrics.

o Use appropriate fields for rows, columns, values, and filters to get meaningful

insights from the data.

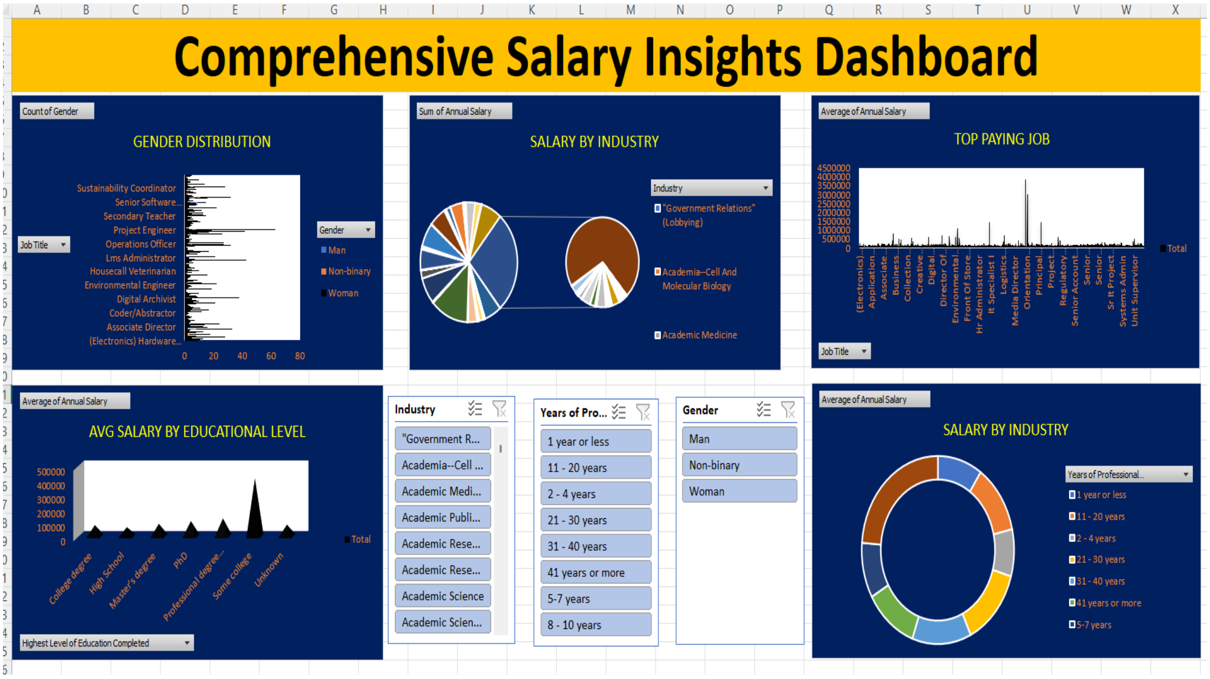
2. Create a Dashboard:

o Use the various Excel charts (bar charts, pie charts, line charts, etc.) to visualize the following insights:

- Salary distribution by industry.
- Gender distribution across different job titles.
- Top-paying job titles.
- Avg salary by education.
- Avg salary by experince.

o To Arrange the charts and tables on a dedicated dashboard sheet in an easy-to-read format.

Dash Board:



Comprehensive Salary Insights Dashboard

Gender Distribution (Top-Left)

- Bar chart displaying counts of Man, Woman, Non-binary across different Job Titles.
- Interactive Job Title and Gender slicers let you filter which roles or genders are shown.

Salary by Industry – Total Sum (Top-Middle)

- Two pie charts:
  - A large one showing total payroll distribution across all industries.
  - A focused smaller one (zoomed in) highlighting a selected industry (e.g., Academia – Cell And Molecular Biology).
- Industry slicer allows selecting one or more industries to inspect**.**

Top Paying Job (Top-Right)

- A spike chart depicting the average annual salary for each job title.

- Y-axis in rupees/dollars (values like 50,000 up to 4,500,000), showing which jobs pay the highest.
- Interactive slicer filters by Job Title.

Avg Salary by Education Level (Bottom-Left)

- A bar or column chart that displays average annual salary for each education level: *High School, College degree, Master's, PhD, Professional degree, Some college, Unknown*.
- Slicer filters by Highest Level of Education Completed.

Salary by Industry – By Experience (Bottom-Right)

- A donut chart, breaking down average salaries by Years of Professional Experience (e.g., *1 year or less, 2–4 years, ..., 41+ years*), within the selected industry or filtered dataset.
- Slicer controls which experience categories are included.

Slicers (Center Region)

Three interactive controls to apply across all charts:

1. Industry: Pick one or multiple industries to update relevant visualizations.
2. Years of Professional Experience: Filter dashboards based on experience categories.
3. Gender: Toggle between gender categories to segment data.

3. Final Touches:

o Ensure the dashboard is clear and visually appealing, with proper labels, titles, and legends.

o Add any filters or slicers for interactive analysis.

Conclusion:

A written summary of insights from the analysis, including documentation that outlines the project objective, dataset description, steps involved, screenshots of results obtained at each phase, insights derived from the analysis, and a conclusion for the project.