Project 4

Hiring Analysis

Submitted By

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Problem Statement

- Imagine you're a data analyst at a multinational company like Google.
- Your task is to analyze the company's hiring process data and draw meaningful insights from it.
- The hiring process is a crucial function of any company, and understanding trends such as the number of rejections, interviews, job types, and vacancies can provide valuable insights for the hiring department.
- As a data analyst, you'll be given a dataset containing records of previous hires.
- Your job is to analyze this data and answer certain questions that can help the company improve its hiring process.

Project Goal

To use the knowledge of statistics and Excel to draw meaningful conclusions about the company's hiring process. This could help the company improve its hiring process and make better hiring decisions in the future.

Tech Stack Used

MS - EXCEL

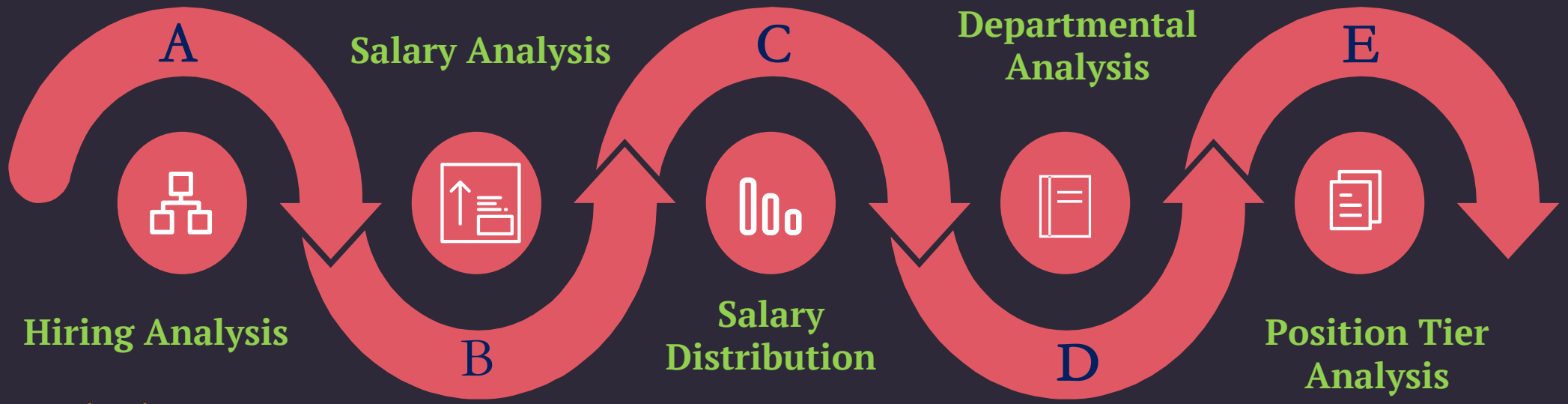
- MS Excel is a spreadsheet program where one can record data in the form of tables.
- It is easy to analyse data in an Excel spreadsheet.
- A spreadsheet is in the form of a table comprising rows and columns.

Benefits of MS - EXCEL

- ✓ Easy to store and manage data
- ✓ Application of Mathematical and Statistical formulas
- ✓ More Secured
- ✓ Clearer visibility of information
- ✓ Data Processing Application

Analytical Tasks

[Click Here to View the Sheet]



Hiring Analysis

It involves bringing new individuals into the organisation for various roles

Salary Analysis

To calculate the average salary offerred by the company to employees

Salary Distribution

It involves creating class intervals between the upper and lower limits of the salary range.

Departmental Analysis

To create employee distribution among the various departments of the organisation through Data Visualisation (Charts)

Position Tier Analysis

To create positional distribution of employees among the various departments of the organisation through Data Visualisation (Charts)

Case Study : Hiring Analysis (Q.A)

CLICK HERE FOR THE SHEET

Objective : To find the total number of male and female employees hired by the company

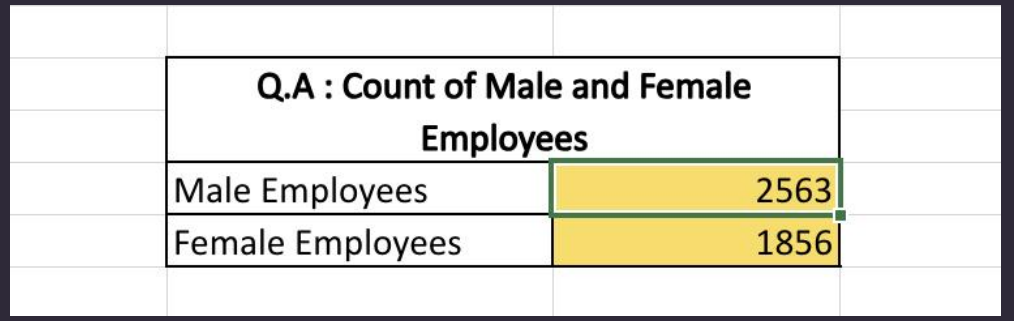
Approach 1 : Formula is used to count the number of male and female employees in the range of data.

Formula : countifs ([range],[criteria]....) : Counts the number of data based on multiple criteria.

Result

Total Male Hired : 2563

Total Female Hired : 1856



Q.A : Count of Male and Female Employees	
Male Employees	2563
Female Employees	1856

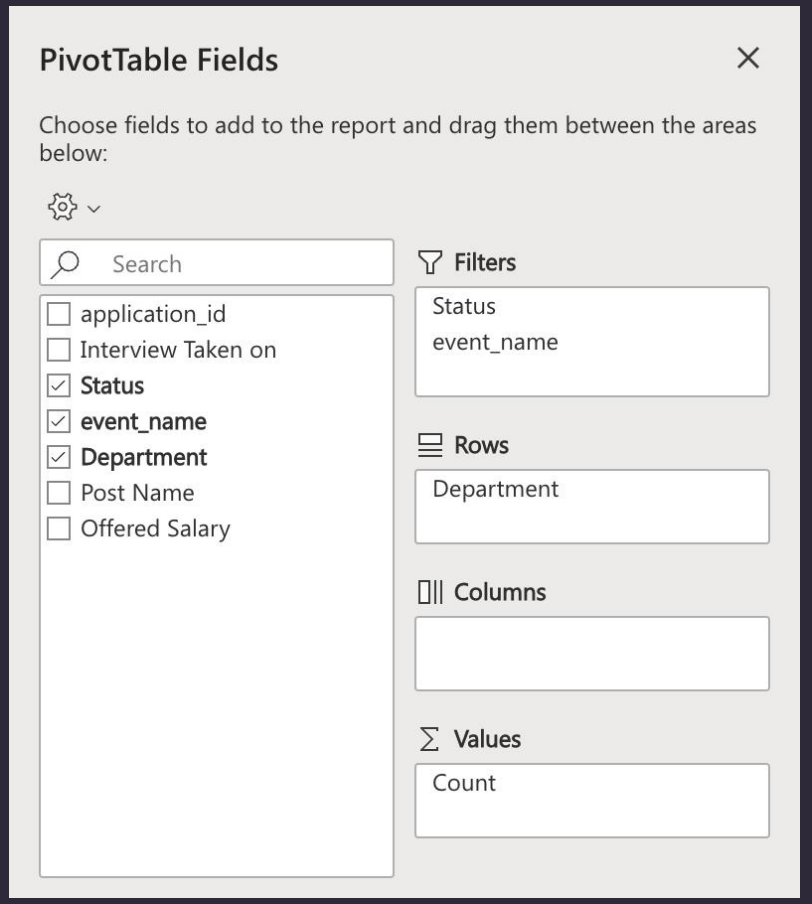
Note : The formula is applied to cells - J5 and J6. Sheet Name : Input_Data

Case Study : Hiring Analysis (Q.A)

CLICK HERE FOR THE SHEET

Objective : To find the total number of male and female employees hired by the company

Approach : A pivot-table has been created based on the fields shown in the image. This pivot table is used to find the count of male and female employees. Based on this data, a suitable pie-chart is made to depict the distribution among various departments.



Result

Total Male Hired : 2563

Total Female Hired : 1856

Note : The filter result screenshots and pie-chart based on this pivot table is included in the next slide.

Sheet Name : Q.A

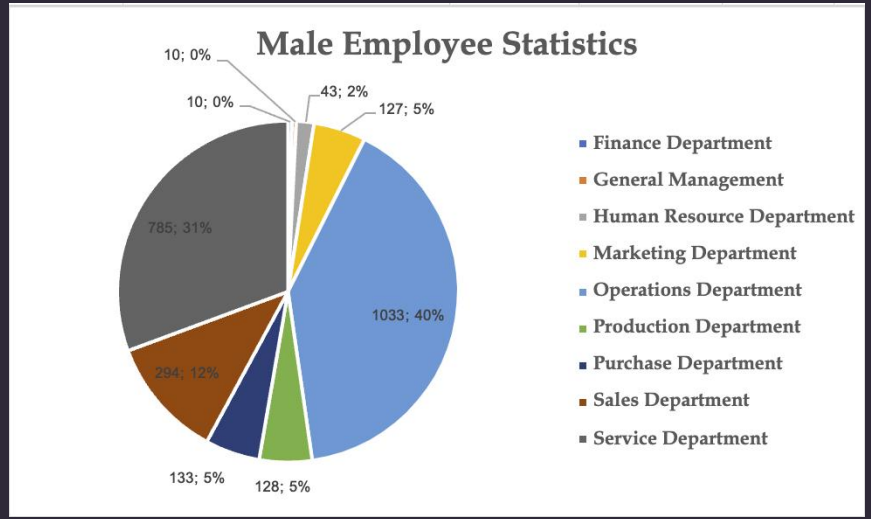
Case Study : Hiring Analysis (Q.A)

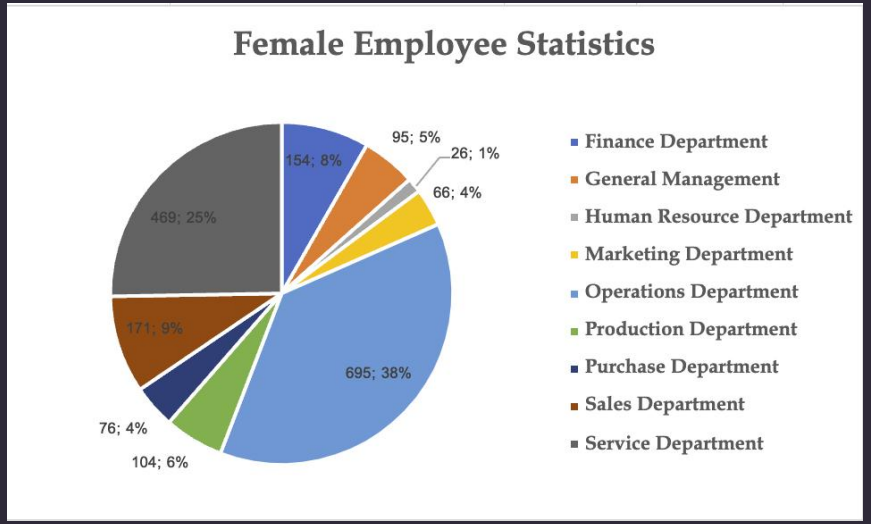
MALE EMPLOYEES	
Status	Hired
event_name	Male
Department	**Count**
Finance Department	10
General Management	10
Human Resource Department	43
Marketing Department	127
Operations Department	1033
Production Department	128
Purchase Department	133
Sales Department	294
Service Department	785
Grand Total	**2563**

FEMALE EMPLOYEES	
Status	Hired
event_name	Female
Department	**Count**
Finance Department	154
General Management	95
Human Resource Department	26
Marketing Department	66
Operations Department	695
Production Department	104
Purchase Department	76
Sales Department	171
Service Department	469
Grand Total	**1856**

PIVOT - TABLE SCREENSHOTS

Click Here : Sheet Name : Q.A
Pivot Table and Chart





Case Study : Hiring Analysis (Q.B)

CLICK HERE FOR THE SHEET

Objective : To find the average salary offered by this company

Approach 1 : Formula is used to get the average of the offerred salaries column from the data.

Formula : average(range) - Gives the average value of the selected numerical column range.

Result

Average Salary = 49983.02902

Q.B : Average Salary Offered	
Using Average Formula	49983.02902

fx =AVERAGE(G:G)

Note : The formula is applied to cell - J11

Sheet Name : Input_Data

Case Study : Hiring Analysis (Q.B)

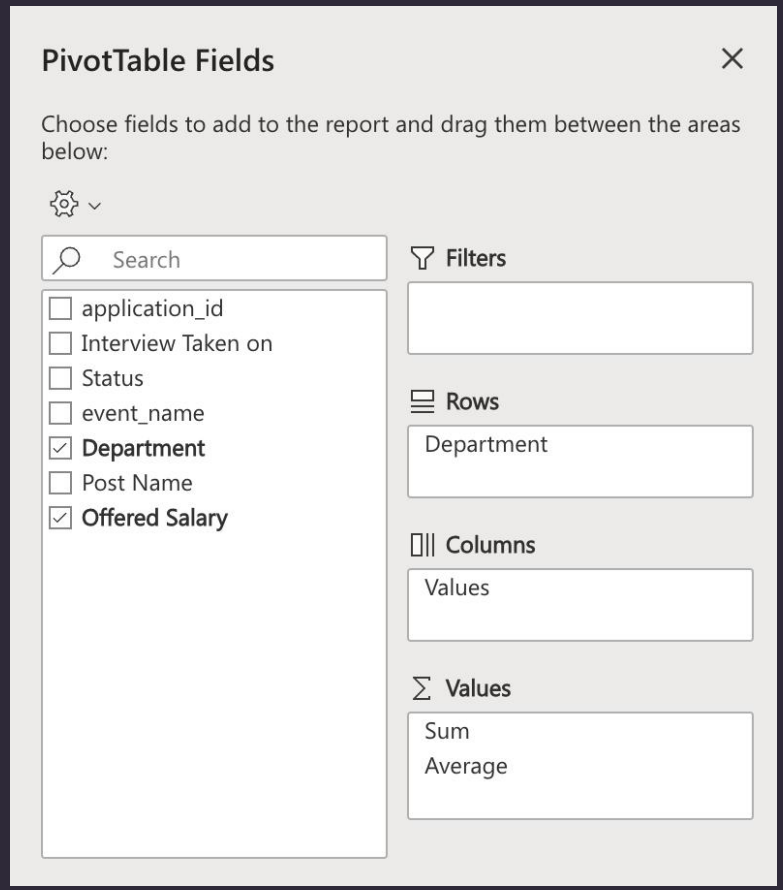
CLICK HERE FOR THE SHEET

Objective : To find the average salary offered by this company

Approach : A pivot-table has been created based on the fields shown in the image.

This pivot table is used to find the sum and average of salaries based on different departments.

The same is visualised using charts.



Result

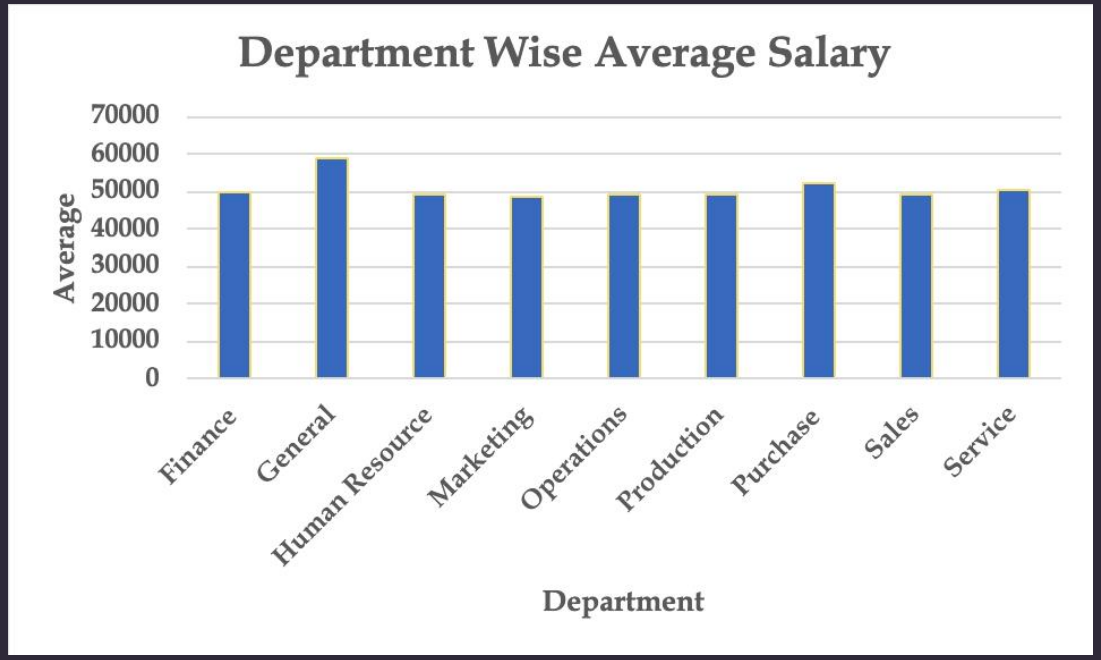
Average Salary = 49983.02902

Note : The result screenshots and chart based on this pivot table is included in the next slide.

Sheet Name : Q.B

Case Study : Hiring Analysis (Q.B)

Department	Sum	Average
Finance Department	14292866	49628.00694
General Management	10100200	58722.09302
Human Resource Department	4753221	49002.27835
Marketing Department	15759229	48489.93538
Operations Department	136198403	49151.35438
Production Department	18790424	49448.48421
Purchase Department	17504070	52564.77477
Sales Department	36785544	49310.3807
Service Department	104044412	50629.88418
Grand Total	**358228369**	**49983.02902**



PIVOT - TABLE SCREENSHOT

Click Here : Sheet Name : Q.B
Pivot Table and Chart

Case Study : Hiring Analysis (Q.C)

CLICK HERE FOR THE SHEET

Objective : To create class intervals for the salaries in the company.

Approach : Frequency Formula is used to get count in the each interval. The class interval is formed manually by calculating the minimum and maximum salaries.

Formula : **frequency (data_array ; bins_array)**

Data Array represents the salary data and the bins array represents the class intervals for which count is being calculated.

Q.C : Class Intervals of Salary	
Minimum Salary	100
Maximum Salary	400000
Using this, class intervals are created and frequency formula is used to find the salary distribution	

Class Intervals	Frequency
10000	678
20000	732
30000	711
40000	710
50000	781
60000	750
70000	698
80000	734
90000	711
100000	659
200000	1
300000	1
400000	1

fx =FREQUENCY(G:G;M15:M27)

Note : The formula is applied to cell - N15

Sheet Name : Input_Data

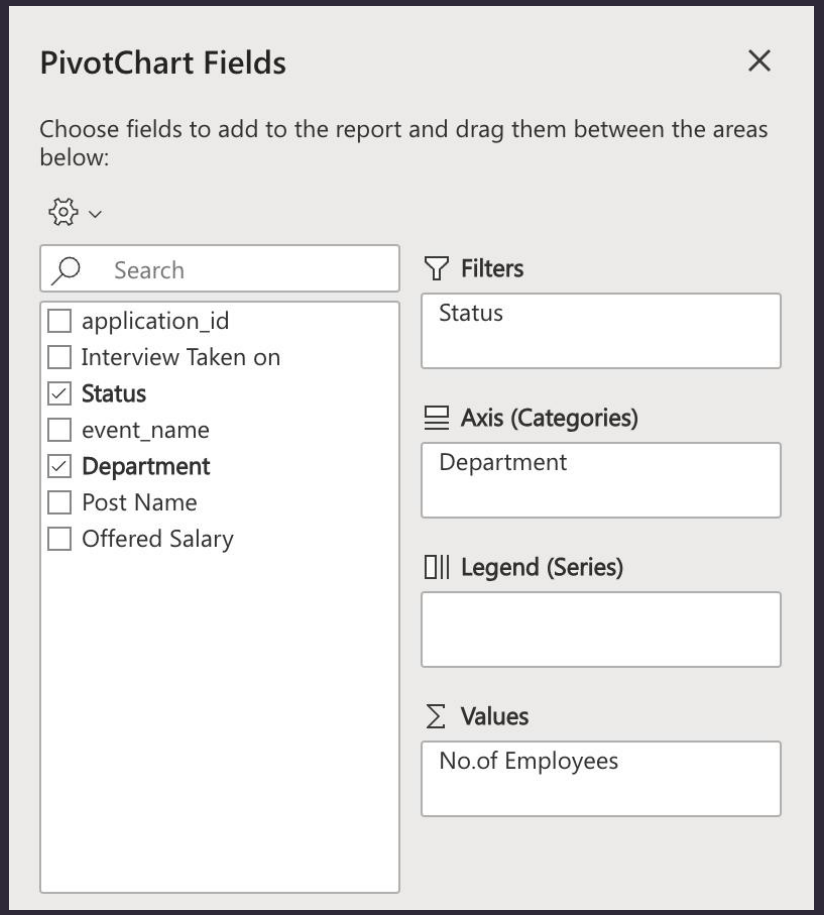
Case Study : Hiring Analysis (Q.D)

CLICK HERE FOR THE SHEET

Objective : Use a pie chart, bar graph, or any other suitable visualization to show the proportion of people working in different departments.

Approach : A pivot-table has been created based on the fields shown in the image. This pivot table is used to find the count of employees under each department.

Based on this data, a suitable column-chart is made to depict the distribution among various departments.

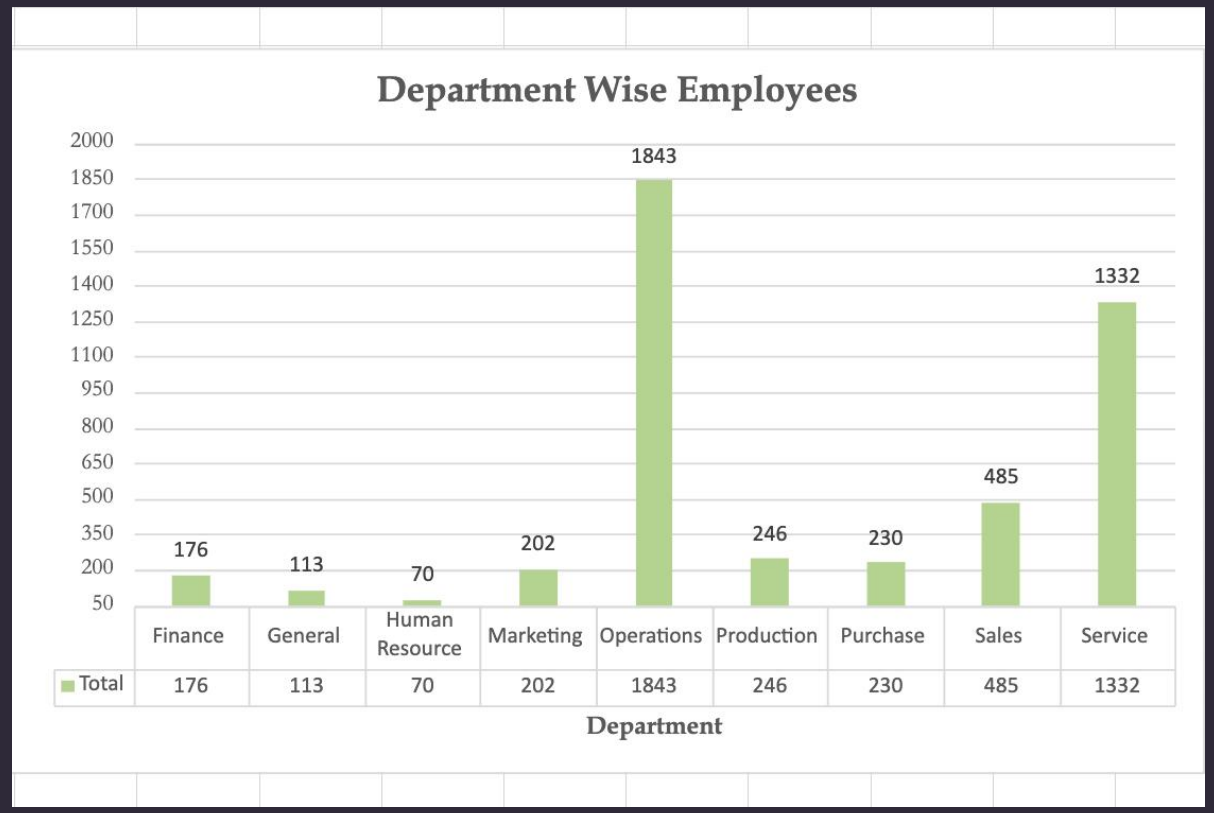


Note : The filter result screenshots and pie-chart based on this pivot table is included in the next slide.

Sheet Name : Q.D

Case Study : Hiring Analysis (Q.D)

Status	Hired
Department	**No.of Employees**
Finance	176
General	113
Human Resource	70
Marketing	202
Operations	1843
Production	246
Purchase	230
Sales	485
Service	1332
Grand Total	**4697**



PIVOT - TABLE SCREENSHOT

Click Here : Sheet Name : Q.D Pivot Table and Chart

Case Study : Hiring Analysis (Q.E)

CLICK HERE FOR THE SHEET

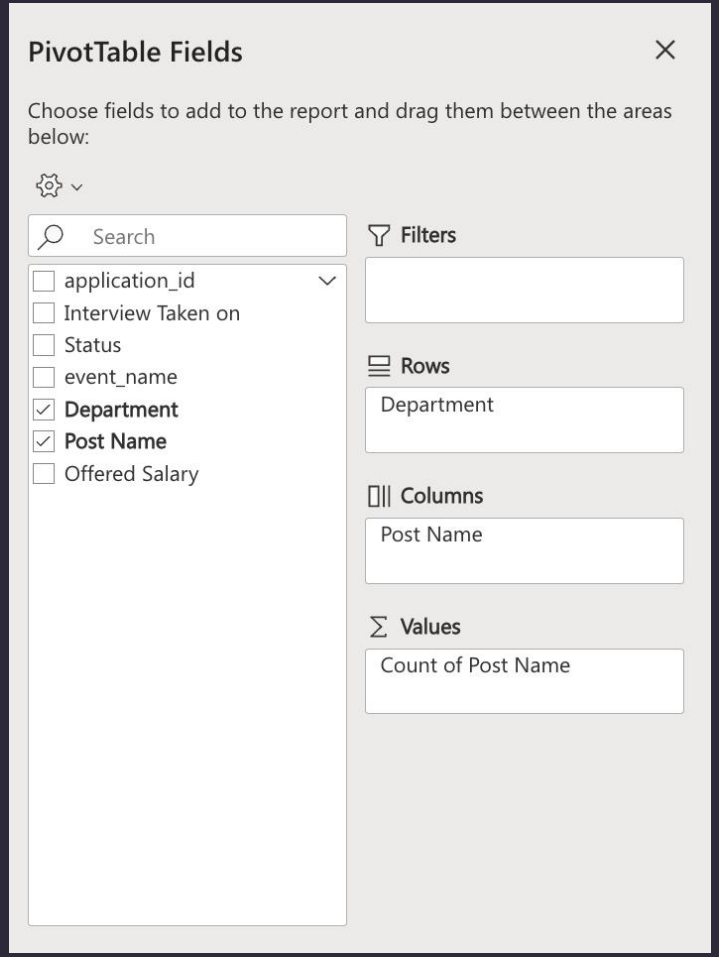
Objective : To Use a chart or graph to represent the different position tiers within the company

Approach : A pivot-table has been created based on the fields shown in the image.

This pivot table is used to find the count of number of employees under each post among various departments.

Bar Chart : Used to visualise the department and post tier data

Pie Chart : Used to visualise the distribution of post tiers



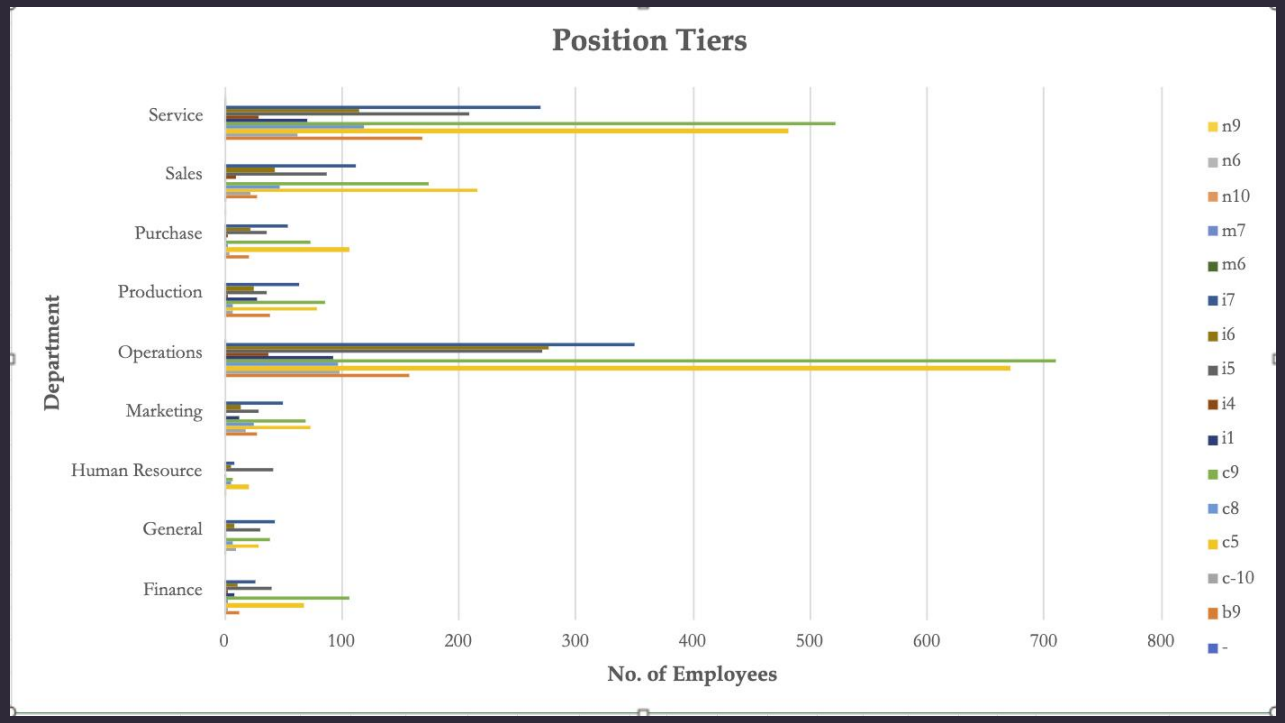
Sheet Name : Q.E

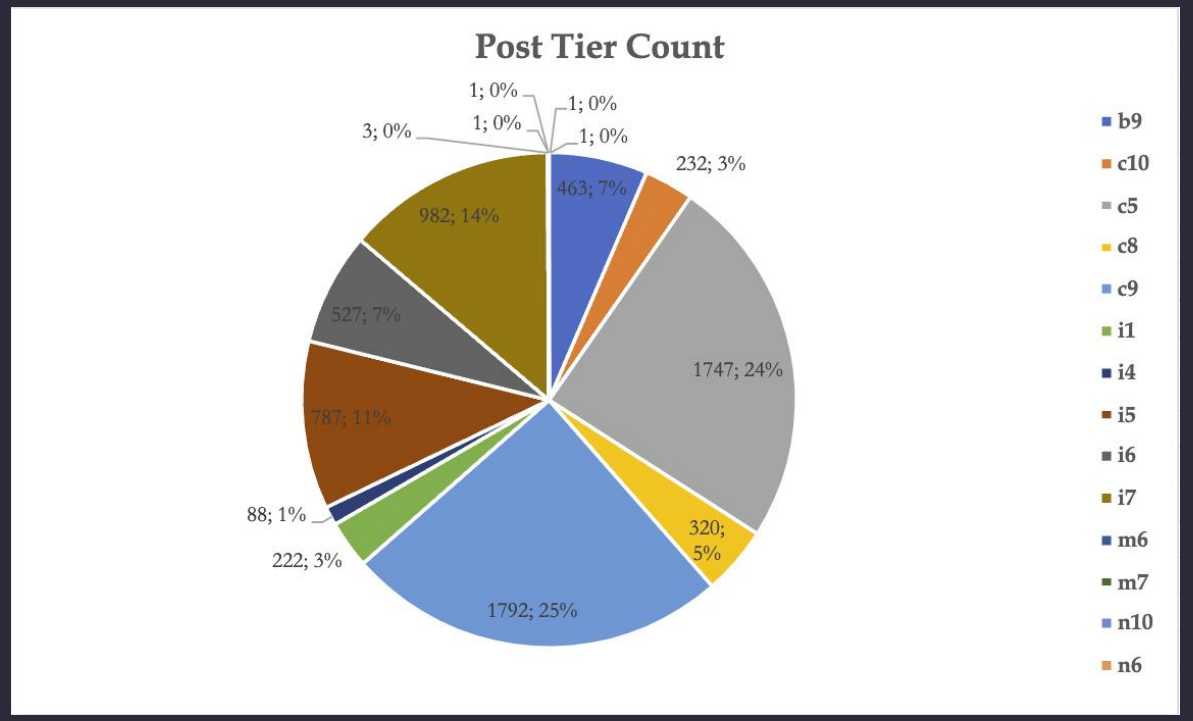
Case Study : Hiring Analysis (Q.E)

Count of Post Name	Post Nam																
Department	-	b9	c-10	c5	c8	c9	i1	i4	i5	i6	i7	m6	m7	n10	n6	n9	Grand Total
Finance		13	4	68	4	107	9	3	41	12	27						288
General		2	10	29	7	39	1	1	31	9	43						172
Human Resource		2	2	21	6	7	2		42	6	9						97
Marketing		28	18	74	26	70	13	1	30	15	50						325
Operations		158	99	671	98	711	94	38	272	278	351	1					2771
Production		40	8	79	8	87	28	3	37	26	64						380
Purchase		22	5	107	4	74	2	3	36	23	55				1	1	333
Sales	1	28	23	216	48	175	2	10	88	43	113						747
Service		170	63	482	119	522	71	29	210	115	270	2	1	1			2055
Grand Total	**1**	**463**	**232**	**1747**	**320**	**1792**	**222**	**88**	**787**	**527**	**982**	**3**	**1**	**1**	**1**	**1**	**7168**

PIVOT - TABLE SCREENSHOT

Case Study : Hiring Analysis (Q.E)

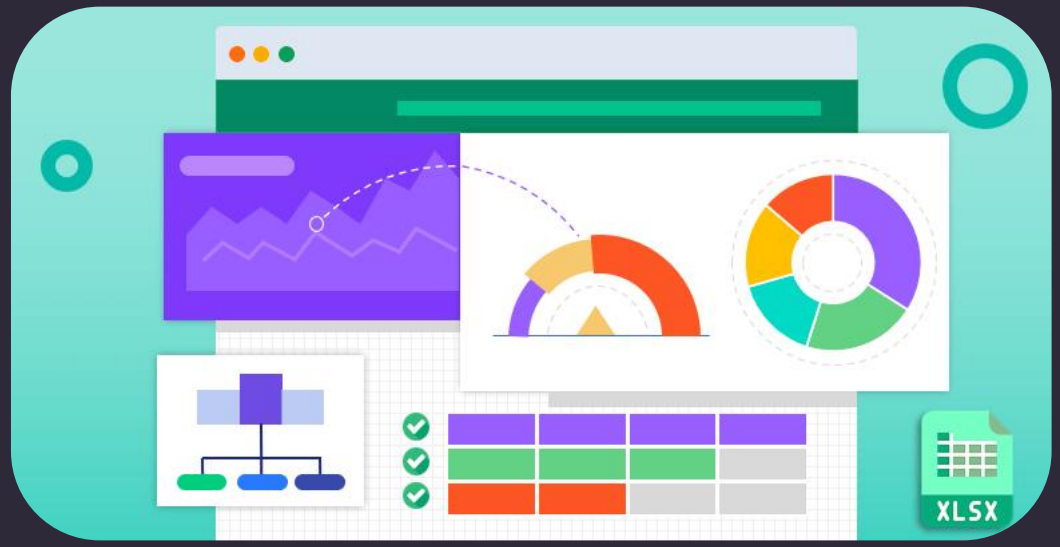




[Click Here : Sheet Name : Q.E
Pivot Table and Chart]

Result Insights

- ✓ The data analytical tasks were made using the concept of “Pivot” Tables in Excel. These are highly interactive as we can move, edit and delete the fields and achieve on the desired results. These are also dynamic and easy to update.
- ✓ The Data Visualisation given to the respective tasks, gives us an enhanced understanding of the data. These help us to find remarkable results, patterns in the data, and also can be used for detecting errors in some cases. They also help us to identify relationships among the data.
- ✓ The results achieved through the tasks will be highly helpful for the company for its hiring process and also gives an heads up to emerge in the lagging areas.
- ✓ On a whole, the entire solutions helps the company for faster decision making and enhances the further activities



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