HIRING PROCESS ANALYTICS

Project Description

The project involves performing analytics on the data provided for the hiring process of the company using Microsoft Excel. The aim is to provide insights on number of males and females hired, average salaries offered, class intervals and plotting charts to get better understanding of the hiring data.

Approach

The first step in the project was to import the data into an excel sheet. Next, we sorted the data according to the needs of the various insights needed, checked for any outliers and removed them, and then performed the excel functions needed to obtain the results we wanted.

Tech-Stack Used

For this project, we used Microsoft Excel 2021 as it is the flagship software used in the world for spreadsheets and is highly reliable and, easily operable.

Insights

The analysis from the dataset gave us several insights which are as follows :-

1. How many Males and Females are hired in the company?

   To obtain this we simply selected the “event_name” and “Status” column and performed the COUNTIFS function putting the necessary range and conditions. The following function gave us the following results –
   For males,
   =COUNTIFS(D2:D7169, "Male",C2:C7169, "Hired")
   No. of Males Hired = 2563

   Similarly, for females
   =COUNTIFS(D2:D7169, "Female",C2:C7169, "Hired")
   No. of Females Hired = 1856

2. What is the average salary offered in the company?

   For this, we selected each department one by one and put them in the function AVERAGEIFS and put the required range and conditions.
   =AVERAGEIFS(G2:G7169, E2:E7169, "Service Department")

   This gave us the average salary in Service department. Similarly, we placed each department in the criteria range to get each department’s average salary and the output obtained is as shown below -

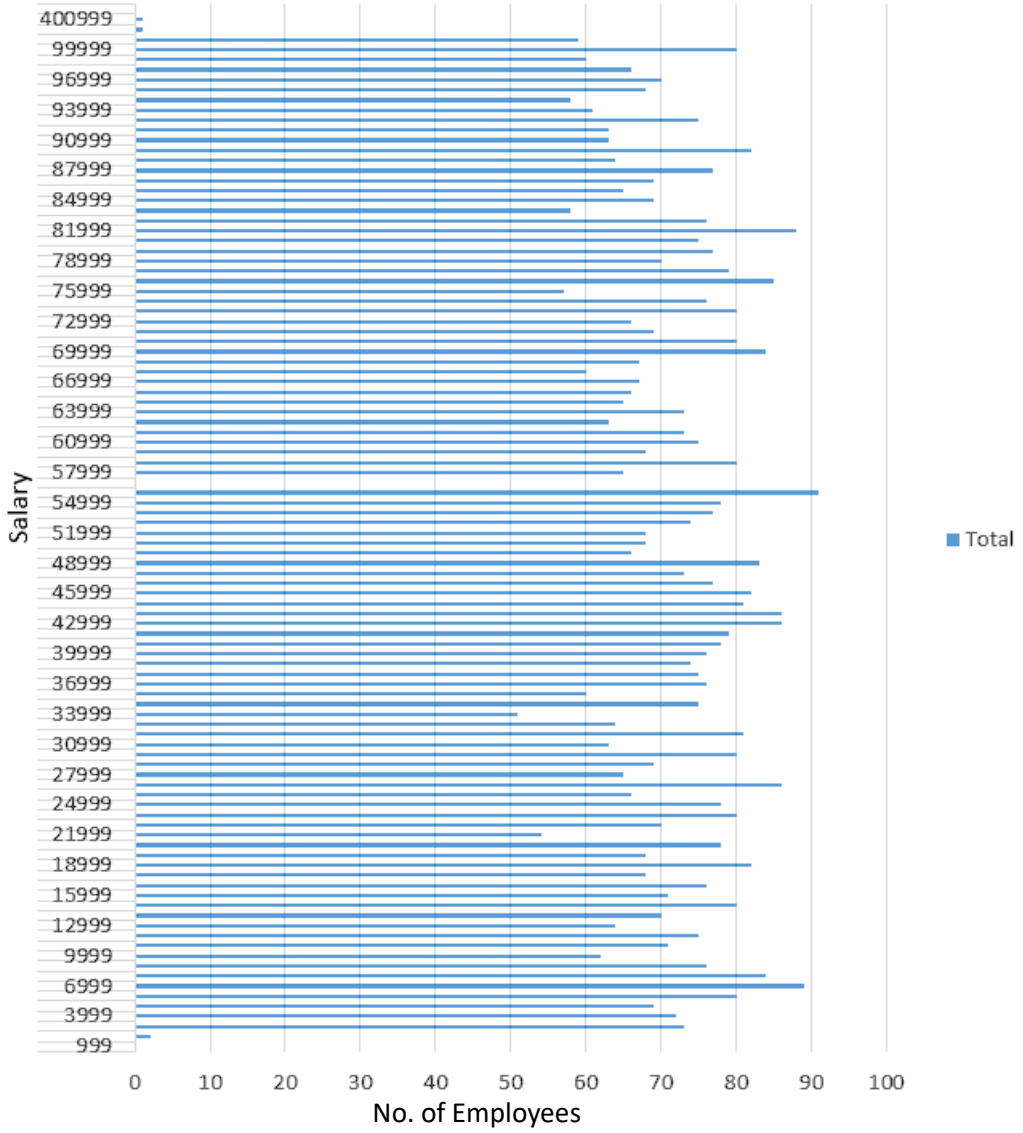
Department	Average Salary by Department
Service	49852.44915
Operations	49561.02022
Sales	51419.35877
Finance	49862.71554
Production	49242.14474
Purchase	49586.36937
Marketing	50506.54154
Gneral Management	54719.78488
HR	47086.89691

3. Draw the class intervals for salary in the company.

As the distribution of salaries across the various departments is very wide and also has small differences, we decided to keep the interval at 999 difference. This way we can track all the salaries in much detail. From the data the “Lower Limit” and the “Upper Limit” came to be as shown in the small sample below along with the frequency indicated.

Offered Salary	Lower Limit	Upper Limit	Frequency
56553	56000	56999	74
22075	22000	22999	70
70069	70000	70999	80
3207	3000	3999	72
29668	29000	29999	80
85914	85000	85999	65
69904	69000	69999	84
11758	11000	11999	75
15156	15000	15999	71
49515	49000	49999	66
26990	26000	26999	86
200000	200000	200999	59
86787	86000	86999	69
2308	2000	2999	73
56688	56000	56999	0
81757	81000	81999	88
15134	15000	15999	0

Using this class interval and frequency of the data occurring in it we plotted a graph to visualize this vast data of 7169 entries which came out as shown below.
From this graph we can infer that the salary distribution is with majority of number of the employees getting salaries touching 60 and above in every class interval.
With a slight exception of middle and lower salaries touching 90 people. And the least number of employees getting highest and lowest salaries in the company being one employee getting ₹400000-400999 and two in the class of ₹1000-1999.

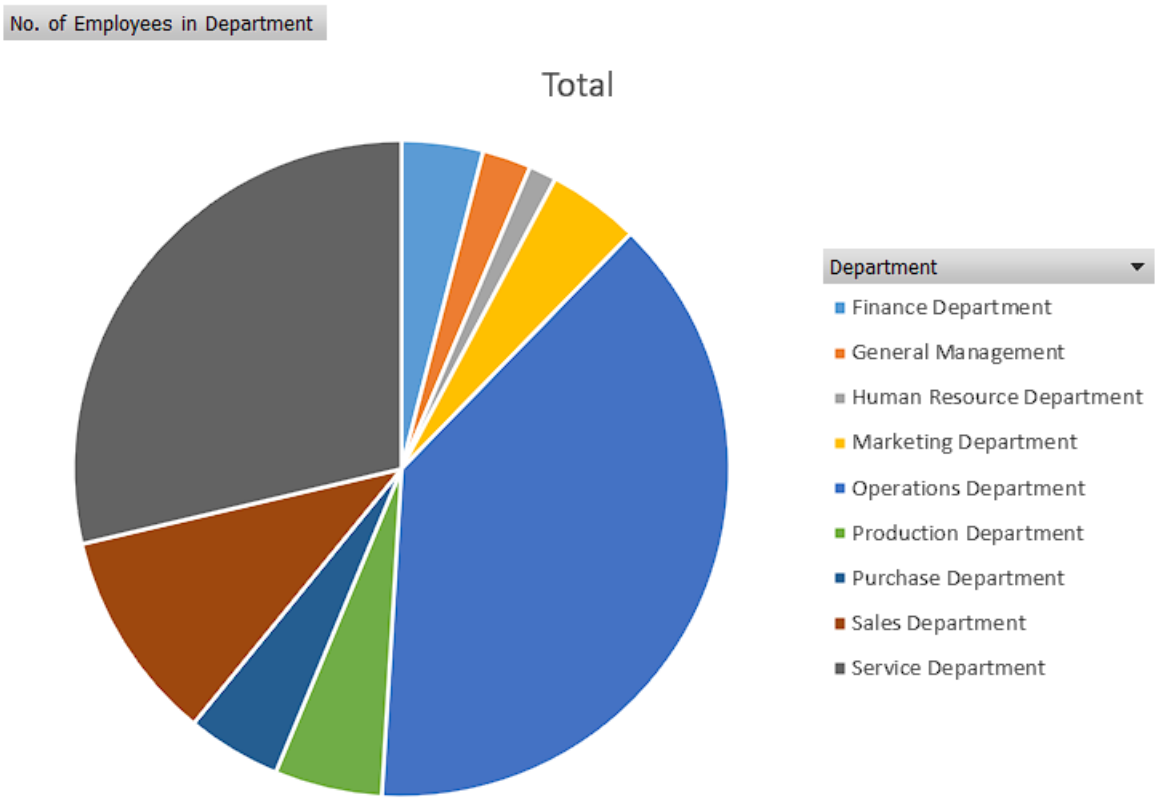


4. Draw a chart to show no. of people working in different departments.

   To obtain this we selected the Departments column and made a pivot table of it which gave us the count of number of employees in each department in the company which is shown below.

Department	No. of Employees in Department
Finance Department	288
General Management	172
Human Resource Department	97
Marketing Department	325
Operations Department	2771
Production Department	380
Purchase Department	333
Sales Department	747
Service Department	2055

   Using this table we plotted a pie chart to visualize the data for better understanding as shown below.



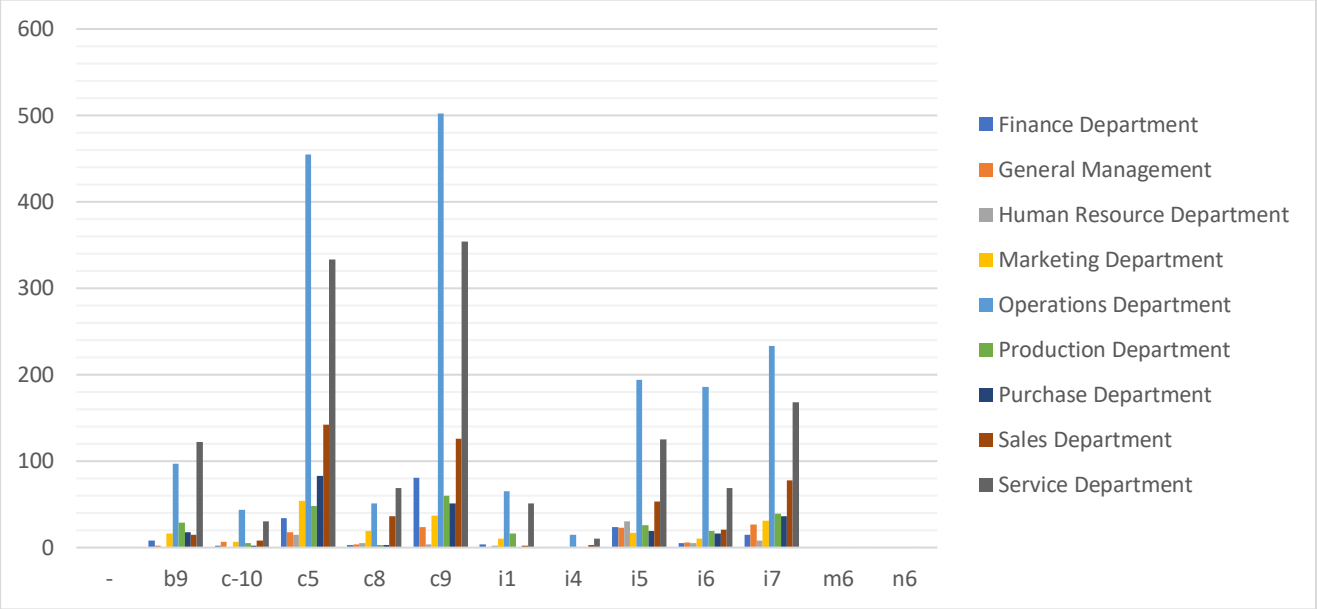
From the pie chart we can infer that the Operations and Service departments have the highest number of employees in the company and make the majority of its share.

5. Represent different post tiers using chart or graph.

   For this, we selected the “Post Name” and “Department” columns and made a pivot table of the data through which we got the count of each tier of post I each department. The data table is as shown below.

Count of Post Name	Depa									
Tiers	Finance	General Management	Human Resource	Marketing	Operations	Production	Purchase	Sales	Service	Grand Total
-								1		1
b9	8	2	1	16	97	29	18	15	122	308
c-10	2	7		7	44	5	2	8	30	105
c5	34	18	15	54	455	48	83	142	333	1182
c8	3	4	5	19	51	3	3	36	69	193
c9	81	24	4	37	502	60	51	126	354	1239
i1	4	1	2	10	65	16		2	51	151
i4		1		1	15	1	1	3	10	32
i5	24	23	30	17	194	26	19	53	125	511
i6	5	6	5	10	186	19	16	21	69	337
i7	15	27	8	31	233	39	36	78	168	635
m6					1				1	2
n6							1			1
Grand Total	**176**	**113**	**70**	**202**	**1843**	**246**	**230**	**485**	**1332**	**4697**

Using this data we plotted a bar graph to help us visualize the data and understand it better. The graph is shown below –



From the graph we can see that the Operations department has more c5 and c9 posts in it with the number of posts touching 500 and similar being the case with Service department as well but the number of posts being around 350 only.
Also, the m6 and n6 posts are the least occupied posts in all the departments with Operations, Purchase and Service departments having these.

Result

From this project, we were able to get an insight into the hiring process data of the company and analyse various elements of the process like gender ratio, salary distribution and average salaries, as well as the diversity of employees working in various departments and the posts they occupy in the company. These results can help the Hiring Department of the company to get better understanding of the whole process and make better and data-driven decisions to improve the hiring process further.