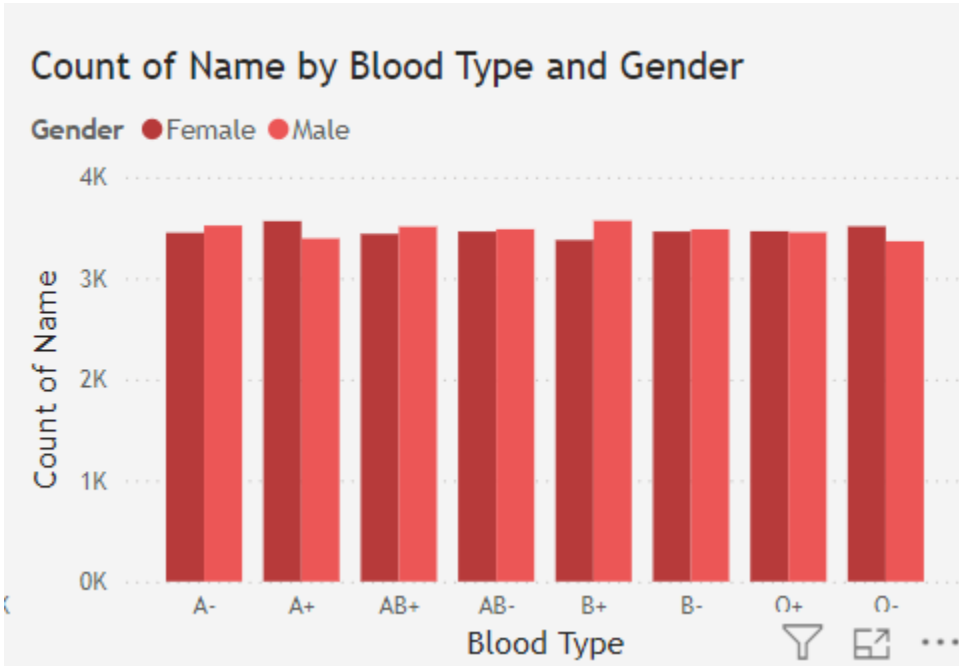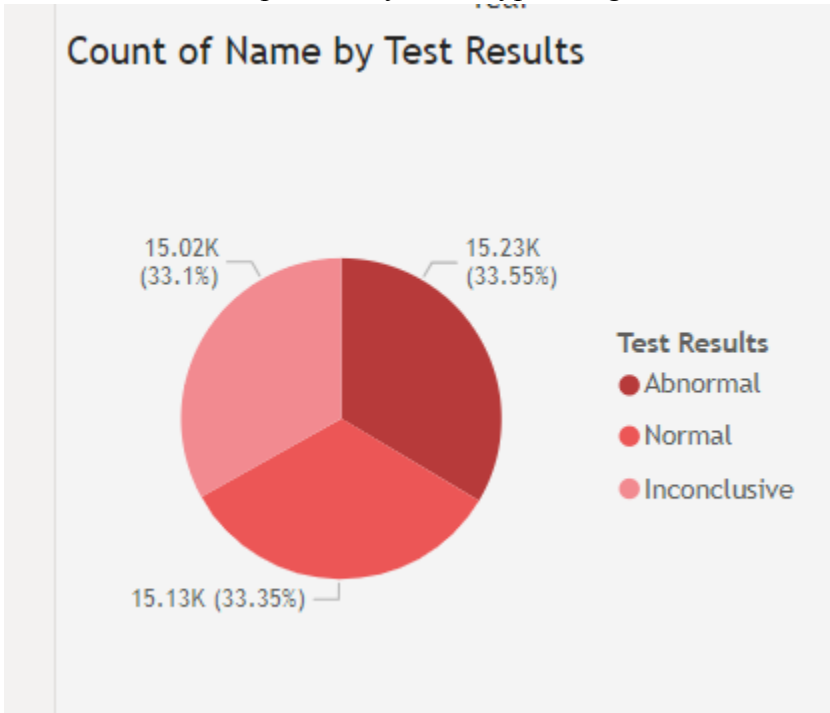| Name:	Prashil Deepak Kadam
UID:	2021600031
Experiment No:	3
Aim:	To visualize data on a Healthcare dataset
Dataset link:	https://www.kaggle.com/datasets/prasad22/healthcare-dataset
Results / Outputs:
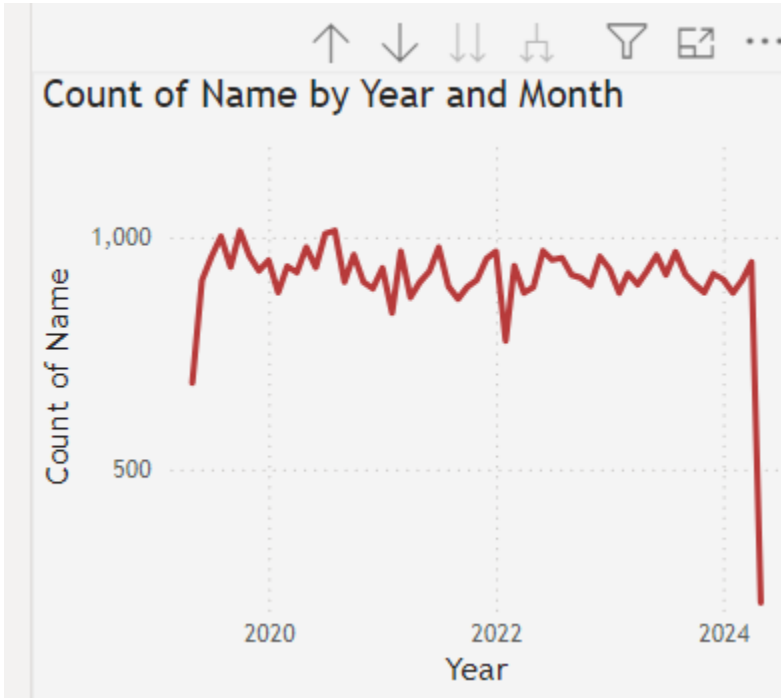
Count of number of patients by Year and Month

 |
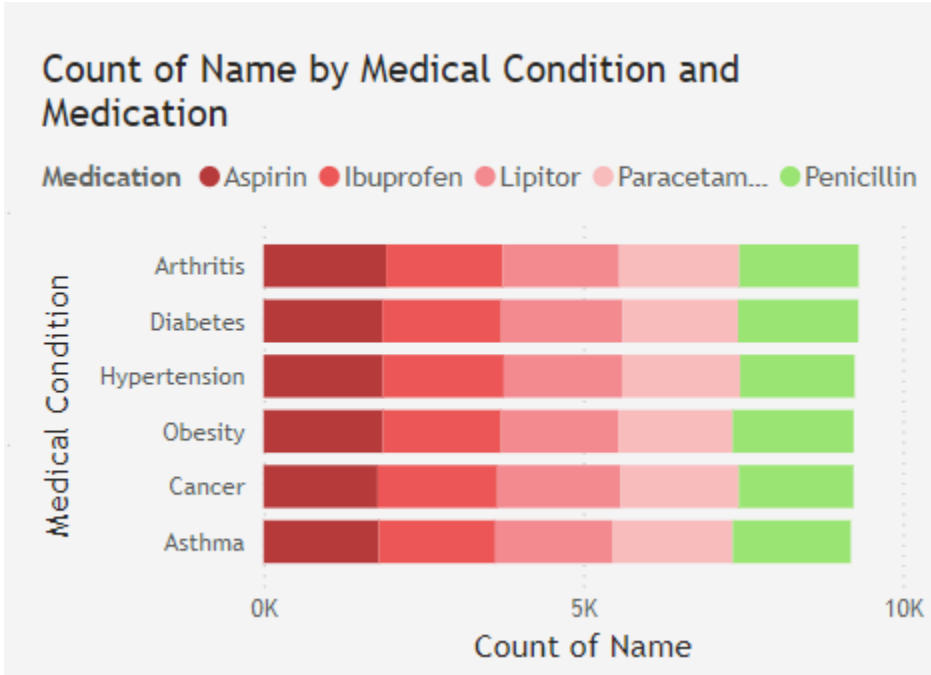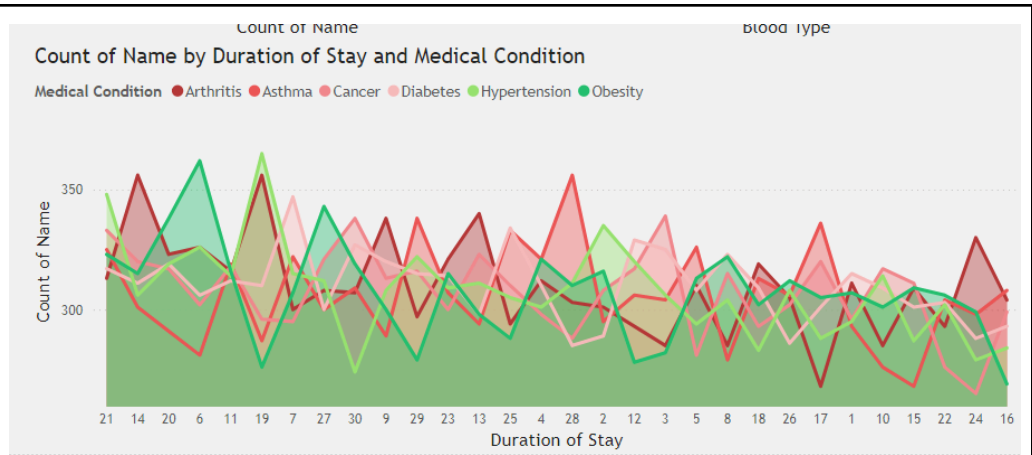
Count of number of patients by medical condition and medication given them

Count of Name by Blood Type and Gender

Gender ● Female ● Male

Count of number of patients by blood type and gender

Count of Name by Test Results

15.02K
(33.1%)

15.23K
(33.55%)

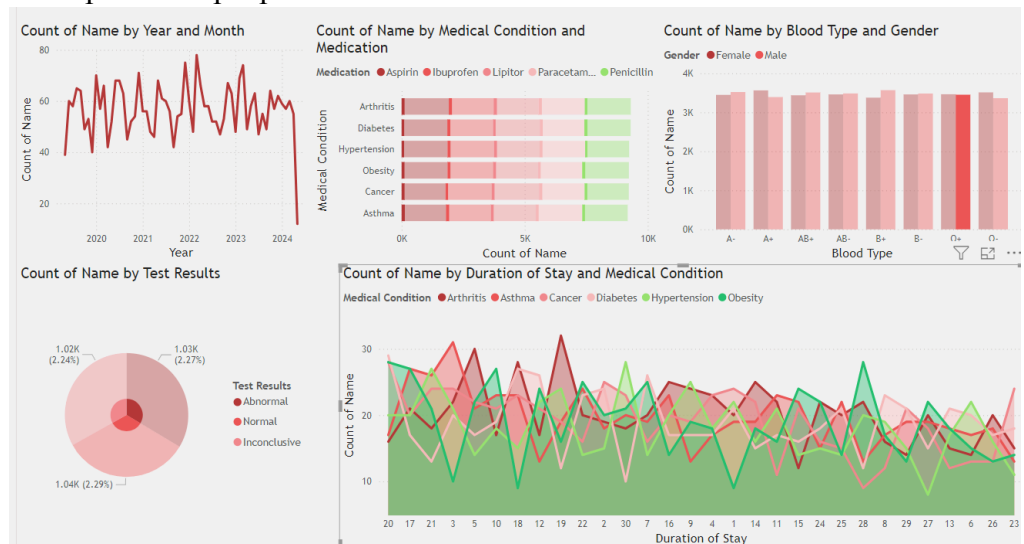15.13K (33.35%)

Test Results
● Abnormal
● Normal
● Inconclusive
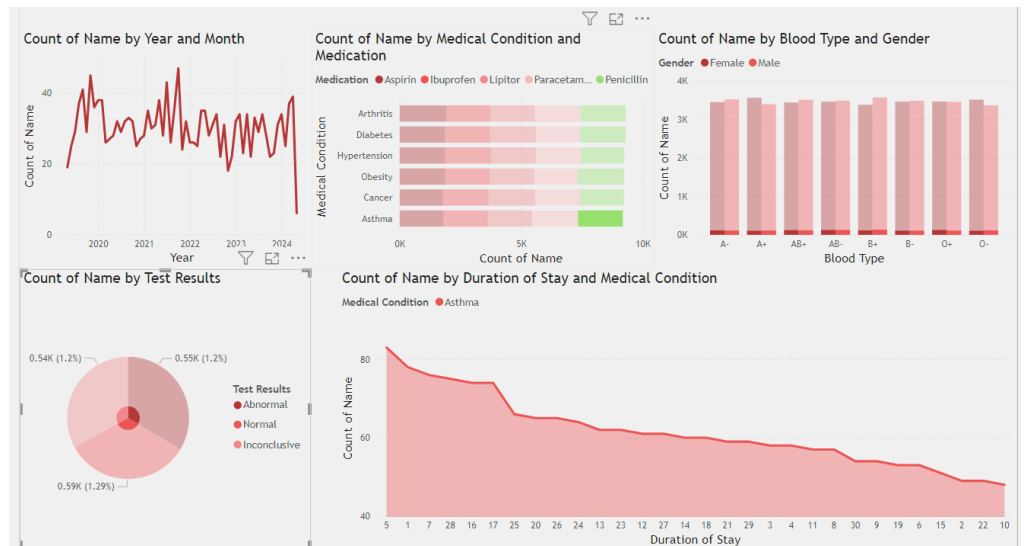

Count of number of patients by the type of test results

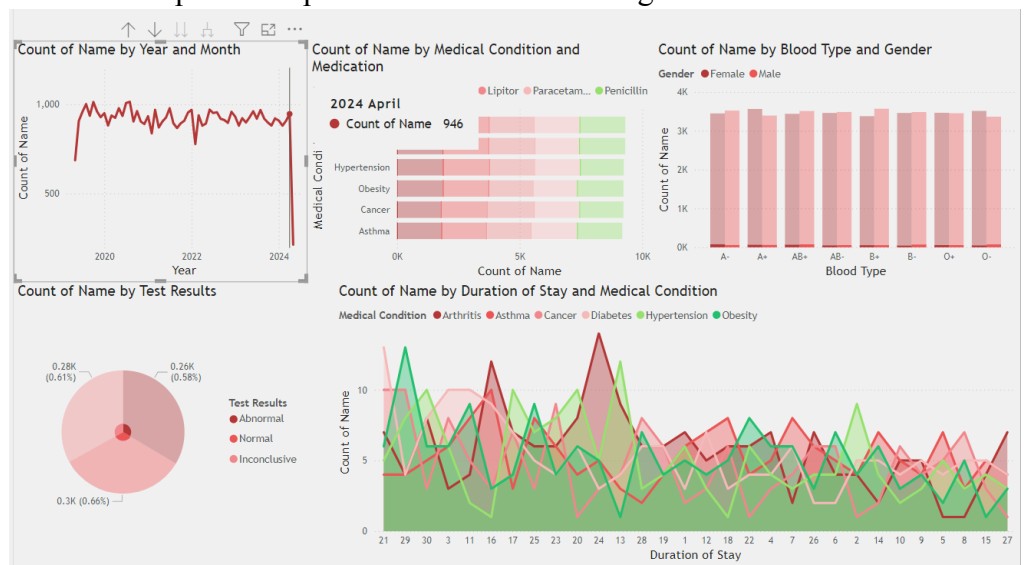Count of number of patients by their duration of stay
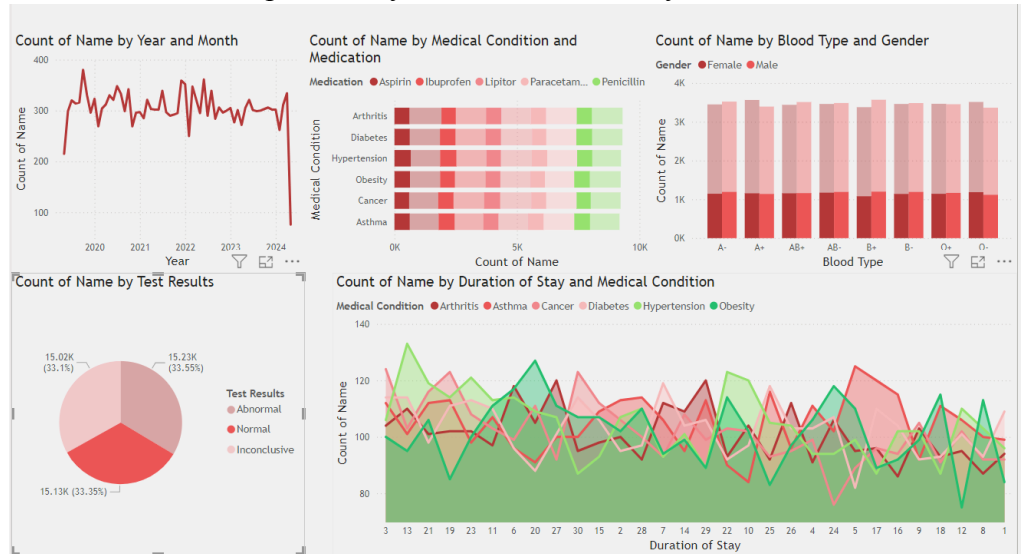
Data specific to people whose test results were normal

Data specific to male patients with O+ve blood group

	 Patient data specific to patients with Asthma and given Penicillin Data specific to April 2024
Conclusion	**Count of Name by Year and Month** The trend over time shows a consistent influx of patient data from 2019 to 2024, with notable peaks and a slight decline towards 2024. This could indicate seasonal healthcare demands or fluctuations in patient visits, perhaps linked to global events or health crises. **Medical Condition and Medication** The second visualization focuses on patients suffering from conditions like asthma, arthritis, and diabetes, and their corresponding medications. Notably, patients with hypertension and obesity are more likely to be prescribed aspirin and penicillin. This highlights the commonality of certain treatments across different conditions and points to prevalent medical conditions in the dataset. **Blood Type and Gender Distribution** The plot comparing gender distribution across different blood types reveals a relatively even distribution of male and female patients across all blood groups. This suggests no significant gender disparity for specific blood types among the recorded patients, helping healthcare providers understand demographic neutrality in their patient base.

Test Results Distribution
The pie chart of test results shows an almost equal division between patients with normal, abnormal, and inconclusive test outcomes. This balanced result demonstrates that while many patients receive normal results, a significant proportion shows abnormal outcomes, emphasizing the need for close monitoring of health trends.

Duration of Stay and Medical Condition
Finally, the line graph captures the variation in the duration of patient stays based on medical conditions. Patients with arthritis and diabetes, for instance, exhibit longer stays, suggesting more intensive treatments or prolonged recovery times. The overlap in duration across different conditions also indicates shared healthcare resource demands.

Through these visualizations, the experiment has effectively provided a window into patient care trends, treatment pathways, and healthcare resource allocation. By extracting these patterns, we gain a better understanding of the dynamics within a healthcare setting, which can drive better decision-making, optimize resource use, and improve patient outcomes.