**Report:-Diabetes Data**

The diabetes dataset, which includes patient data on glucose level, blood pressure, the skin thickness, insulin, BMI, and diabetes outcome, is the subject of this report's exploratory data analysis. This analysis's main goals are to do data cleansing, compare, and visualize numerous statistical metrics for the sample and population.

In a sample of 25 individuals, the highest glucose level was shown to be 167 mg/dL. The population's average blood glucose level was determined to be 199 mg/dL. Comparison of the sample's and the population's maximum glucose levels

An analysis of 25 patients' BMI values was found to be in the 98th percentile at 49.9 kg/m2. The population's BMI score at the 98th percentile was discovered to be 52.3 kg/m2. Comparison of the sample's and the population's BMI levels at the 98th percentile.

Applying bootstrapping, the mean, standard deviation, and 98th percentile blood pressure values for the population were all calculated. There were 500 bootstrap samples in all, each with 150 blood pressure readings. The average of the means of the bootstrap samples was found to be 71.09 mmHg, with a standard deviation of 0.40 mmHg. At 98 mmHg, blood pressure values were found to be in the 98th percentile.

The exploration of the diabetes data has produced insightful results. Now that the data has been cleansed, it may be further examined and modelled. The sample is truly representative of the population, as shown by the statistical parameter comparison between the sample and population. Additionally, we were able to calculate the mean, standard deviation, and 98th percentile of the population's blood pressure measurements using bootstrapping.