**ASSIGNMENT-3**

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1. Setting a seed value to generate a random sample size of 25 and comparing the mean and highest glucose values of the sample and the population.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A graph of different colored rectangular bars

Description automatically generated with medium confidence

**Observation:**

From the above graph, we can observe that Sample Mean and Population Mean are nearly equal for Glucose values

1. Comparing the results of 98th percentile values of BMI for sample and population.

A screenshot of a computer program

Description automatically generated

A graph of a person with a number of points

Description automatically generated with medium confidence

**Observation:**

The 98th percentile value of BMI for the population and sample size of 25 are almost similar i:e 47.53 and 40.25.

1. Creating 500 samples of 150 observations each from the population and finding the average mean, standard deviation and percentile for Blood Pressure and comparing the values.

A screenshot of a computer

Description automatically generated

**A screenshot of a computer

Description automatically generated**

**A group of graphs with different colored bars

Description automatically generated with medium confidence**

**Observations:**

The population values in the line plots and histograms are closely aligned with the bootstrap means, standard deviations, and percentiles. This implies that the bootstrap samples are representative of the population, allowing for accurate blood pressure statistics estimates.