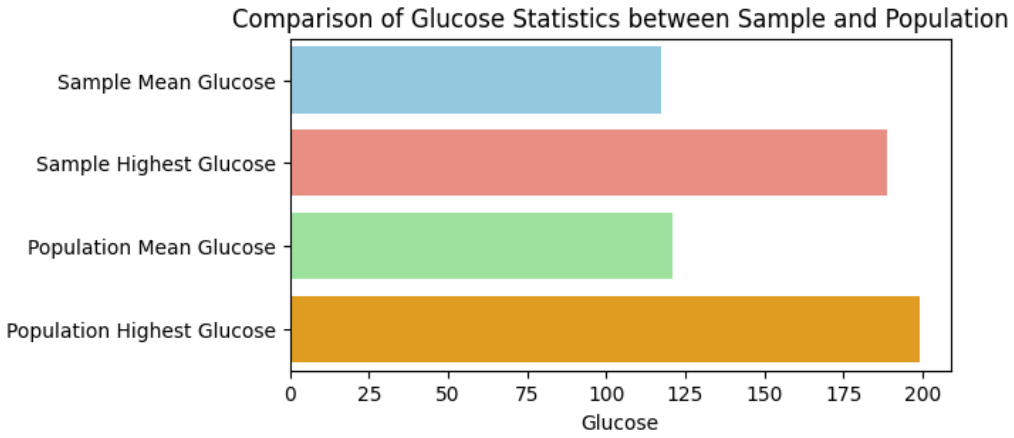
Name: Dharani Thakkallapally
Student ID: 16354872

2a) I have set the seed value to some random number and sampled 25 observations.

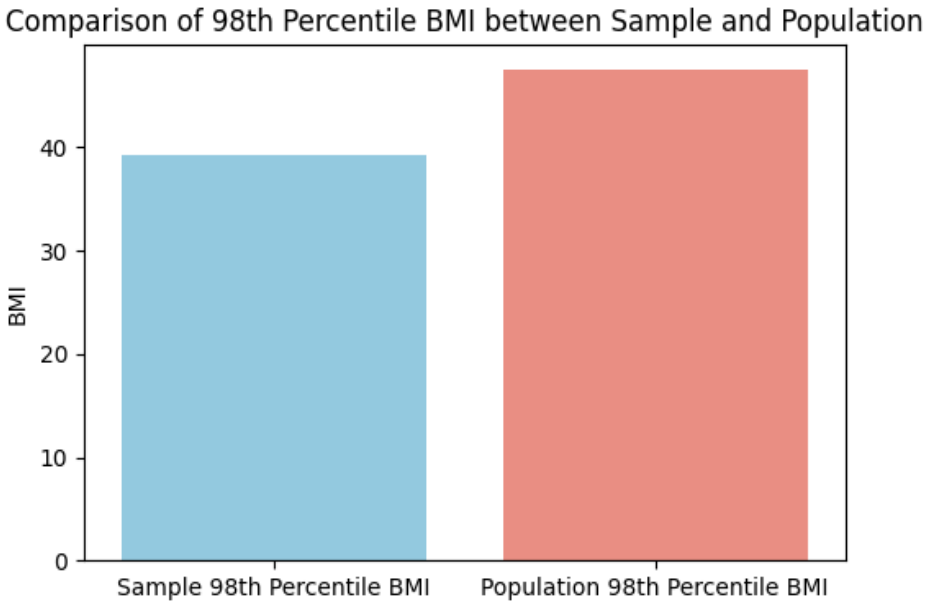
Comparison between sample and total values of glucose statistics:



According to the image, the population has a higher average glucose level than the sample. The population's highest glucose level exceeds the sample's highest glucose level. This is a small sample, which may not be representative of the entire population.

b)

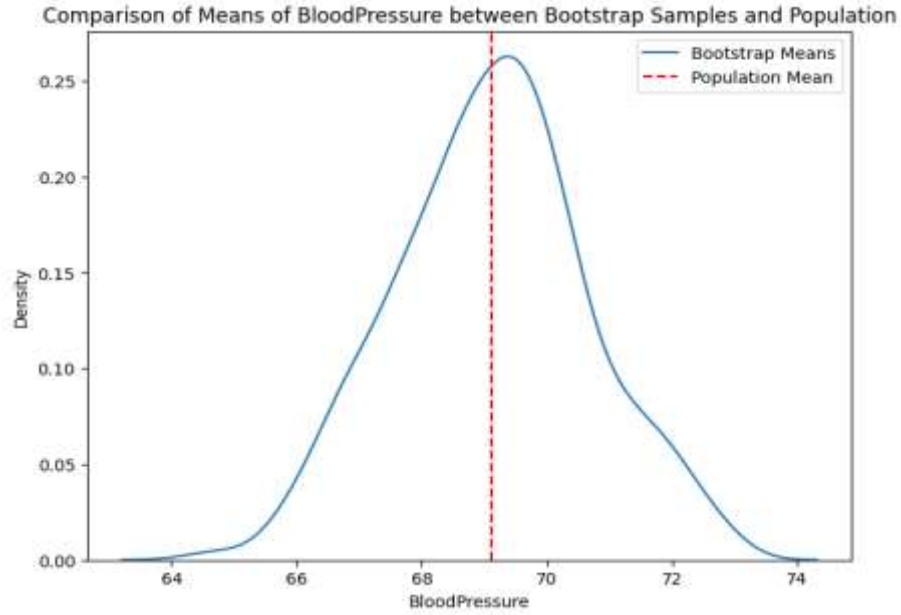
Comparison between sample and total values of glucose statistics:



Based on the image, the sample's 98th percentile BMI is lower than the population's. The blue bar represents the sample's 98th percentile BMI, which is shorter than the red bar representing the population's 98th percentile BMI. This suggests that the sample has a lower 98th percentile BMI than the general population.

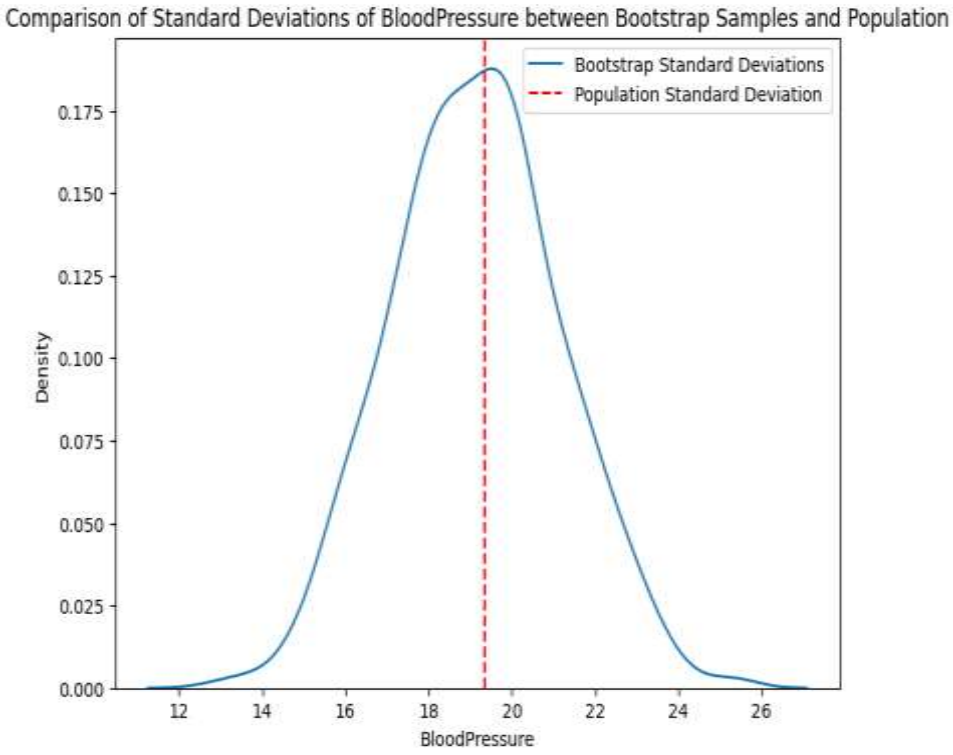
c)

Comparison of Means of BloodPressure between Bootstrap Samples and Population



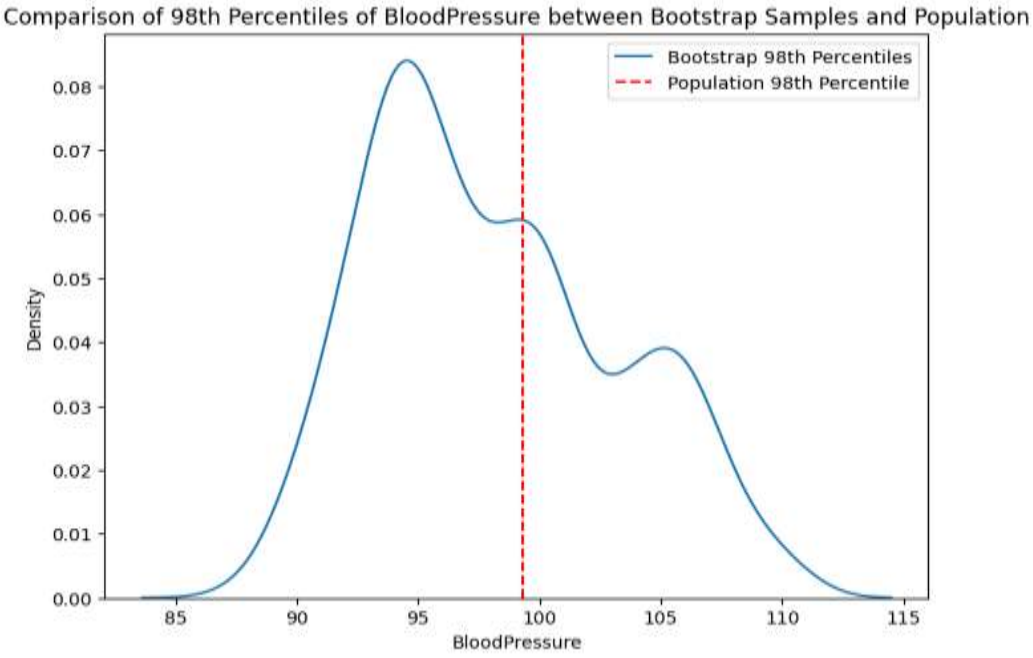
Bootstrap samples are a good representation of the population mean, with a slight bias toward higher values. This bias is most likely caused by the fact that bootstrap samples are drawn with replacement, resulting in an overestimation of the population mean.

Comparison of Standard Deviation of BloodPressure between Bootstrap Samples and Population



The bootstrap distribution is roughly normal, with the population standard deviation just slightly above the peak. This indicates that the population may have slightly higher variability in blood pressure measurements than the bootstrap samples.

Comparison of 98th percentiles of BloodPressure between Bootstrap Samples and Population



The graph depicts the distribution of the 98th percentile of blood pressure across bootstrap samples and the population. The bootstrap samples have a higher 98th percentile of blood pressure than the general population. This means that a greater proportion of the bootstrap samples have high blood pressure than the general population.