Standard deviation in a sample: s

$$s = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(x_i - \bar{x})^2}$$

Variance in a sample: s^2

$$s^2 = \left(\sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(x_i - \bar{x})^2}\right)^2 = \frac{1}{n-1}\sum_{i=1}^{n}(x_i - \bar{x})^2$$

$$> 0$$

Variance in a population: σ^2

$$\sigma^2 = \left(\sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}\right)^2 = \frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2$$