

# CS3560 Homework 3: GDB

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The standard deviation function,  $\sqrt{\frac{1}{N} \sum_{i=1}^N (a_i - \mu)^2}$ , determines the variation in a set of data, where  $\mu$  is the mean, and  $x_i$  is the data at the given index  $i$ , and  $N$  is the number of data. To find it, you calculate the sum from 1 to  $N$  of  $(a_i - \mu)$ , then square it. After that, you simply divide by the number of data, and take the square root of it.