Student performance on exam

**input:** exam scores
**output:** high score, low score, median (the "middle" score), mean (average), standard deviation

1. Begin with a design and ask a lot of clarifying questions!
2. Use functions whenever reasonable

**high score**: the highest exam score

**low score**: the lowest exam score

**median**: the "middle" score
      order the exam scores from smallest to largest, grab the middle
           even number of exam scores: the middle is the average of two middle scores
           odd number of exam scores: the middle score is the median

**mean**: the average of all the exam scores. It if often denoted $\bar{x}$ and is calculated using the formula

$$\bar{x} = \frac{\sum x_i}{n}$$

**standard deviation**: this is a measure of how spread out the scores are. The standard deviation s is given by the formula

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

n is the number of data values
$x_i$ is the $i^{th}$ data value