# Define mean, median and range

**Mean:**

when you add numbers together and divide by amount of numbers

**Median**:

order numbers lowest to highest finding the middle point.

1+4+5+8+10 =28 => 28/5 =5.6 is mean and Median is 5

# Define standard deviation and variance

**Standard deviation** shows how spread-out different values are from each other in the data set. Also, square root of variance.

**Variance** is average of the squared differences from the mean.

# What is sample and what is population?

**population** is all people in the data group like all IOT group students (70?) and the **sample** is when 10 students of the 70 got data collected.

# What is interquartile range?

it tells one far are the data points between the 25% and 75% ranges are from each other.

# What is histogram?

Data what is show in collected groups. Like In Oamk we could have histogram of student count based on how years they have studied.

# What is bias in statistics?

There are many types of bias in statics but mostly it seems to boil down to that most collection of data is to prove or disprove something.

Some biases are funding, observer, recall, omission, survivor, selection bias. Like if you asked people during the night what colour is the sky versus asking in the morning

# What is a statistical distribution? What is the most common one?

When one collect data it forms set or groups of data. For example, if you start to collet peoples hights most people will be between 130-210 centimetres and then even more visible groups. So, with statical distribution data on can do educated guesses what will happen. Like we try observing Oamk main door where we can measure height of the person. We can guess quite accurately in what range the person will be based on the observed data. Person will be 50% time 150-170 99% between 130-200 and 10-250 centimetres will be 100% of the people. **Needs to add to 100%**

Gaussian distribution, often called the Normal distribution.

# What is the difference between discrete and continuous distribution?

Continuous value is value that can have really have any value. Like hight can have any value between 180-181 centimetres. But something like coin flip will only have 3 options tails, head or neither.

In simple terms continuous is measured and discrete is counted.