Correlation : a statistical measure that expresses the extent to which two variables are linearly related, meaning that they change together at a constant rate.

Negative correlation :- increase in one variable is associated with a decrease in the other.

$$r = \frac{\sum ((x-\bar{x})(y-\bar{y}))}{(n-1) \times S_x \times S_y}$$

use $(n-1)$ for sample else use population.

Correlation V/S Causation :

Causation means one event directly causes the other.

Just because 2 things are correlated doesn't mean that one causes the other. A 3rd factor could be influencing both.