# The difference between mutually exclusive and independent events

## Mutually exclusive event:

Two events are mutually exclusive when they cannot occur at the same time. For example, if we flip a coin it can only show a head OR a tail, not both.

## Independent event:

The occurrence of one event does not affect the occurrence of the others. For example, if we flip a coin two times, the first time may show a head, but the next time when we flip the coin the outcome will be heads also. From this example, we can see the first event does not affect the occurrence of the next event.

Simply, for independent events we have two events derived from ***two different trials*** (two different events like tossing coin and rolling a dice, tossing two coins). Therefore, probability of occurrence of one does not affect the probability of occurrence of other. In case of mutually exclusive events, we have also two events (may be more than two) but difference is that the events derived from the ***same trial*** (in rolling a dice, facing even numbers & odd numbers are mutually exclusive).