Secret Santa

From 00:00 to 00:42

Explain what is Secret Santa.

From 01:22 to 01:36

What are the two fundamental things for a perfect Secret Santa ?

From 01:44 to 02:03

How does Hannah describe the "hat method" ?
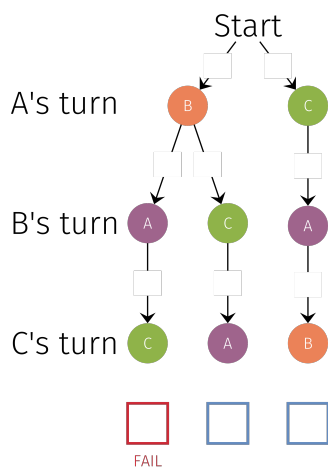
What is the obvious problem with this method and what does the group have to do in this case ?

Why is there also an anonymity violation if the person before the last one pulls his or her name ?

From 02:46 to 10:59

Start

A's turn

B's turn

C's turn

FAIL

Despite of anonymity issues, let's see how Secret Santa works with 3 persons.

Complete this probability tree.

When the method works, can we say is it completely random ? Justify your answer.

From 11:00 till the end

Explain what's the right way to organize a Secret Santa.

Bonus

What's a derangement ?

Complete the following tree for a "hat method" with 4 person.

Start

A's turn

1/3

B

B's turn

1/3   1/3   1/3

A   C   D

1   1/2   1/2   1

C's turn

D   A   D   A

1   1   1   1

D's turn

C   D   A   C

1/9   1/18   1/18   1/9

What's the probability of a failure ?