**Counting and Optimisation Lab 3 Practical Application of the Counting Theorem**

**Document Id 15**

**Questions**

1. Give a precise definition of a combination
2. List all combinations of the letters ABC
3. List all 2 letter combinations of the letters in the word CAT

**Practical**

An array A[1...n] contains all the integers from 0 to n except for one number which is missing.

Task 1 create code that finds the missing integer

**int**[] missingSeries = **new int**[]{1, 3, 6, 4, 2};

Ans is 5

Taks 2

create code that finds the missing integer when the elements of A are represented in binary

and access time is constant

*// Big endian*

https://en.wikipedia.org/wiki/Endianness

{"000","010","001","100", "101", "111", "110"}