

# Online on Pointers

Section: C1+C2

Time: 50 minutes

## Problem: Decode a BCD String

Write a C program that takes a BCD string as input and converts it into its corresponding integer **string**. Each sequence in the input string represents a 4-bit BCD code, where **0000** to **1001** represents the integers **0** to **9**. You may assume the input sequence can be always split into 4 bit chunks. *You are not allowed to use the `strtol` library function to convert a binary string to an integer value. You have to implement this function yourself.*

Use **pointer arithmetic** and **dynamic memory allocation** to solve the problem. No array indexing allowed!

## Sample I/O:

Input	Output
0001100101000111	1947
0001100101110001	1971
0010000000100100	2024

Explanation for the first input:

```
0001 1001 0100 0111
|    |    |    |
1     9     4     7
```