

## Algorithms Level 4



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# PROGRAMMING ADVICES

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## Problem # 1/4 Solution Using C++

```
#include <iostream>
#include <string>

using namespace std;

string NumberToText(int Number)
{
    if (Number == 0)
    {
        return "";
    }

    if (Number >= 1 && Number <= 19)
    {
        string arr[] = { "",
            "One", "Two", "Three", "Four", "Five", "Six", "Seven",
            "Eight", "Nine", "Ten", "Eleven", "Twelve", "Thirteen", "Fourteen",
            "Fifteen", "Sixteen", "Seventeen", "Eighteen", "Nineteen" };

        return arr[Number] + " ";
    }

    if (Number >= 20 && Number <= 99)
    {
        string arr[] = {
            "", "", "Twenty", "Thirty", "Forty", "Fifty", "Sixty", "Seventy", "Eighty",
            "Ninety" };

        return arr[Number / 10] + " " + NumberToText(Number % 10);
    }

    if (Number >= 100 && Number <= 199)
    {
        return "One Hundred " + NumberToText(Number % 100);
    }

    if (Number >= 200 && Number <= 999)
    {
        return NumberToText(Number / 100) + "Hundreds " +
            NumberToText(Number % 100);
    }

    if (Number >= 1000 && Number <= 1999)
    {
        return "One Thousand " + NumberToText(Number % 1000);
    }
}
```



## Problem # 1/4 Solution Using C++

```
    if (Number >= 2000 && Number <= 999999)
    {
        return    NumberToText(Number / 1000) + "Thousands " +
NumberToText(Number % 1000);
    }

    if (Number >= 1000000 && Number <= 1999999)
    {
        return    "One Million " + NumberToText(Number % 1000000);
    }

    if (Number >= 2000000 && Number <= 999999999)
    {
        return    NumberToText(Number / 1000000) + "Millions " +
NumberToText(Number % 1000000);
    }

    if (Number >= 1000000000 && Number <= 1999999999)
    {
        return    "One Billion " + NumberToText(Number %
1000000000);
    }
    else
    {
        return    NumberToText(Number / 1000000000) + "Billions " +
NumberToText(Number % 1000000000);
    }
}

int ReadNumber()
{
    int Number;
    cout << "\nEnter a Number? ";
    cin >> Number;
    return Number;
}

int main()
{
    int Number = ReadNumber();

    cout << NumberToText(Number);

    system("pause>0");
    return 0;
}
```