Example on recursion

This function calculates x raised to the power n (i.e., x^n).

```cpp
#include <iostream>
using namespace std;


int power(int x, int n) {
    if (n == 0)  // Base case
        return 1;
    else        // Recursive case
        return x * power(x, n - 1);
}


int main() {
    int x = 2, n = 3;
    cout << x << " raised to the power " << n << " is " << power(x, n) << endl;
    return 0;
}
```

This function calculates the sum of all elements in an array.

```cpp
#include <iostream>
using namespace std;

int sumArray(int arr[], int size) {
    if (size == 0)  // Base case
        return 0;
    else            // Recursive case
        return arr[size - 1] + sumArray(arr, size - 1);
}

int main() {
    int size = 5;
    int arr[] = {1, 2, 3, 4, 5};
    cout << "Sum of array elements is " << sumArray(arr, size) << endl;
    return 0;
}
```

Sum of First n Natural Numbers

```cpp
#include <iostream>
using namespace std;

int sumOfNaturalNumbers(int n) {
    if (n == 0)  // Base case
        return 0;
    else        // Recursive case
        return n + sumOfNaturalNumbers(n - 1);
}

int main() {
    int n = 10;
    cout << "Sum of first " << n << " natural numbers is " << sumOfNaturalNumbers(n) << endl;
    return 0;
}
```