Question 1

file I/O	

Given

```
────────────────── input.txt ──────────────────
1 2 3 4 5 6 7 8 9 10
```

write an entire program (including *#include* directives and `using std::...` statements) to generate

```
──────────────── output.gen.txt ────────────────
1 4 9 16 25 36 49 64 81 100
```

without hard coding the number of integers to read in. Be sure to check that opening each file succeeded before reading from or writing to it, and `return 1;` from `main()` if it did not.

```cpp
#include <fstream>
using std::ifstream;
using std::ofstream;

int main() {
    ifstream infile("input.txt");
    if (! infile.is_open() )
        return 1;   // error

    ofstream outfile("output.gen.txt");
    if (! outfile.is_open() )
        return 1; // error

    int n;
    infile >> n;
    while (infile.good()) {
        outfile << n*n << " ";
        infile >> n;
    }

    return 0;   // success
}
```