Problem 1
Write a complete C++ program that does the following. (Programs that correctly carry out some of the tasks will receive partial credit.)
1. It opens an input file called input14b.txt that contains only strings, including at least one that starts with the letter X. (You may assume that the file has exactly this content.)
2. It reads strings from the file until one beginning with X is found.
3. It reports how many strings were read (upto and including the first that begins with X).

For example if the file input14b.txt has the following content:

A BBB Cat
Dog
XYZ E XXX

The first X-word in the file is its 5th string XYZ and the program would output: 5

Problem 2
Consider the following C++ program.
```cpp
#include <iostream>
#include <fstream>
using namespace std;

int main() {
    ifstream infile("file.txt");
    for (int line = 1; line <= 5; line++) {
        cout << "Line " << line << " ";
        int x;
        if (infile.eof()) cout << "Done";
        infile >> x;
        if (x > 10) cout << ++x;
        if (x > 5) cout << 2 * x;
        if (x > 0) cout << x;
        if (x < 0) {
            infile >> x;
            cout << x;
        }
    }
    cout << endl;
    return 0;
}
```

The file called file.txt exists in the directory in which the above program is run. The file consists of the following data:

0 2 22 -2 -2 -22 22222222

(a) What is the output line that begins: Line 1? Answer: 
(b) What is the output line that begins: Line 2? Answer: 
(c) What is the output line that begins: Line 3? Answer: 
(d) What is the output line that begins: Line 4? Answer: 
(e) What is the output line that begins: Line 5? Answer:
Problem 3
Write a complete C++ program that does the following. (Programs that correctly carry out
some of the tasks will receive partial credit.)
1. It asks the user to enter 25 integers and it reads the numbers that the user gives.
2. It calculates the average of the entered numbers.
3. It reports all entered numbers that are greater than the average, by printing them to a file
called output6.txt.

Problem 4
Write C++ statements to carry out the following tasks. Do not write complete
programs, just give a single line, or a few lines of C++ instructions. Declare
and initialize any variables that you use in each part.

(i) Print the number 7 to an output file whose system name is out.txt

(ii) Read the first line of text in an input file whose system name is in.txt. Store the line in an
appropriate variable called line.