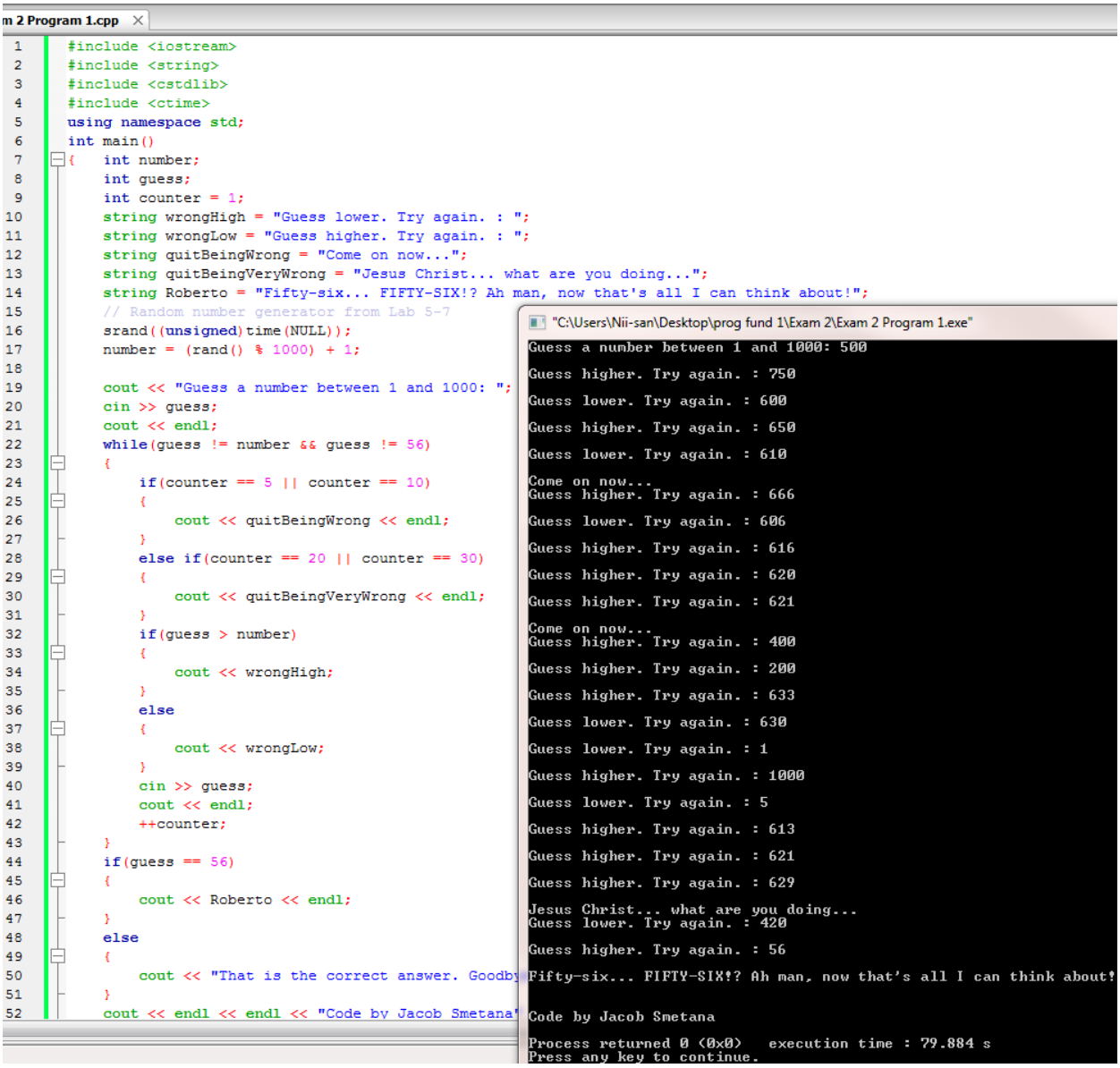
Exam 2 Part 2

Program 1 Pseudocode.

```
start
    Declarations
        num number
        num guess

    input guess

    while guess != number is true
        if guess > number is true then
            output "guess lower"
        else
            output "guess higher"
        endif
        input guess
    endwhile

    output "guess is correct"
stop
```

Program 1 Code.

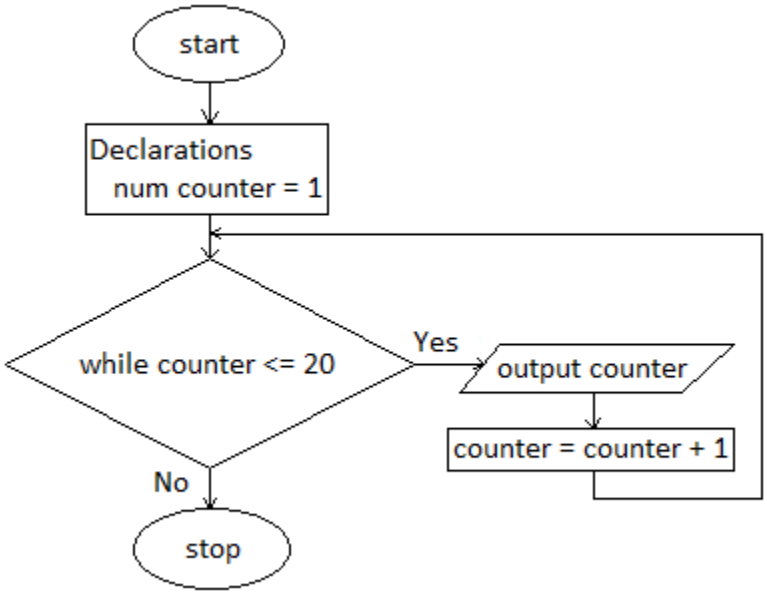


```
m 2 Program 1.cpp
#include <iostream>
#include <string>
#include <cstdlib>
#include <ctime>
using namespace std;
int main()
{   int number;
    int guess;
    int counter = 1;
    string wrongHigh = "Guess lower. Try again. : ";
    string wrongLow = "Guess higher. Try again. : ";
    string quitBeingWrong = "Come on now...";
    string quitBeingVeryWrong = "Jesus Christ... what are you doing...";
    string Roberto = "Fifty-six... FIFTY-SIX!? Ah man, now that's all I can think about!";
    // Random number generator from Lab 5-7
    srand((unsigned)time(NULL));
    number = (rand() % 1000) + 1;

    cout << "Guess a number between 1 and 1000: ";
    cin >> guess;
    cout << endl;
    while(guess != number && guess != 56)
    {
        if(counter == 5 || counter == 10)
        {
            cout << quitBeingWrong << endl;
        }
        else if(counter == 20 || counter == 30)
        {
            cout << quitBeingVeryWrong << endl;
        }
        if(guess > number)
        {
            cout << wrongHigh;
        }
        else
        {
            cout << wrongLow;
        }
        cin >> guess;
        cout << endl;
        ++counter;
    }
    if(guess == 56)
    {
        cout << Roberto << endl;
    }
    else
    {
        cout << "That is the correct answer. Goodby
    }
    cout << endl << endl << "Code by Jacob Smetana"
```

```
"C:\Users\Nii-san\Desktop\prog fund 1\Exam 2\Exam 2 Program 1.exe"
Guess a number between 1 and 1000: 500

Guess higher. Try again. : 750

Guess lower. Try again. : 600

Guess higher. Try again. : 650

Guess lower. Try again. : 610

Come on now...
Guess higher. Try again. : 666

Guess lower. Try again. : 606

Guess higher. Try again. : 616

Guess higher. Try again. : 620

Guess higher. Try again. : 621

Come on now...
Guess higher. Try again. : 400

Guess higher. Try again. : 200

Guess higher. Try again. : 633

Guess lower. Try again. : 630

Guess lower. Try again. : 1

Guess higher. Try again. : 1000

Guess lower. Try again. : 5

Guess higher. Try again. : 613

Guess higher. Try again. : 621

Guess higher. Try again. : 629

Jesus Christ... what are you doing...
Guess lower. Try again. : 420

Guess higher. Try again. : 56

Fifty-six... FIFTY-SIX!? Ah man, now that's all I can think about!


Code by Jacob Smetana

Process returned 0 (0x0)   execution time : 79.884 s
Press any key to continue.
```

Program 2 Flowchart & Pseudocode.

```
start
    Declarations
        num counter

    for counter = 1 to 20 step 1
        output counter
    endfor
stop
```



Program 2 Code.

Exam 2 Program 2.cpp

```
1   #include <iostream>
2   using namespace std;
3   int main()
4   {
5       int counter;
6
7       for(counter = 1; counter <= 20; ++counter)
8       {
9           cout << counter << endl;
10      }
11
12      cout << endl << "Code by Jacob Smetana" << endl;
13      return 0;
14  }
15
```

"C:\Users\Nii-san\Desktop\prog fund 1\Exam 2\Exam 2 Program 2.exe"

```
1
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Code by Jacob Smetana

Process returned 0 (0x0)   execution time : 0.005 s
Press any key to continue.
```