Assignment 3- Chapter 8 – Control Structures

Objectives: The objectives of this assignment are:

1. Write a complete assembly program using loops.

Exercise:

Write an assembly program that

1. generates a random number between 0 and 255.
2. asks the user for input numbers. For every input number, it tells the user if it is too high or low and keeps asking until he/she guesses correctly.

Here is the pseudocode of the program:

```
r = RANDOM_NUMBER
do {
        print_string("Enter a guess: ");
        input = read_int()
        if (input > r)
            print_string("Too high\n");
        if (input < r)
           print_string("Too low\n");
} while (input != r);
print_string("Correct!");
```

Hint: x86 assembly code to generate a random number between 0 and 255 and store it in ebx:

```
mov ebx, 0
mov bl, cl
```

Sample Output:

```
Enter a guess: 200
Too high
Enter a guess: 100
Too high
Enter a guess: 50
Too high
Enter a guess: 30
Too high
Enter a guess: 20
Too high
Enter a guess: 10
Too high
Enter a guess: 5
Too low
Enter a guess: 6
Too low
Enter a guess: 7
Too low
Enter a guess: 8
Correct!
```

Deliverables:

- Your assembly code (.asm) file.
- A screenshot of your code running, proving it works, or showing how far you got.
- The path on the server where it can be found. (run `pwd` to get this)