**Laboratory Activity #3**

**Binary Search**

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*Suggested Time:* **60 minutes**

Individual work will be evaluated manually using the following criteria:

- Functionality (30%)

- Accuracy (30%)

- Code Efficiency (30%)

- User Interface (10%)

\*\*\* *for complete details,* *please refer to the provided rubric.*

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**Guess a Number Game: Create a program that the asks the user to enter a number from 1 to 10. While a secret number must be *randomly* generated by the computer using the Random class. The user will be given a maximum of three (3) attempts to correctly guess the number, otherwise it will display a message “Sorry, you have reach a maximum of 3 attempts” and the program terminates.**

(*Individual work – unique source code*)

Sample Output:

The computer has successfully generated a secret number...

Guess a Number from 1 to 10: 5

Your guess is HIGH, try guessing for a LOWER number

Guess a Number from 1 to 4: 2

Your guess is LOW, try guessing for a HIGHER number

Guess a Number from 3 to 4: 3

Good Job! You have successfully guess the secret number in 3 attempts.

The computer has successfully generated a secret number...

Guess a Number from 1 to 10: 4

Your guess is LOW, try guessing for a HIGHER number

Guess a Number from 5 to 10: 8

Your guess is HIGH, try guessing for a LOWER number

Guess a Number from 5 to 7: 6

Sorry, you have reached a maximum of three attempts!

The secret number is 5

**Required to Submit:**

***Save*** this document with the following content:

1. source code (text) - “copy-pasted C# code”
2. screenshot of sample output
3. Source Code

using System;

namespace Lab\_Act\_3

{

class Program

{

static void Main(string[] args)

{

int start = 0;

int end = 10;

int guess;

Random rand\_num = new Random();

int winning\_number = rand\_num.Next(start, end);

for (int i = 1; i <= 3; i++)

{

Console.Write("Enter Guess {0}: ", i);

guess = Convert.ToInt32(Console.ReadLine());

if (i >= 3)

{

Console.WriteLine("Sorry, you have reached a maximum of three attempts! ");

Console.Write("The Secret Number is {0}", winning\_number);

break;

}

else

{

if (guess == winning\_number)

{

Console.Write("Good Job! You have successfully guess the secret number in {0} attempts.", i);

break;

}

else if (guess < winning\_number)

{

Console.WriteLine("Your guess is LOW, try guessing for a HIGHER number");

}

else if (guess > winning\_number)

{

Console.WriteLine("Your guess is HIGH, try guessing for a LOWER number");

}

}

}

Console.ReadKey();

}

}

}

1. Screenshot of Sample Output

<Change this with your sample screenshots>



