

Course Code: CS 3101

Course Title: Rapid Application Development and Visual Programming Technologies

## **Programming Assignment**

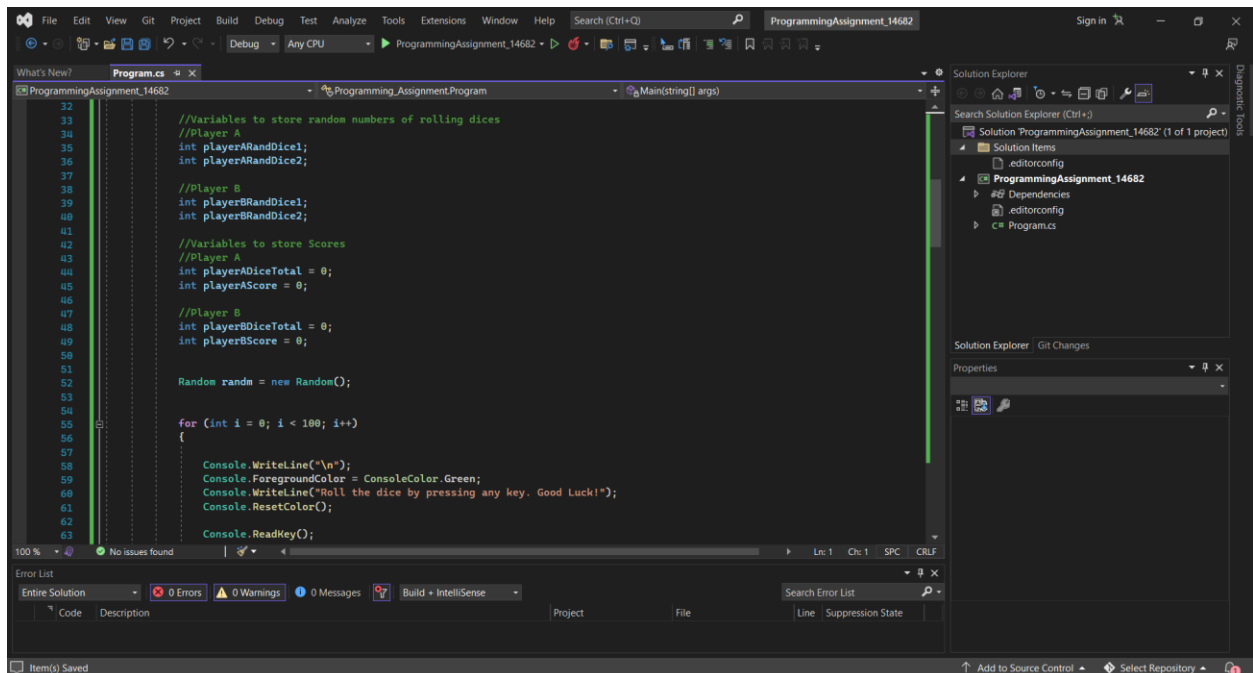
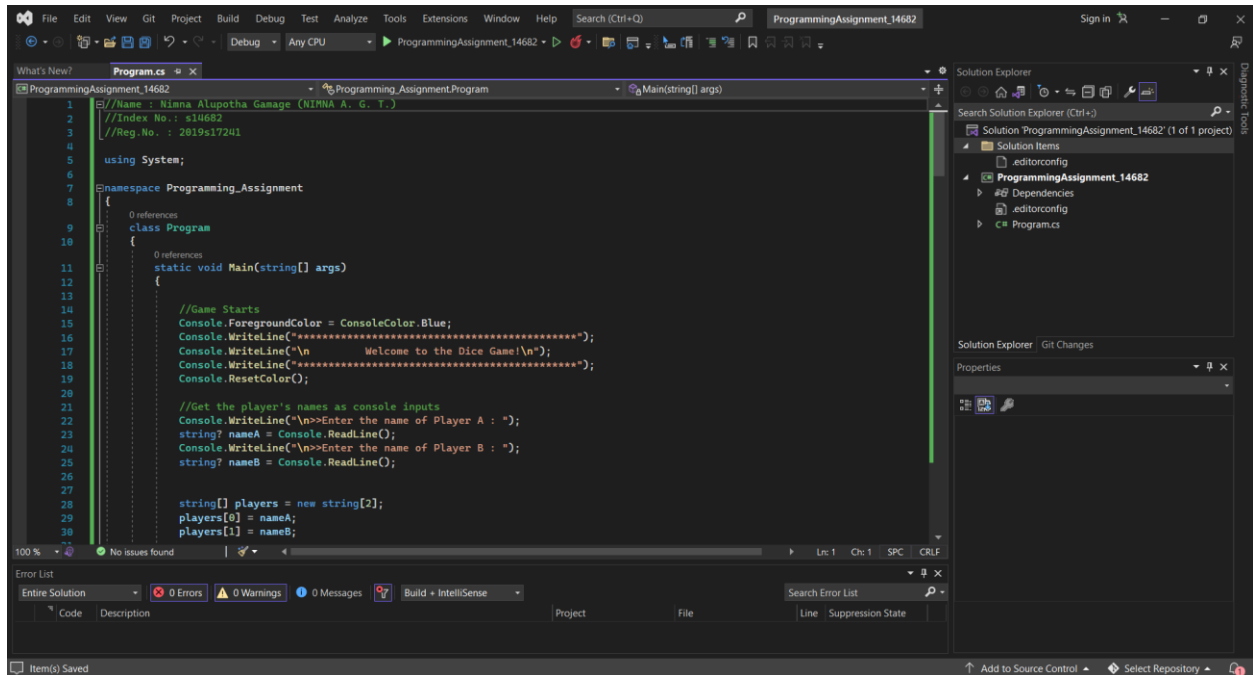
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Index No.: 14682

Reg. No. : 2019s17241

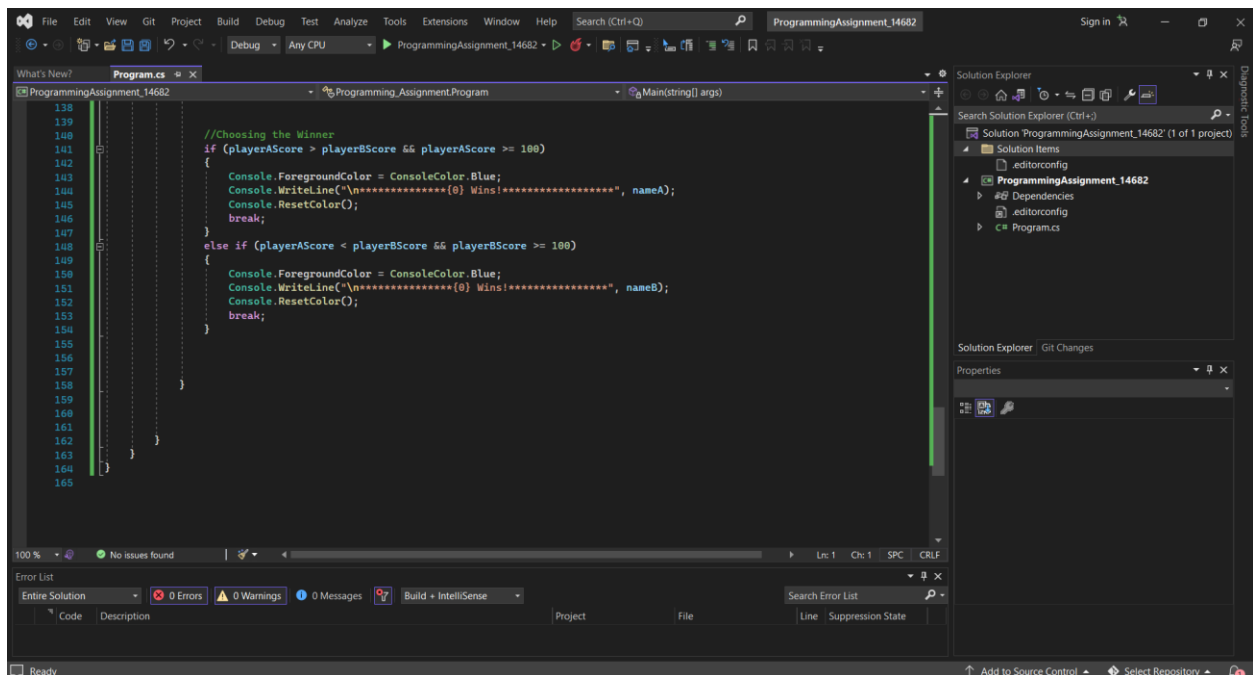
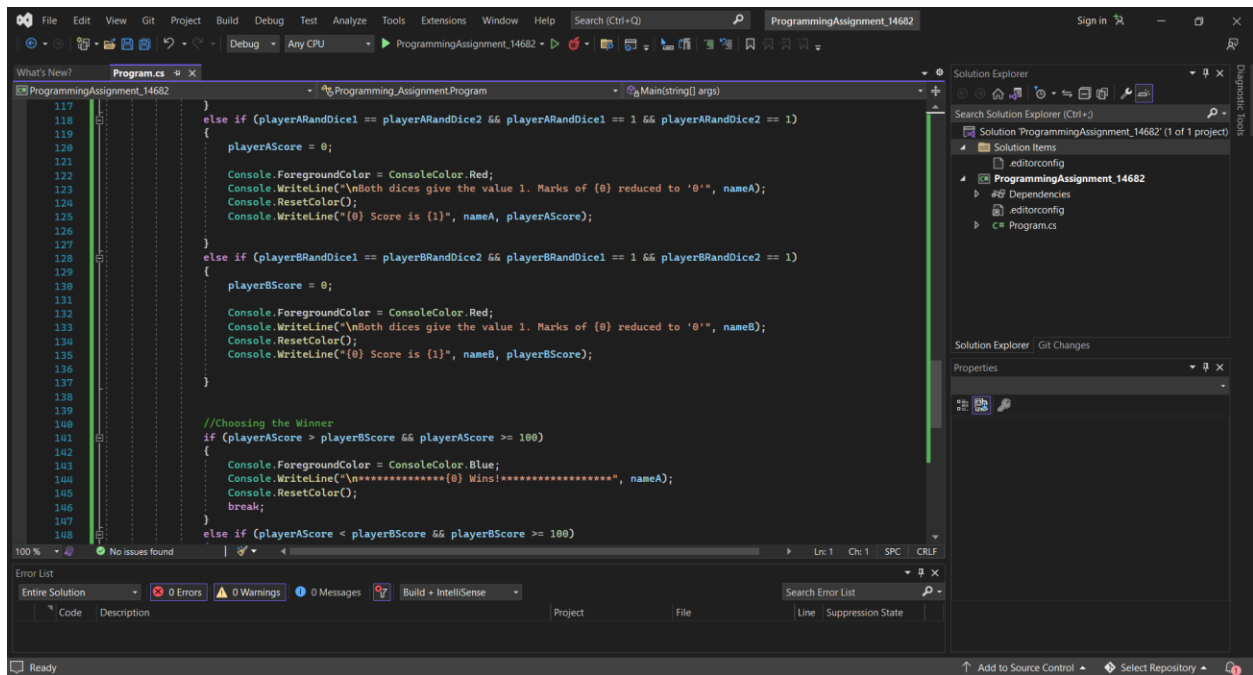
Year : 3rd year

## Screenshots of the Visual Studio Code



```
62 Console.ReadKey();
63
64 //Generating random numbers
65 //Player A
66 playerARandDice1 = rand.Next(1, 7);
67 playerARandDice2 = rand.Next(1, 7);
68 Console.WriteLine("{0} has rolled {1} {2}", nameA, playerARandDice1, playerARandDice2);
69
70 //Player B
71 playerBRandDice1 = rand.Next(1, 7);
72 playerBRandDice2 = rand.Next(1, 7);
73 Console.WriteLine("{0} has rolled {1} {2}", nameB, playerBRandDice1, playerBRandDice2);
74
75
76 playerADiceTotal = playerARandDice1 + playerARandDice2;
77 playerAScore = playerAScore + playerADiceTotal;
78 Console.WriteLine("{0} Score is {1}", nameA, playerAScore);
79
80 playerBDiceTotal = playerBRandDice1 + playerBRandDice2;
81 playerBScore = playerBScore + playerBDiceTotal;
82 Console.WriteLine("{0} Score is {1}", nameB, playerBScore);
83
84
85 //Game Rules
86 if (playerARandDice1 == playerARandDice2 && playerARandDice1 != 1 && playerARandDice2 != 1)
87 {
88     Console.ForegroundColor = ConsoleColor.Yellow;
89     Console.WriteLine("\n{0} will get another chance to roll the dice!", nameA);
90     Console.ResetColor();
91 }
```

```
92 Console.ForegroundColor = ConsoleColor.Yellow;
93 Console.WriteLine("\n{0} will get another chance to roll the dice!", nameA);
94 Console.ResetColor();
95
96 playerARandDice1 = rand.Next(1, 7);
97 playerARandDice2 = rand.Next(1, 7);
98 Console.WriteLine("{0} has rolled {1} {2}", nameA, playerARandDice1, playerARandDice2);
99 playerADiceTotal = playerARandDice1 + playerARandDice2;
100 playerAScore = playerAScore + playerADiceTotal;
101 Console.WriteLine("{0} Score is {1}", nameA, playerAScore);
102
103 else if (playerBRandDice1 == playerBRandDice2 && playerBRandDice1 != 1 && playerBRandDice2 != 1)
104 {
105     Console.ForegroundColor = ConsoleColor.Yellow;
106     Console.WriteLine("\n{0} will get another chance to roll the dice!", nameB);
107     Console.ResetColor();
108
109     playerBRandDice1 = rand.Next(1, 7);
110     playerBRandDice2 = rand.Next(1, 7);
111     Console.WriteLine("{0} has rolled {1} {2}", nameB, playerBRandDice1, playerBRandDice2);
112     playerBDiceTotal = playerBRandDice1 + playerBRandDice2;
113     playerBScore = playerBScore + playerBDiceTotal;
114     Console.WriteLine("{0} Score is {1}", nameB, playerBScore);
115 }
```



## Complete code of the Dice Game

```
using System;

namespace Programming_Assignment
{
    class Program
    {
        static void Main(string[] args)
        {
            //Game Starts
            Console.ForegroundColor = ConsoleColor.Blue;
            Console.WriteLine("*****");
            Console.WriteLine("\n        Welcome to the Dice Game!\n");
            Console.WriteLine("*****");
            Console.ResetColor();

            //Get the player's names as console inputs
            Console.WriteLine("\n>>Enter the name of Player A : ");
            string? nameA = Console.ReadLine();
            Console.WriteLine("\n>>Enter the name of Player B : ");
            string? nameB = Console.ReadLine();

            string[] players = new string[2];
            players[0] = nameA;
            players[1] = nameB;

            //Variables to store random numbers of rolling dices
            //Player A
            int playerARandDice1;
            int playerARandDice2;

            //Player B
            int playerBRandDice1;
            int playerBRandDice2;

            //Variables to store Scores
            //Player A
            int playerADiceTotal = 0;
            int playerAScore = 0;

            //Player B
            int playerBDiceTotal = 0;
            int playerBScore = 0;

            Random randm = new Random();

            for (int i = 0; i < 100; i++)
            {
```

```
Console.WriteLine("\n");
Console.ForegroundColor = ConsoleColor.Green;
Console.WriteLine("Roll the dice by pressing any key. Good Luck!");
Console.ResetColor();

Console.ReadKey();

//Generating random numbers
//Player A
playerARandDice1 = randm.Next(1, 7);
playerARandDice2 = randm.Next(1, 7);
Console.WriteLine("{0} has rolled {1} {2}", nameA, playerARandDice1,
playerARandDice2);

//Player B
playerBRandDice1 = randm.Next(1, 7);
playerBRandDice2 = randm.Next(1, 7);
Console.WriteLine("{0} has rolled {1} {2}", nameB, playerBRandDice1,
playerBRandDice2);

playerADiceTotal = playerARandDice1 + playerARandDice2;
playerAScore = playerAScore + playerADiceTotal;
Console.WriteLine("{0} Score is {1}", nameA, playerAScore);

playerBDiceTotal = playerBRandDice1 + playerBRandDice2;
playerBScore = playerBScore + playerBDiceTotal;
Console.WriteLine("{0} Score is {1}", nameB, playerBScore);

//Game Rules
if (playerARandDice1 == playerARandDice2 && playerARandDice1 != 1 &&
playerARandDice2 != 1)
{
    Console.ForegroundColor = ConsoleColor.Yellow;
    Console.WriteLine("\n{0} will get another chance to roll the
dice!", nameA);
    Console.ResetColor();

    playerARandDice1 = randm.Next(1, 7);
    playerARandDice2 = randm.Next(1, 7);
    Console.WriteLine("{0} has rolled {1} {2}", nameA,
playerBRandDice1, playerBRandDice2);
    playerADiceTotal = playerARandDice1 + playerARandDice2;
    playerAScore = playerAScore + playerADiceTotal;
    Console.WriteLine("{0} Score is {1}", nameA, playerAScore);
}
else if (playerBRandDice1 == playerBRandDice2 && playerBRandDice1 !=
1 && playerBRandDice2 != 1)
{
    Console.ForegroundColor = ConsoleColor.Yellow;
    Console.WriteLine("\n{0} will get another chance to roll the
dice!", nameB);
```

---

```

        Console.ResetColor();

        playerB RandDice1 = randm.Next(1, 7);
        playerB RandDice2 = randm.Next(1, 7);
        Console.WriteLine("{0} has rolled {1} {2}", nameB,
playerB RandDice1, playerB RandDice2);
        playerB DiceTotal = playerB RandDice1 + playerB RandDice2;
        playerB Score = playerB Score + playerB DiceTotal;
        Console.WriteLine("{0} Score is {1}", nameB, playerB Score);
    }
    else if (playerA RandDice1 == playerA RandDice2 && playerA RandDice1 ==
1 && playerA RandDice2 == 1)
    {
        playerA Score = 0;

        Console.ForegroundColor = ConsoleColor.Red;
        Console.WriteLine("\nBoth dices give the value 1. Marks of {0}
reduced to '0'", nameA);
        Console.ResetColor();
        Console.WriteLine("{0} Score is {1}", nameA, playerA Score);
    }
    else if (playerB RandDice1 == playerB RandDice2 && playerB RandDice1 ==
1 && playerB RandDice2 == 1)
    {
        playerB Score = 0;

        Console.ForegroundColor = ConsoleColor.Red;
        Console.WriteLine("\nBoth dices give the value 1. Marks of {0}
reduced to '0'", nameB);
        Console.ResetColor();
        Console.WriteLine("{0} Score is {1}", nameB, playerB Score);
    }
}

//Choosing the Winner
if (playerA Score > playerB Score && playerA Score >= 100)
{
    Console.ForegroundColor = ConsoleColor.Blue;
    Console.WriteLine("\n*****{0} Wins!*****",
nameA);
    Console.ResetColor();
    break;
}
else if (playerA Score < playerB Score && playerB Score >= 100)
{
    Console.ForegroundColor = ConsoleColor.Blue;
    Console.WriteLine("\n*****{0} Wins!*****",
nameB);
    Console.ResetColor();
    break;
}

```

```
        }  
  
    }  
}
```

## **The approach for the Dice Game**

A Roll a Dice Game has developed using C# (console application) according to the given game rules.

According to the specified game rules;

- This dice game can be played by two players using two dices.
- Each player will get a chance to roll two dices at the same time.
- The winning score is 100 and the game automatically terminates if player A or player B get 100 or more than 100 marks.
- The player, whose winning score is greater than or equal to 100 will be the winner.
- If 02 dices give the same result (except the dice value 1), the same player will get another chance to roll the dice. If not, the other player will get the chance to roll 02 dices.
- When calculating the score, if both dices give the value 1, the individual marks of the respective player will be reduced to 0. If not, sum of the two dice values will be added to the individual scores of the respective player.



## The explanation of the code and the game logic

When the player run the program, the console output will give a welcome message as “Welcome to the Dice Game!”. It will appear in blue colour font.

```
using System;

namespace Programming_Assignment
{
    class Program
    {
        static void Main(string[] args)
        {
            //Game Starts
            Console.ForegroundColor = ConsoleColor.Blue;
            Console.WriteLine("*****");
            Console.WriteLine("\n        Welcome to the Dice Game!\n");
            Console.WriteLine("*****");
            Console.ResetColor();
        }
    }
}
```

Name of the players can be given as console inputs through the following code.

Console output will appear as “Enter the name of Player A : ”. Player A should type his/her name and press the enter key. Then the Console output will appear as “Enter the name of Player B : ”. Player B should type his/her name and press the enter key.

The names that are given as the console inputs will be assigned to the respective players.

```
//Get the player's names as console inputs
Console.WriteLine("\n>>Enter the name of Player A : ");
string? nameA = Console.ReadLine();
Console.WriteLine("\n>>Enter the name of Player B : ");
string? nameB = Console.ReadLine();

string[] players = new string[2];
players[0] = nameA;
players[1] = nameB;
```

Following are the variable that are used to store different values.

The player A rolled the two dices and the generated random numbers are stored in two integer type variables called; ‘playerARandDice1’ and ‘playerARandDice2’.

The player B rolled the two dices and the generated random numbers are stored in two integer type variables called; ‘playerBRandDice1’ and ‘playerBRandDice2’.

Score of player A is stored in ‘playerADiceTotal’ and ‘playerAScore’ integer type variables.

Score of player B is stored in 'playerBDiceTotal' and 'playerBScore' integer type variables.

```
//Variables to store random numbers of rolling dices
//Player A
int playerARandDice1;
int playerARandDice2;

//Player B
int playerBRandDice1;
int playerBRandDice2;

//Variables to store Scores
//Player A
int playerADiceTotal = 0;
int playerAScore = 0;

//Player B
int playerBDiceTotal = 0;
int playerBScore = 0;
```

Following code is used to initialize the instances of the Random class.

```
Random randm = new Random();
```

All the game rules are included within a for loop with 100 iterations. 100 iterations are more than enough to complete the game as mostly the game will terminate with 15 or 20 iterations. Modifications can be done using other types of loops as well. E.g. while loop.

```
for (int i = 0; i < 100; i++){
```

After the Player B entered his/her name to the console input, A message will be appeared as “Roll the dice by pressing any key. Good Luck!”. The game can be started by pressing any key on the keyboard.

```
Console.WriteLine("\n");
Console.ForegroundColor = ConsoleColor.Green;
Console.WriteLine("Roll the dice by pressing any key. Good Luck!");
Console.ResetColor();

Console.ReadKey();
```

Following code block is used to generate random numbers from two dices. Random numbers including one and excluding 7 will be generated. Each player will get a chance to roll two dices at the same time.

```
//Generating random numbers
//Player A
playerARandDice1 = randm.Next(1, 7);
playerARandDice2 = randm.Next(1, 7);
Console.WriteLine("{0} has rolled {1} {2}", nameA, playerARandDice1,
playerARandDice2);

//Player B
playerBRandDice1 = randm.Next(1, 7);
playerBRandDice2 = randm.Next(1, 7);
Console.WriteLine("{0} has rolled {1} {2}", nameB, playerBRandDice1,
playerBRandDice2);
```

In each iteration the score is printed on the console through following code block.

```
playerADiceTotal = playerARandDice1 + playerARandDice2;
playerAScore = playerAScore + playerADiceTotal;
Console.WriteLine("{0} Score is {1}", nameA, playerAScore);

playerBDiceTotal = playerBRandDice1 + playerBRandDice2;
playerBScore = playerBScore + playerBDiceTotal;
Console.WriteLine("{0} Score is {1}", nameB, playerBScore);
```

The most important part of any game is its rules.

One of the rules of this game is “If 02 dices give the same result (except the dice value 1), the same player will get another chance to roll the dice. Else other player gets the chance to roll 02 dices.”

If clause is used to imitate that behaviour of this game. As && operator is used, all the following conditions must be true for the execution of the code block inside the if clause.

- The generated random numbers of two dices should be equal.
- But the random numbers of two dices should not be equal to ‘1’.

The if block will be executed only if the above both conditions are true. Therefore, if above conditions are true, the if clause will be executed and will give another chance to the same player. If both conditions are false or one condition is false, the other player will get a chance to roll the dices as in the case of normal game behaviour.

**Player A**

```
//Game Rules
    if (playerARandDice1 == playerARandDice2 && playerARandDice1 != 1 &&
playerARandDice2 != 1)
    {
        Console.ForegroundColor = ConsoleColor.Yellow;
        Console.WriteLine("\n{0} will get another chance to roll the
dice!", nameA);
        Console.ResetColor();

        playerARandDice1 = randm.Next(1, 7);
        playerARandDice2 = randm.Next(1, 7);
        Console.WriteLine("{0} has rolled {1} {2}", nameA,
playerB RandDice1, playerB RandDice2);
        playerADiceTotal = playerARandDice1 + playerARandDice2;
        playerAScore = playerAScore + playerADiceTotal;
        Console.WriteLine("{0} Score is {1}", nameA, playerAScore);
    }
```

**Player B**

```
else if (playerB RandDice1 == playerB RandDice2 && playerB RandDice1 != 1 &&
playerB RandDice2 != 1)
    {
        Console.ForegroundColor = ConsoleColor.Yellow;
        Console.WriteLine("\n{0} will get another chance to roll the
dice!", nameB);
        Console.ResetColor();

        playerB RandDice1 = randm.Next(1, 7);
        playerB RandDice2 = randm.Next(1, 7);
        Console.WriteLine("{0} has rolled {1} {2}", nameB,
playerB RandDice1, playerB RandDice2);
        playerBDiceTotal = playerB RandDice1 + playerB RandDice2;
        playerBScore = playerBScore + playerBDiceTotal;
        Console.WriteLine("{0} Score is {1}", nameB, playerBScore);
    }
```

An example console output is given below;

```
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 6
Gamage has rolled 5 5
Nimna Score is 7
Gamage Score is 10

Gamage will get another chance to roll the dice!
Gamage has rolled 6 4
Gamage Score is 20
```

Another rule of this game is;

“Calculation of score: If both dices give the value 1, the individual marks of the respective player will be reduced to 0. Else sum of the two dice values will be added to individual scores of the respective player.”

Following conditions must be true to execute this else if code block.

- Both dices should give the same value
- That value must be equal to '1'.

As && operator is used in the middle, both conditions must be true. If not (if only one condition is true or both are false), the following code block will not be executed. If both conditions are true, the total mark of the respective player will be reduced to '0'. Unless the sum of the two dice values will be added to total scores of the respective player as in the case of normal scenario.

#### Player A

```
else if (playerARandDice1 == playerARandDice2 && playerARandDice1 == 1 &&
playerARandDice2 == 1)
{
    playerAScore = 0;

    Console.ForegroundColor = ConsoleColor.Red;
    Console.WriteLine("\nBoth dices give the value 1. Marks of {0}
reduced to '0'", nameA);
    Console.ResetColor();
    Console.WriteLine("{0} Score is {1}", nameA, playerAScore);
}
```

#### Player B

```
else if (playerBRandDice1 == playerBRandDice2 && playerBRandDice1 ==
1 && playerBRandDice2 == 1)
{
    playerBScore = 0;

    Console.ForegroundColor = ConsoleColor.Red;
    Console.WriteLine("\nBoth dices give the value 1. Marks of {0}
reduced to '0'", nameB);
    Console.ResetColor();
    Console.WriteLine("{0} Score is {1}", nameB, playerBScore);
}
```

An example console output is given below;

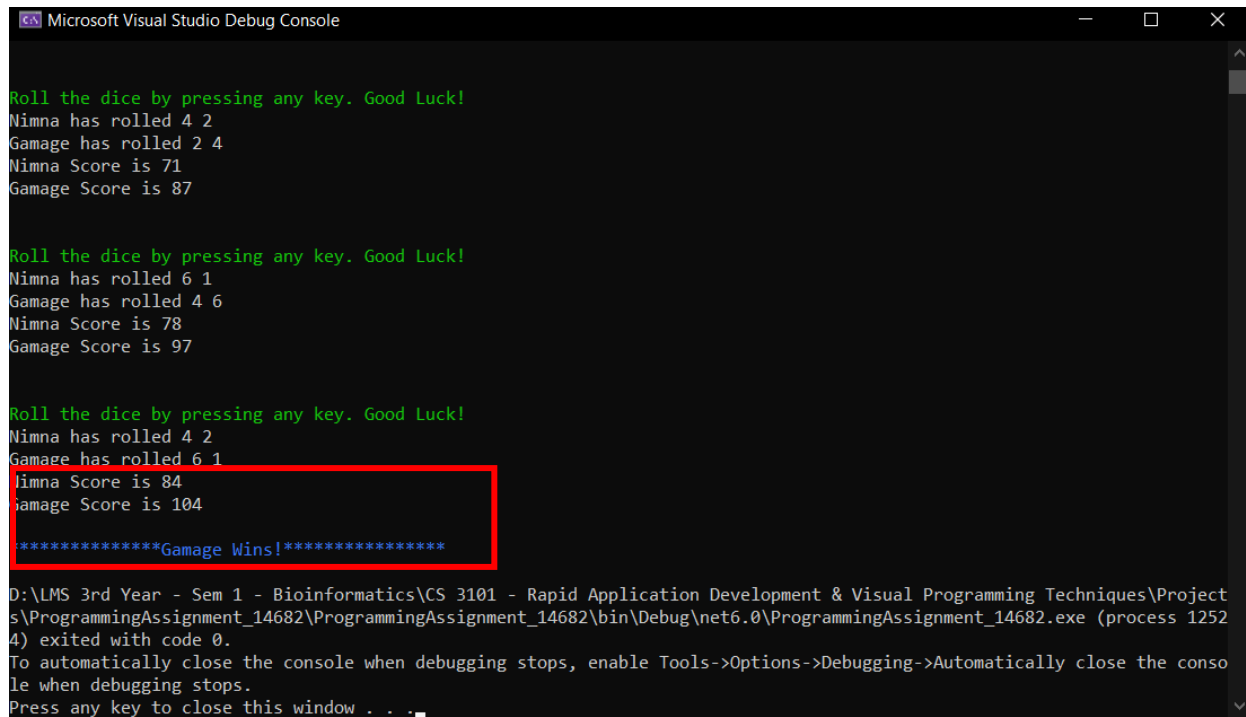
```
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 1
Gamage has rolled 2 3
Nimna Score is 50
Gamage Score is 53
Both dices give the value 1. Marks of Nimna reduced to '0'
Nimna Score is 0
```

The winning score of this game is '100'. The player who first reaches the winning score will be the winner of the game. When one player reaches the winning score, the game will automatically terminate and give the name of the winner.

Another if clause is used here. If the score of the player A is greater than the score of the player B and if the score of the player A is greater than or equal to winning score 100; the player A will be the winner. If the score of the player B is greater than the score of the player A and if the score of the player B is greater than or equal to the winning score 100; the player B will be the winner.

```
//Choosing the Winner
if (playerAScore > playerBScore && playerAScore >= 100)
{
    Console.ForegroundColor = ConsoleColor.Blue;
    Console.WriteLine("\n*****{0} Wins!*****",
nameA);
    Console.ResetColor();
    break;
}
else if (playerAScore < playerBScore && playerBScore >= 100)
{
    Console.ForegroundColor = ConsoleColor.Blue;
    Console.WriteLine("\n*****{0} Wins!*****",
nameB);
    Console.ResetColor();
    break;
}
```

An example console output is given below;

A screenshot of the Microsoft Visual Studio Debug Console window. The window has a title bar with the Visual Studio icon and the text "Microsoft Visual Studio Debug Console". The console output is as follows:

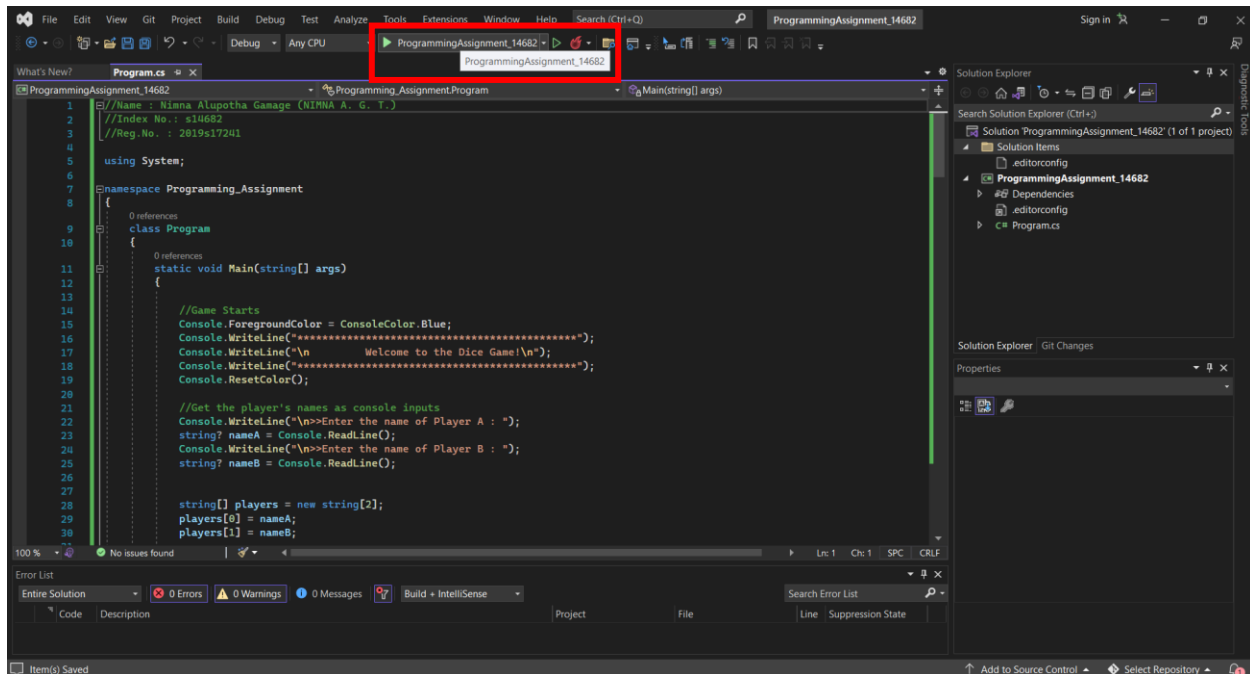
```
Roll the dice by pressing any key. Good Luck!  
Nimna has rolled 4 2  
Gamage has rolled 2 4  
Nimna Score is 71  
Gamage Score is 87  
  
Roll the dice by pressing any key. Good Luck!  
Nimna has rolled 6 1  
Gamage has rolled 4 6  
Nimna Score is 78  
Gamage Score is 97  
  
Roll the dice by pressing any key. Good Luck!  
Nimna has rolled 4 2  
Gamage has rolled 6 1  
Nimna Score is 84  
Gamage Score is 104  
  
*****Gamage Wins!*****  
  
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Project  
s\ProgrammingAssignment_14682\ProgrammingAssignment_14682\bin\Debug\net6.0\ProgrammingAssignment_14682.exe (process 1252  
4) exited with code 0.  
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso  
le when debugging stops.  
Press any key to close this window . . .
```

The text "Nimna Score is 84" and "Gamage Score is 104" is highlighted with a red rectangular box. The text "\*\*\*\*\*Gamage Wins!\*\*\*\*\*" is on the line immediately following the box. The console window has standard Windows window controls (minimize, maximize, close) in the top right corner.

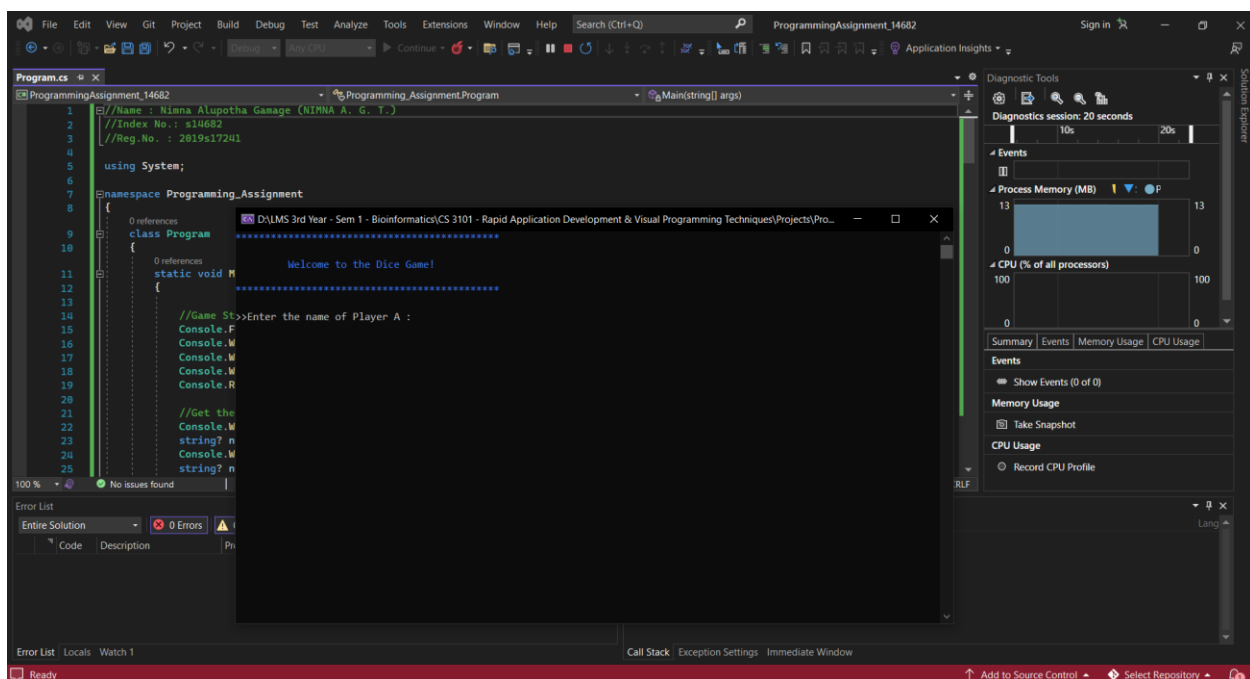
## Instructions to play the game with appropriate screenshots

The steps to follow to play the dice game will explained with screenshots of one round of the game.

Step 1: The players should run the console application.

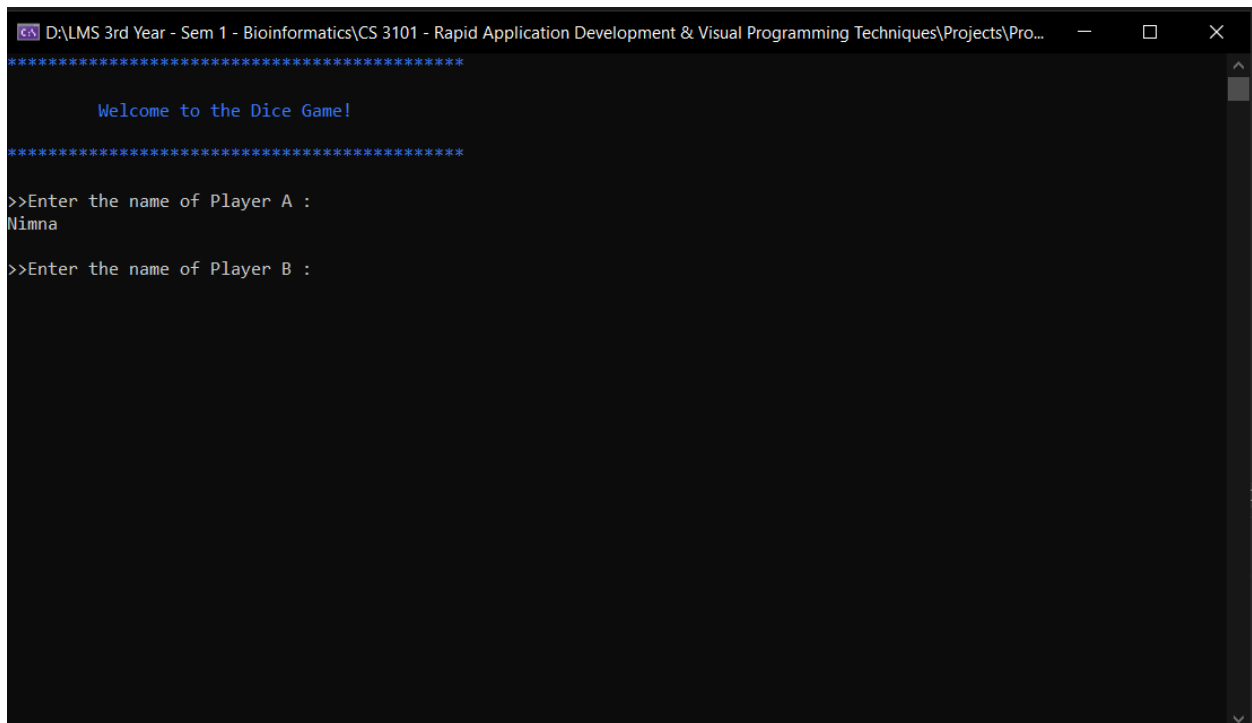


Step 2: The name of the player A should be entered.

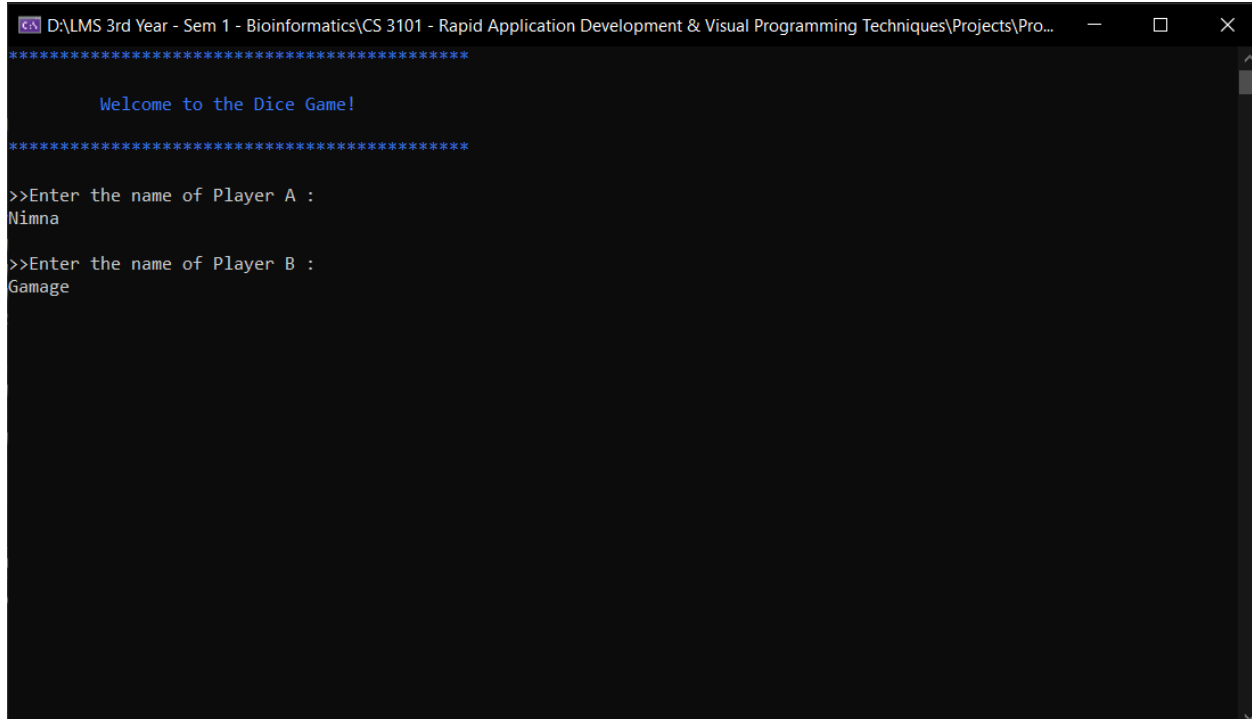




Step 3: The name of the player B should be entered.



```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
*****
Welcome to the Dice Game!
*****
>>Enter the name of Player A :
Nimna
>>Enter the name of Player B :
```



```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
*****
Welcome to the Dice Game!
*****
>>Enter the name of Player A :
Nimna
>>Enter the name of Player B :
Gamage
```

Step 4: Roll the dices by pressing any key in the keyboard. This will be processed until one player reaches the winning score.

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
*****
Welcome to the Dice Game!
*****
>>Enter the name of Player A :
Nimna
>>Enter the name of Player B :
Gamage
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 2
Gamage has rolled 1 1
Nimna Score is 7
Gamage Score is 2
Both dices give the value 1. Marks of Gamage reduced to '0'
Gamage Score is 0
Roll the dice by pressing any key. Good Luck!
_
```

First Iteration

Player B/Gamage has rolled 1 1

Therefore, Score of Gamage is reduced to '0'.

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Welcome to the Dice Game!
*****
>>Enter the name of Player A :
Nimna
>>Enter the name of Player B :
Gamage
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 2
Gamage has rolled 1 1
Nimna Score is 7
Gamage Score is 2
Both dices give the value 1. Marks of Gamage reduced to '0'
Gamage Score is 0
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 2 6
Nimna Score is 16
Gamage Score is 8
Roll the dice by pressing any key. Good Luck!
```

Second Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
>>Enter the name of Player B :
Gamage

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 2
Gamage has rolled 1 1
Nimna Score is 7
Gamage Score is 2

Both dices give the value 1. Marks of Gamage reduced to '0'
Gamage Score is 0

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 2 6
Nimna Score is 16
Gamage Score is 8

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 5 3
Nimna Score is 24
Gamage Score is 16

Roll the dice by pressing any key. Good Luck!
```

Third Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Nimna Score is 7
Gamage Score is 2

Both dices give the value 1. Marks of Gamage reduced to '0'
Gamage Score is 0

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 2 6
Nimna Score is 16
Gamage Score is 8

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 5 3
Nimna Score is 24
Gamage Score is 16

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 3 6
Gamage has rolled 5 3
Nimna Score is 33
Gamage Score is 24

Roll the dice by pressing any key. Good Luck!
```

Fourth Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 2 6
Nimna Score is 16
Gamage Score is 8

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 5 3
Nimna Score is 24
Gamage Score is 16

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 3 6
Gamage has rolled 5 3
Nimna Score is 33
Gamage Score is 24

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamage has rolled 1 3
Nimna Score is 38
Gamage Score is 28

Roll the dice by pressing any key. Good Luck!
```

Fifth Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Gamage Score is 16

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 3 6
Gamage has rolled 5 3
Nimna Score is 33
Gamage Score is 24

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamage has rolled 1 3
Nimna Score is 38
Gamage Score is 28

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 2
Gamage has rolled 5 5
Nimna Score is 41
Gamage Score is 38

Gamage will get another chance to roll the dice!
Gamage has rolled 2 4
Gamage Score is 44

Roll the dice by pressing any key. Good Luck!
```

Sixth Iteration

Player B/Gamage has rolled 5 5

Therefore, Gamage will get another chance to roll the dice as he got same value on both dices and that is not equal to '1'.

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Gamage Score is 24

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamage has rolled 1 3
Nimna Score is 38
Gamage Score is 28

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 2
Gamage has rolled 5 5
Nimna Score is 41
Gamage Score is 38

Gamage will get another chance to roll the dice!
Gamage has rolled 2 4
Gamage Score is 44

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 6 3
Nimna Score is 50
Gamage Score is 53

Roll the dice by pressing any key. Good Luck!
```

Seventh Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Nimna has rolled 1 2
Gamage has rolled 5 5
Nimna Score is 41
Gamage Score is 38

Gamage will get another chance to roll the dice!
Gamage has rolled 2 4
Gamage Score is 44

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 6 3
Nimna Score is 50
Gamage Score is 53

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 6 6
Nimna Score is 58
Gamage Score is 65

Gamage will get another chance to roll the dice!
Gamage has rolled 6 1
Gamage Score is 72

Roll the dice by pressing any key. Good Luck!
```

Eighth Iteration

Player B/Gamage has rolled 6 6

Therefore, Gamage will get another chance to roll the dice as he got same value on both dices and that is not equal to '1'.

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Gamage Score is 44

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamage has rolled 6 3
Nimna Score is 50
Gamage Score is 53

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 6 6
Nimna Score is 58
Gamage Score is 65

Gamage will get another chance to roll the dice!
Gamage has rolled 6 1
Gamage Score is 72

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 2 6
Gamage has rolled 6 2
Nimna Score is 66
Gamage Score is 80

Roll the dice by pressing any key. Good Luck!
```

Ninth Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 5 3
Gamage has rolled 6 6
Nimna Score is 58
Gamage Score is 65

Gamage will get another chance to roll the dice!
Gamage has rolled 6 1
Gamage Score is 72

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 2 6
Gamage has rolled 6 2
Nimna Score is 66
Gamage Score is 80

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamage has rolled 1 1
Nimna Score is 71
Gamage Score is 82

Both dices give the value 1. Marks of Gamage reduced to '0'
Gamage Score is 0

Roll the dice by pressing any key. Good Luck!
```

Tenth Iteration

Player B/Gamage has rolled 1 1

Therefore, Score of Gamage is again reduced to '0'.

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Gamege has rolled 6 1
Gamege Score is 72

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 2 6
Gamege has rolled 6 2
Nimna Score is 66
Gamege Score is 80

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamege has rolled 1 1
Nimna Score is 71
Gamege Score is 82

Both dices give the value 1. Marks of Gamege reduced to '0'
Gamege Score is 0

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamege has rolled 2 1
Nimna Score is 80
Gamege Score is 3

Roll the dice by pressing any key. Good Luck!
```

Eleventh Iteration

```
D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Projects\Pro...
Roll the dice by pressing any key. Good Luck!
Nimna has rolled 1 4
Gamege has rolled 1 1
Nimna Score is 71
Gamege Score is 82

Both dices give the value 1. Marks of Gamege reduced to '0'
Gamege Score is 0

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 3
Gamege has rolled 2 1
Nimna Score is 80
Gamege Score is 3

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 6
Gamege has rolled 3 6
Nimna Score is 92
Gamege Score is 12

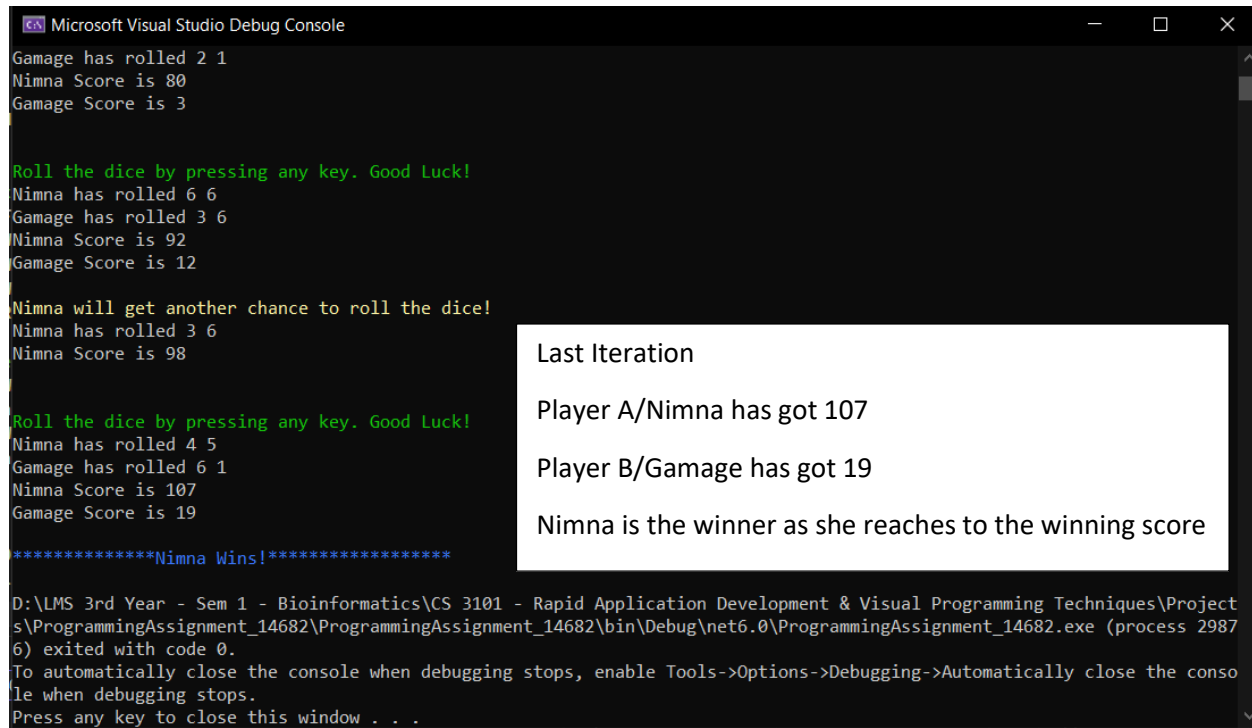
Nimna will get another chance to roll the dice!
Nimna has rolled 3 6
Nimna Score is 98

Roll the dice by pressing any key. Good Luck!
```

Twelfth Iteration

Player A/Nimna has rolled 6 6

Therefore, Nimna will get another chance to roll the dice as she got same value on both dices and that is not equal to '1'.



The screenshot shows the Microsoft Visual Studio Debug Console with the following text:

```
Game has rolled 2 1
Nimna Score is 80
Game Score is 3

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 6 6
Game has rolled 3 6
Nimna Score is 92
Game Score is 12

Nimna will get another chance to roll the dice!
Nimna has rolled 3 6
Nimna Score is 98

Roll the dice by pressing any key. Good Luck!
Nimna has rolled 4 5
Game has rolled 6 1
Nimna Score is 107
Game Score is 19

*****Nimna Wins!*****

D:\LMS 3rd Year - Sem 1 - Bioinformatics\CS 3101 - Rapid Application Development & Visual Programming Techniques\Project
s\ProgrammingAssignment_14682\ProgrammingAssignment_14682\bin\Debug\net6.0\ProgrammingAssignment_14682.exe (process 2987
6) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
```

Overlaid on the right side of the console is a white box with the following text:

Last Iteration

Player A/Nimna has got 107

Player B/Game has got 19

Nimna is the winner as she reaches to the winning score

The game is terminated after 13 iterations. This game can be further modified in different ways by adding game levels and different logics.