

01_DATA_TYPES\05_FUNCTION_EXAMPLE\Program.cs

```
1 using System;
2
3 namespace _05_FUNCTION_EXAMPLE
4 {
5     class Program
6     {
7         static void Main(string[] args)
8         {
9             Console.WriteLine("=== FUNCTION EXAMPLES ===");
10
11             #region Built-in Function Example
12             // Built-in functions are provided by .NET libraries.
13             // Example: Console.WriteLine(), Math.Sqrt(), etc.
14             Console.WriteLine("This is a built-in function.");
15             double squareRoot = Math.Sqrt(25); // Returns square root of 25
16             Console.WriteLine("Square root of 25 is: " + squareRoot);
17             #endregion
18
19             #region User-defined Function: No return, No parameter
20             // Custom function that performs a task without returning a value or taking
parameters
21             GreetUser();
22             #endregion
23
24             #region User-defined Function: No return, With parameter
25             // Function that takes input but doesn't return a value
26             DisplayMessage("Hello from a function with parameter!");
27             #endregion
28
29             #region User-defined Function: With return, No parameter
30             // Function that returns a value but takes no input
31             int number = GetRandomNumber();
32             Console.WriteLine("Random number is: " + number);
33             #endregion
34
35             #region User-defined Function: With return, With parameter
36             // Function that takes input and returns a result
37             int sum = AddNumbers(10, 20);
38             Console.WriteLine("Sum of 10 and 20 is: " + sum);
39             #endregion
40         }
41
42         // ----- User-defined Functions Below -----
43
44         // No return, No parameter
45         static void GreetUser()
46         {
47             Console.WriteLine("Hello! This is a user-defined function with no
parameters.");
48         }
49     }
50 }
```

```
51 // No return, With parameter
52 static void DisplayMessage(string message)
53 {
54     Console.WriteLine("Message: " + message);
55 }
56
57 // With return, No parameter
58 static int GetRandomNumber()
59 {
60     Random rand = new Random();
61     return rand.Next(1, 101); // Returns random number between 1 and 100
62 }
63
64 // With return, With parameter
65 static int AddNumbers(int a, int b)
66 {
67     return a + b;
68 }
69 }
70 }
71 }
```