

## **Implementing classes and objects**

### **Step 1: Prepare for the Application**

You'll create a small application using the Visual Studio Code console application you created at the start of the course. Your application allows users to manage a simple to-do list. The program will let users create a greeting method for an application. Remove any existing code in the Program.cs file of your console application and create all the code in each step in that file.

### **Step 2: Creating a Basic Class**

In the Person.cs file, define a class called Person that includes properties to represent a person's characteristics.

#### **Instructions:**

1. Define a class called Person.
2. Create two properties: Name (a string) and Age (an integer).

### **Step 3: Creating Objects**

Create objects from the Person class and assign values to their properties.

#### **Instructions:**

1. Create two objects of the Person class.
2. Assign different values to their Name and Age properties.

### **Step 4: Creating Methods**

Add a method to the Person class that performs an action, like printing a greeting.

#### **Instructions:**

1. Update the Person class by writing a method called Greet.
2. Make this method print a message that includes the person's name.

### **Step 5: Using Methods in Objects**

Call the method on each Person object to perform an action.

#### **Instructions:**

1. Update the Main method to call the Greet method on each Person object to print a personalized greeting.

2. To check your answer, run the Visual Studio Code console application. If you receive an error when you run the code, go to the reading on the next page to compare your code to the correct answer.

## Step 6: Practicing with Multiple Objects

Create additional objects from the same class and use methods on them to see how each behaves independently.

### Instructions:

1. Update the Main method by creating a third Person object.
2. Assign a different name and age to this object.
3. Call the Greet method on this new object.
4. To check your answer, run the Visual Studio Code console application. If you receive an error when you run the code, go to the reading on the next page to compare your code to the correct answer.

### Code:

#### Person.cs

```
namespace ImplClassAndObjects
{
    public class Person
    {
        public required string Name { get; set; }
        public int Age { get; set; }

        public void Greet()
        {
            Console.WriteLine($"Hello, my name is {Name} and i am {Age} years old.");
        }
    }
}
```

#### Program

```
using ImplClassAndObjects;

class Program
{
    static void Main(string[] args)
    {
        // Step 3: Create two Person objects
        Person person1 = new()
        {
```

```
        Name = "Alice",
        Age = 30
    };

    Person person2 = new()
    {
        Name = "Bob",
        Age = 25
    };

    // Step 5: Call Greet on each object
    person1.Greet();
    person2.Greet();

    // Step 6: Create a third object and call Greet
    Person person3 = new()
    {
        Name = "Charlie",
        Age = 35
    };
    person3.Greet();
}
}
```