Lesson 5 - Assignment and Relational Operators

Assignment Operators

Normally, we have been using the `=` assignment operator up till now, which assigns the value on the right side of the operator to the variable on the left side. There are also **compound assignment operators** in C# that let us perform operations and assignment in a single statement.

Example

This example illustrates the different ways of incrementing a variable by a certain amount.

```
int x = 10;

// without using compound assignment
// equates to x = 15
int y = x + 5
x = y;

// another way to do this without compound assignment
// equates to x = 15
x = x + 5;

// using compound assignment
// equates to x = 15
x += 5;
```

Example

The same shorthand syntax applies to addition, subtraction, multiplication, division and modulus operators as shown in this example.

```
int x = 10;

// addition
x += 5;     // equates to x = 15
```

```
// subtraction
x -= 5;     // equates to x = 5

// multiplication
x *= 5;     // equates to x = 50

// division
x /= 5;     // equates to x = 2

// modulus
x %= 3;     // equates to x = 1
```

Increment Operator

Increment operators have even shorter syntax and increase the value by 1, and this is very commonly used in C#.

```
int x = 10;

// without using compound assignment
// equates to x = 11
x = x + 1;

// using compound assignment
// equates to x = 11
x += 1;

// using increment operator
// equates to x = 11
x++;
```

Decrement Operator

Similarly, we can also use shorthand to decrease the value by 1.

```
int x = 10;

// without using compound assignment
// equates to x = 9
x = x - 1;

// using compound assignment
// equates to x = 9
x -= 1;

// using increment operator
// equates to x = 9
x--;
```

Relational Operators

Relational Operators are used to evaluate conditions. There are 6 main relational operators. These will return a `bool` type value.

Operator	Description	Example	Result
>=	Greater than or equal to	7 >= 4	True
<=	Less than or equal to	7 <= 4	False
==	Equal to	7 == 4	False
!=	Not equal to	7 != 4	True

Example

```
int age = 25;
bool isAdult = (age >= 18);

// You can also omit brackets and write this as below
// bool isAdult = age >= 18;
// however it looks confusing without the brackets

Console.WriteLine(isAdult);
```

Output

```
True
```

Assignment 3

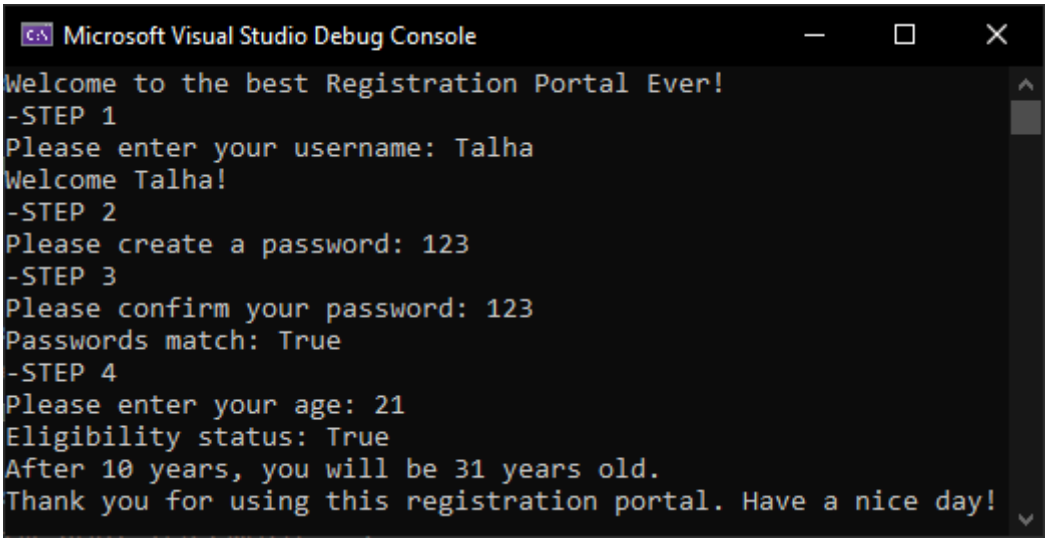
You need to create a **Registration From Application** In which you have to ask user for 4 main things:

1. Enter Username.
2. Create a password.
3. Confirm the password.
4. Enter their Age.

You need to user string interpolation to use the user inputted values in output strings, and in other places such as displaying the step number. You should also increment the step number instead of writing it down as a string. You also need to check eligibility of person based on age (let us suppose, only 18+ can register).

> (Hints: String interpolation, assignment operators, increment operator, relational operators)

Output Example 1



Output Example 2