

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

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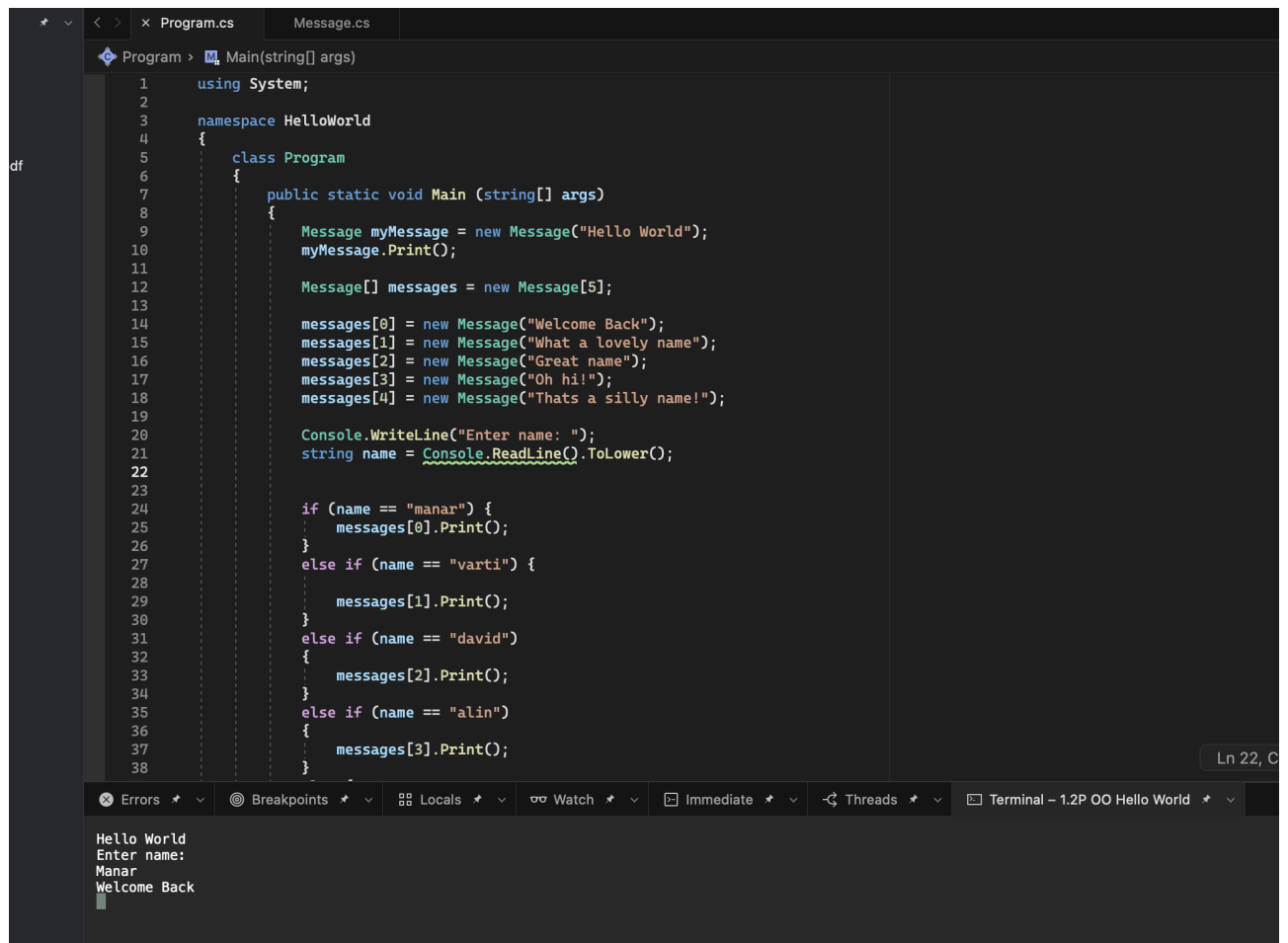
## 1.2P - Object Oriented Hello World

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PDF generated at 18:13 on Monday 6<sup>th</sup> March, 2023

```
1  using System;
2
3  namespace HelloWorld
4  {
5      class Program
6      {
7          public static void Main (string[] args)
8          {
9              Message myMessage = new Message("Hello World");
10             myMessage.Print();
11
12             Message[] messages = new Message[5];
13
14             messages[0] = new Message("Welcome Back");
15             messages[1] = new Message("What a lovely name");
16             messages[2] = new Message("Great name");
17             messages[3] = new Message("Oh hi!");
18             messages[4] = new Message("Thats a silly name!");
19
20             Console.WriteLine("Enter name: ");
21             string name = Console.ReadLine().ToLower();
22
23
24             if (name == "manar") {
25                 messages[0].Print();
26             }
27             else if (name == "varti") {
28
29                 messages[1].Print();
30             }
31             else if (name == "david")
32             {
33                 messages[2].Print();
34             }
35             else if (name == "alin")
36             {
37                 messages[3].Print();
38             }
39             else {
40                 messages[4].Print();
41             }
42
43
44             Console.ReadLine();
45
46         }
47     }
48 }
```

```
1  using System;
2  namespace HelloWorld
3  {
4      public class Message
5      {
6          private string _text;
7
8          public Message(string text)
9          {
10             _text = text;
11         }
12
13         public void Print()
14         {
15             Console.WriteLine(_text);
16         }
17     }
18 }
19
```



The screenshot displays a Visual Studio IDE with a C# program open in the editor. The program is named `Program.cs` and is located within the `Message.cs` file. The code defines a `namespace HelloWorld` containing a `class Program` with a `Main` method. The `Main` method performs the following actions:

- Imports `System`.
- Creates a `Message` object `myMessage` with the text "Hello World" and prints it.
- Creates an array of `Message` objects `messages` with 5 elements.
- Initializes the `messages` array with the following values:
  - `messages[0]`: "Welcome Back"
  - `messages[1]`: "What a lovely name"
  - `messages[2]`: "Great name"
  - `messages[3]`: "Oh hi!"
  - `messages[4]`: "Thats a silly name!"
- Prompts the user to enter a name using `Console.WriteLine("Enter name: ")` and reads the input using `Console.ReadLine().ToLower()`.
- Uses a series of `if` statements to check the entered name against "manar", "varti", "david", and "alin". If a match is found, it prints the corresponding message from the `messages` array.

The output window at the bottom shows the execution results:

```
Hello World
Enter name:
Manar
Welcome Back
```

The screenshot shows the Visual Studio IDE with a C# program open. The program is named `Program.cs` and is located in the `Message.cs` project. The code is as follows:

```
1 using System;
2
3 namespace HelloWorld
4 {
5     class Program
6     {
7         public static void Main (string[] args)
8         {
9             Message myMessage = new Message("Hello World");
10            myMessage.Print();
11
12            Message[] messages = new Message[5];
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14            messages[0] = new Message("Welcome Back");
15            messages[1] = new Message("What a lovely name");
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17            messages[3] = new Message("Oh hi!");
18            messages[4] = new Message("Thats a silly name!");
19
20            Console.WriteLine("Enter name: ");
21            string name = Console.ReadLine().ToLower();
22
23
24            if (name == "manar") {
25                messages[0].Print();
26            }
27            else if (name == "varti") {
28
29                messages[1].Print();
30            }
31            else if (name == "david")
32            {
33                messages[2].Print();
34            }
35            else if (name == "alin")
36            {
37                messages[3].Print();
38            }
39        }
40    }
41 }
```

A breakpoint is set at line 15, indicated by a red circle on the left margin. The `Locals` window at the bottom shows the current state of the program:

Name	Value
<input checked="" type="checkbox"/> args	{string[0]}
> <input checked="" type="checkbox"/> myMessage	{HelloWorld.Message}
> <input checked="" type="checkbox"/> messages	{HelloWorld.Message[5]}
<input checked="" type="checkbox"/> name	(null)