**Programs on list**

**1st program on how to create a list**

**Code:-** var names = new List<string> { "<sathvik>", "Ana", "Felipe" };

foreach (var name in names)

{

Console.WriteLine($"Hello {name.ToUpper()}!");

}

**Output:-**

Hello <sathvik>!

Hello ANA!

Hello FELIPE!

**MODIFY LIST CONTENTS**

|  |
| --- |
|  |
|  |  |
|  | names.Add("Maria"); |
|  | names.Add("Bill"); |
|  | names.Remove("Ana"); |
|  | foreach (var name in names) |
|  | { |
|  | Console.WriteLine($"Hello {name.ToUpper()}!"); |
|  | } |
|  |  |
|  | Console.WriteLine($"My name is {names[0]}"); |
|  | Console.WriteLine($"I've added {names[2]} and {names[3]} to the list"); |
|  |  |
|  | Console.WriteLine($"The list has {names.Count} people in it"); |
|  |  |
|  | **SEARCH AND SORT LIST** |
|  |  |
|  | var index = names.IndexOf("Felipe"); |
|  | if (index == -1) |
|  | { |
|  | Console.WriteLine($"When an item is not found, IndexOf returns {index}"); |
|  | } |
|  | else |
|  | { |
|  | Console.WriteLine($"The name {names[index]} is at index {index}"); |
|  | } |
|  |  |
|  | index = names.IndexOf("Not Found"); |
|  | if (index == -1) |
|  | { |
|  | Console.WriteLine($"When an item is not found, IndexOf returns {index}"); |
|  | } |
|  | else |
|  | { |
|  | Console.WriteLine($"The name {names[index]} is at index {index}"); |
|  |  |
|  | } |
|  |  |
|  | names.Sort(); |
|  | foreach (var name in names) |
|  | { |
|  | Console.WriteLine($"Hello {name.ToUpper()}!"); |
|  | } |

**Program on Fibonacci number**

Code:-

var fibonacciNumbers = new List<int> {1, 1};

while (fibonacciNumbers.Count < 20)

{

var previous = fibonacciNumbers[fibonacciNumbers.Count - 1];

var previous2 = fibonacciNumbers[fibonacciNumbers.Count - 2];

fibonacciNumbers.Add(previous + previous2);

}

foreach(var item in fibonacciNumbers)

Console.WriteLine(item);

**Output**

1

1

2

3

5

8

13

21

34

55

89

144

233

377

610

987

1597

2584

4181

6765