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Title

Simple Number List Management Using Non-Generic Collections

Question No : 1 / 1

Problem Statement: Simple Number List

You need to create a program that **manages a list of numbers**.
The program should allow the user to:

- Add numbers to the list
- Remove numbers from the list
- Display all numbers currently in the list

The solution should be written within the **Program class** in the **Program.cs** file.

Constraints

- Use **ArrayList** to store numbers
- Do **not** use generic collections
- All classes must be **public**
- All methods must be **private static**

Requirements

1. Add Number

- Prompt the user to enter a number to add to the list
- Display:
- `<num> added to the number list.`
- If input is invalid:

- `Invalid input. Please enter a valid number.`

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2. Remove Number

- Prompt the user to enter a number to remove
- Display:
  - If removed:
  - `<num> removed from the number list.`
  - If not found:
  - `<num> not found in the number list.`

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3. Display Numbers

- Display all numbers currently in the list in the format:
- `Current numbers in the list:`
- `<num1>`
- `<num2>`

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4. Exit

- Provide an option to exit the program

Input Format

- Commands entered by the user:
- `add`
- `remove`
- `display`
- `exit`
- Numbers entered when adding or removing

Output Format

- Confirmation messages for add/remove
- Display list when requested
- If command is invalid:
- `Invalid command.`

  (Program should terminate)

Test Cases

Test Case ID	Input	Expected Output
TC01	add → 1	1 added to the number list.
TC02	remove → 5	5 not found in the number list.
TC03	display	Displays all numbers
TC04	update	Invalid command.
TC05	add → abc	Invalid input. Please enter a valid number.

Sample Input 1

```
add
1
add
2
add
3
display
remove
2
display
exit
```

Sample Output 1

```
1 added to the number list.
2 added to the number list.
3 added to the number list.
Current numbers in the list:
1
2
3
2 removed from the number list.
Current numbers in the list:
1
3
```

Sample Input 2

```
add
1
add
Sample
display
```

```
update
add
2
exit
```

Sample Output 2

```
1 added to the number list.
Invalid input. Please enter a valid number.
Current numbers in the list:
1
Invalid command.
2 added to the number list.
```

Sample Input 3

```
add
1
display
remove
2
display
exit
```

Sample Output 3

```
1 added to the number list.
Current numbers in the list:
1
2 not found in the number list.
Current numbers in the list:
1
```

```
using System.Collections;


class Program
{
    private static void AddNumber(ArrayList numbers,int num)
    {
        numbers.Add(num);
```

```
    Console.WriteLine("{0} added to the number list.",num);
}
private static void RemoveNumber(ArrayList numbers,int num)
{
    numbers.Remove(num);
}
private static void DisplayNumber(ArrayList Numbers)
{
    Console.WriteLine("Current elements in the list: ");
    foreach(var i in Numbers)
    {
        Console.WriteLine(i);
    }
}
static void Main()
{
    ArrayList numbers = new ArrayList();
    while (true)
    {
        string method = Console.ReadLine()??"";
        if(method=="add" || method =="display" || method=="remove" || method == "exit")
        {
            if (method.ToLower()=="display")
            {
                DisplayNumber(numbers);
```

```
            continue;
        }
        string input = Console.ReadLine()??"";
        if (!int.TryParse(input, out int number))
            {
                Console.WriteLine("Invalid input. Please enter a valid number.");
                continue;
            }
        if (method.ToLower()=="exit") break;
        if (method.ToLower()=="add") AddNumber(numbers,number);
        if (method.ToLower()=="remove") RemoveNumber(numbers,number);
      }
      else
      {
        Console.WriteLine("Invalid Command");
        continue;
      }

    }
  }
}
```