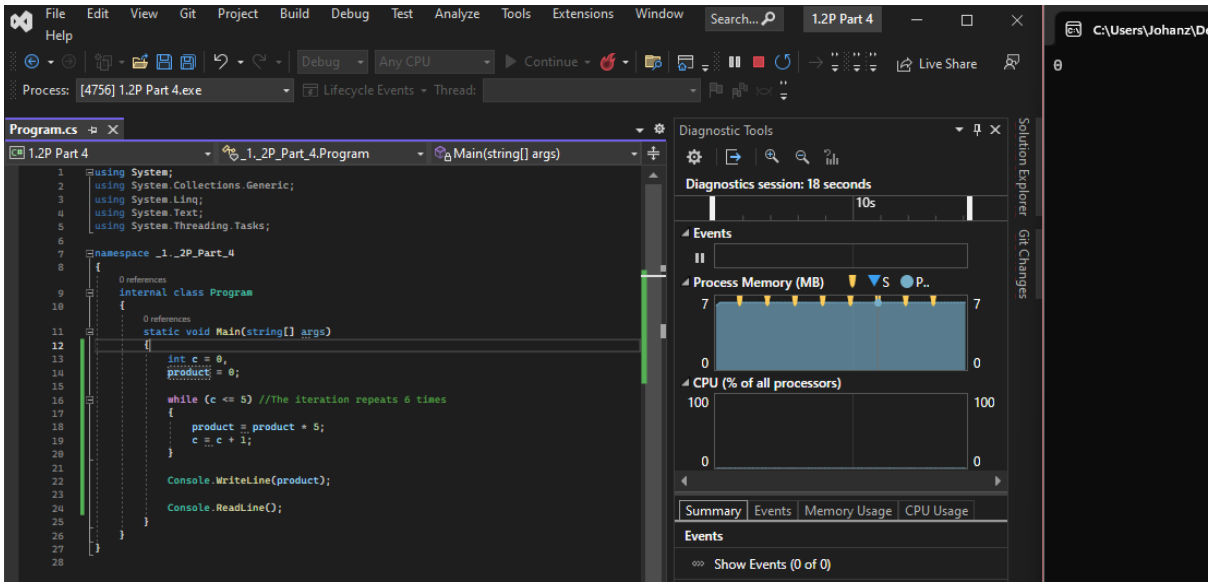
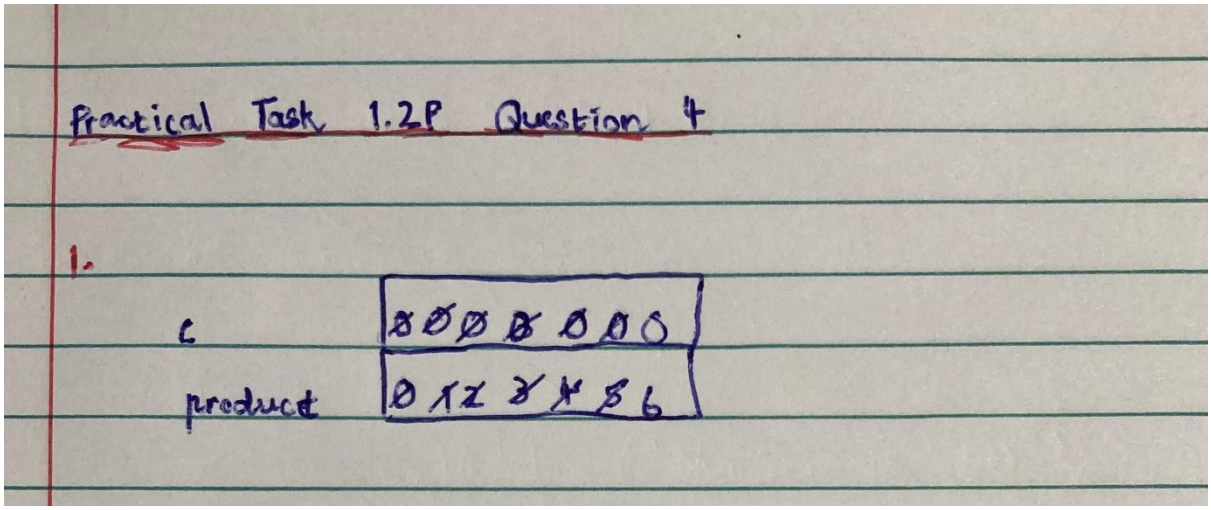
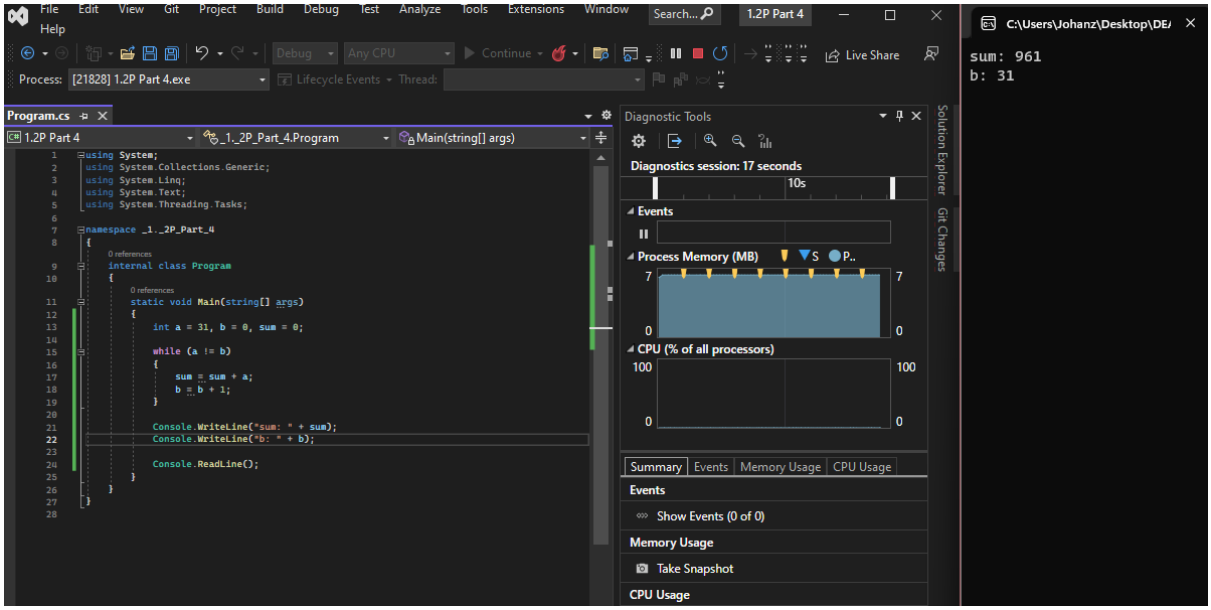
4. Find existing issues for all the code snippets presented below. It is highly important to try working this out on paper by tracing through the statements and then input the code into your IDE. Run it to see if you are correct and then see if you can fix the code. You may wish to add additional Console.WriteLine statements to check that variables contain the values you expect. Note that there may be more than one mistake.

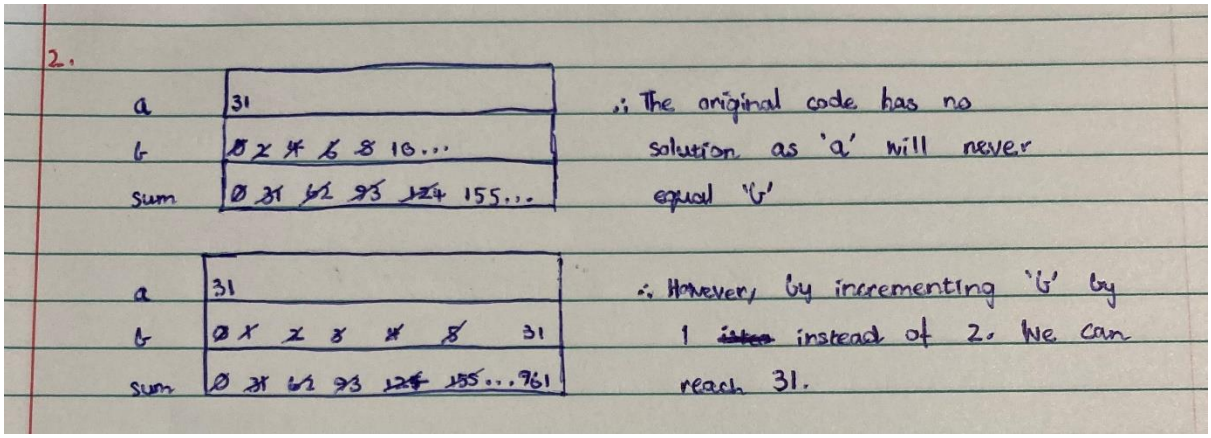
A)



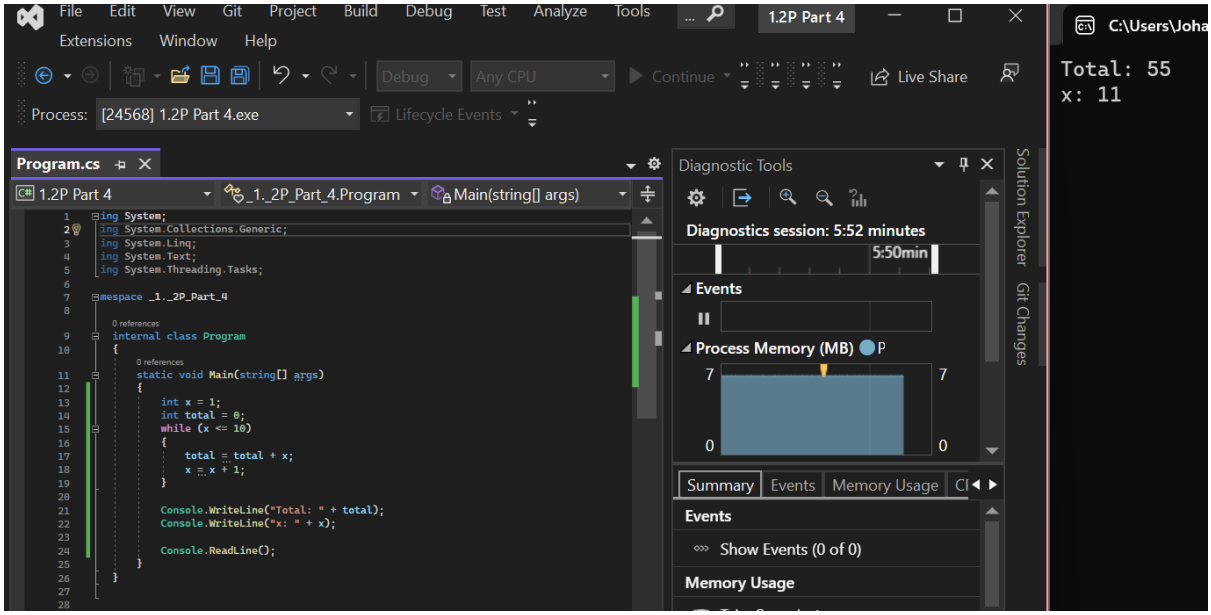


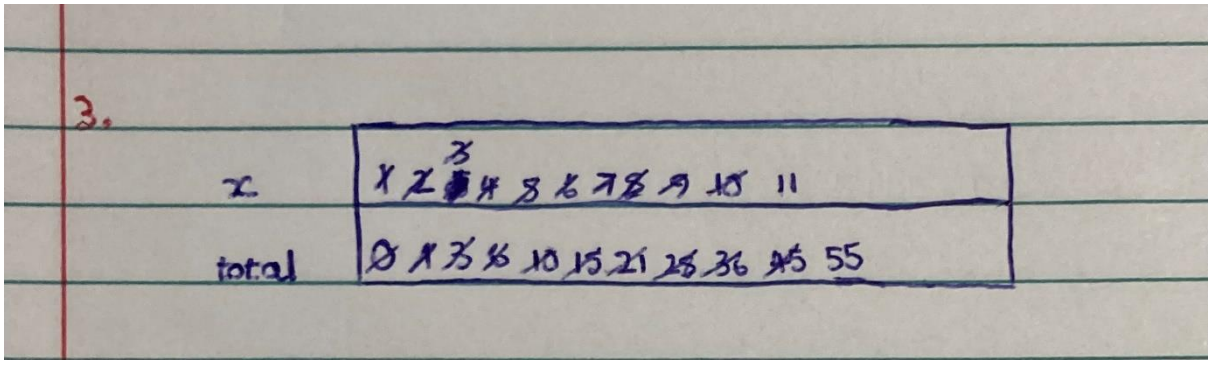
b)


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
1.2P Part 4
Debug
Any CPU
Continue
Live Share
Process: [21828] 1.2P Part 4.exe
Lifecycle Events
Thread:
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
int a = 31, b = 0, sum = 0;
while (a != b)
{
sum = sum + a;
b = b + 1;
}
Console.WriteLine("sum: " + sum);
Console.WriteLine("b: " + b);
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 17 seconds
10s
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
CPU Usage
Show Events (0 of 0)
Take Snapshot
Solution Explorer
Git Changes
C:\Users\Johanz\Desktop\DE
sum: 961
b: 31

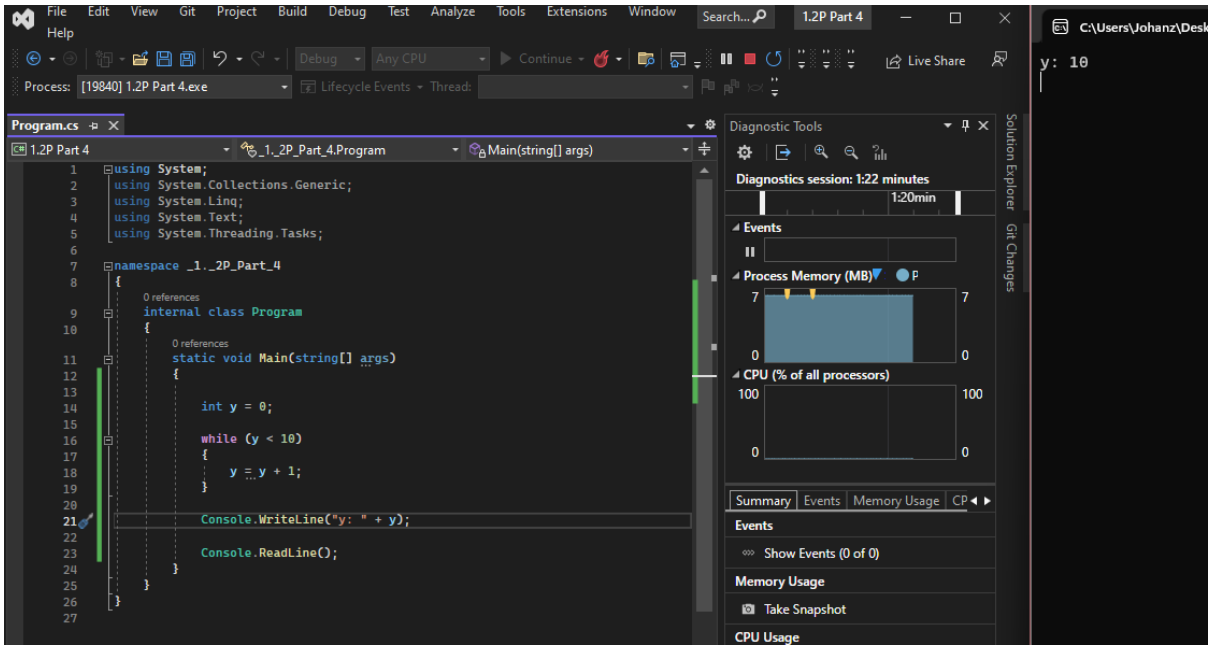

2.
a
b
Sum
31
0 x x x x 8 10...
0 x x x x x 155...
∴ The original code has no solution as 'a' will never equal 'b'
a
b
Sum
31
0 x x x x 8 31
0 x x x x x 155...961
∴ However, by incrementing 'b' by 1 instead of 2. We can reach 31.

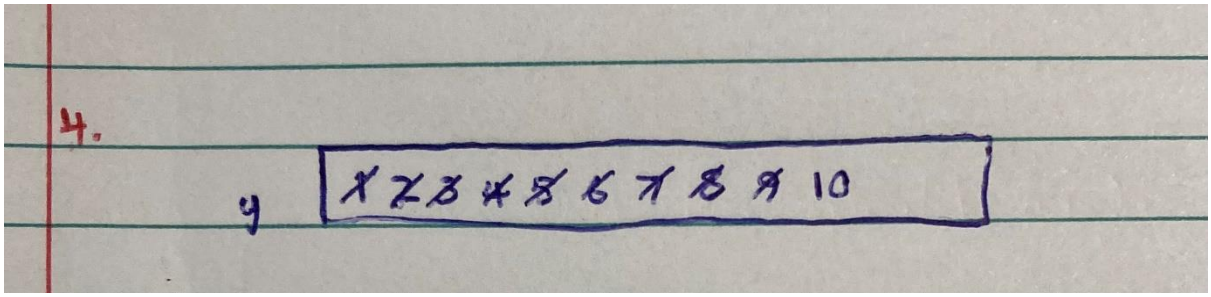
c)


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
1.2P Part 4
Debug
Any CPU
Continue
Live Share
Process: [24568] 1.2P Part 4.exe
Lifecycle Events
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
ing System;
ing System.Collections.Generic;
ing System.Linq;
ing System.Text;
ing System.Threading.Tasks;
mespace _1._2P_Part_4
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
int x = 1;
int total = 0;
while (x <= 10)
{
total = total + x;
x = x + 1;
}
Console.WriteLine("Total: " + total);
Console.WriteLine("x: " + x);
Console.ReadLine();
}
}
Diagnostic Tools
Diagnostics session: 5:52 minutes
5:50min
Events
Process Memory (MB)
Summary
Events
Memory Usage
Show Events (0 of 0)
Memory Usage
Solution Explorer
Git Changes
C:\Users\Joha
Total: 55
x: 11

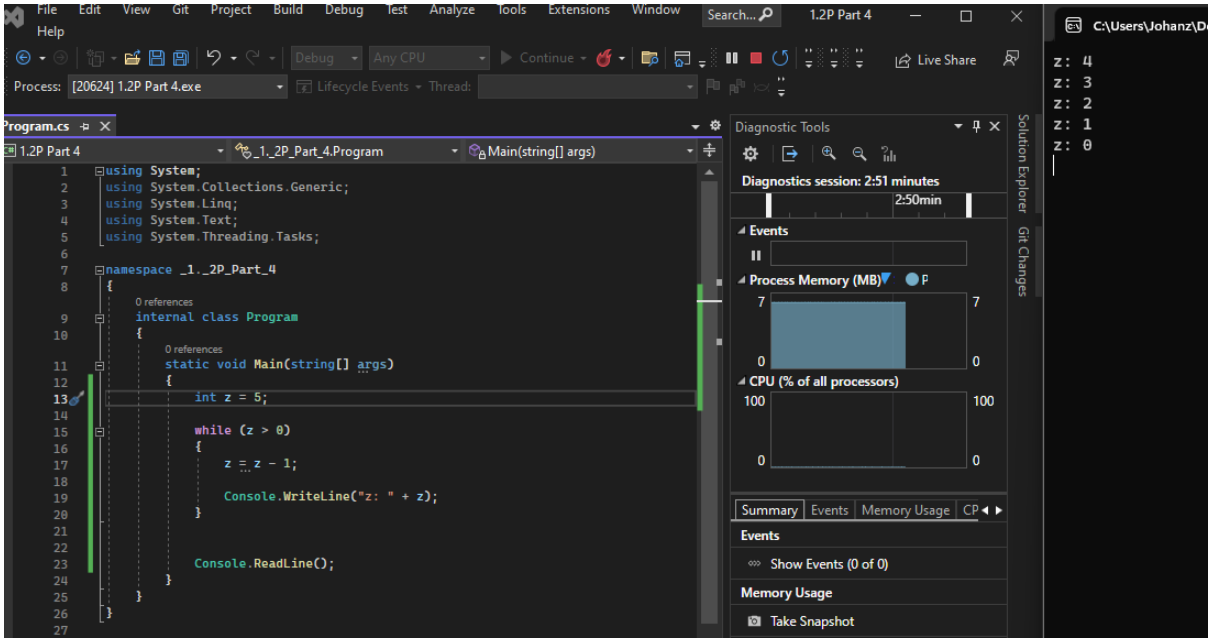

3.
x
total
55

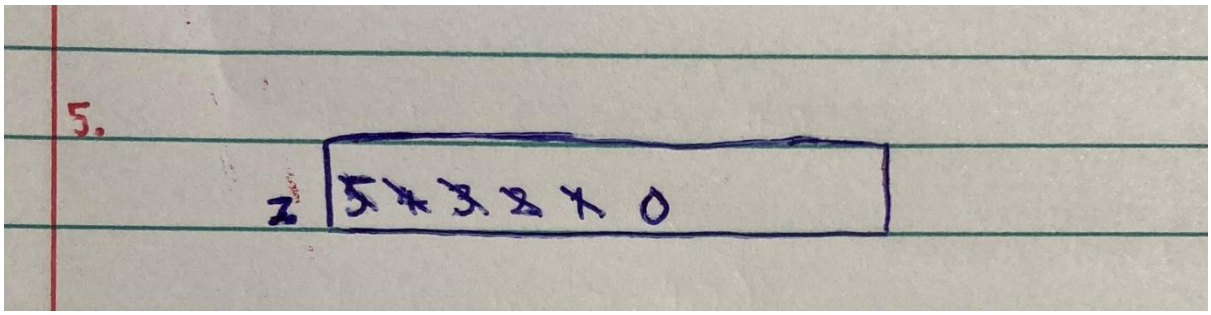
d)


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search...
1.2P Part 4
Debug
Any CPU
Continue
Live Share
Process: [19840] 1.2P Part 4.exe
Lifecycle Events
Thread:
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
int y = 0;
while (y < 10)
{
y = y + 1;
}
Console.WriteLine("y: " + y);
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 1:22 minutes
1:20min
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
Events
Show Events (0 of 0)
Memory Usage
Take Snapshot
CPU Usage
Solution Explorer
Git Changes
C:\Users\Johanz\Desk
y: 10

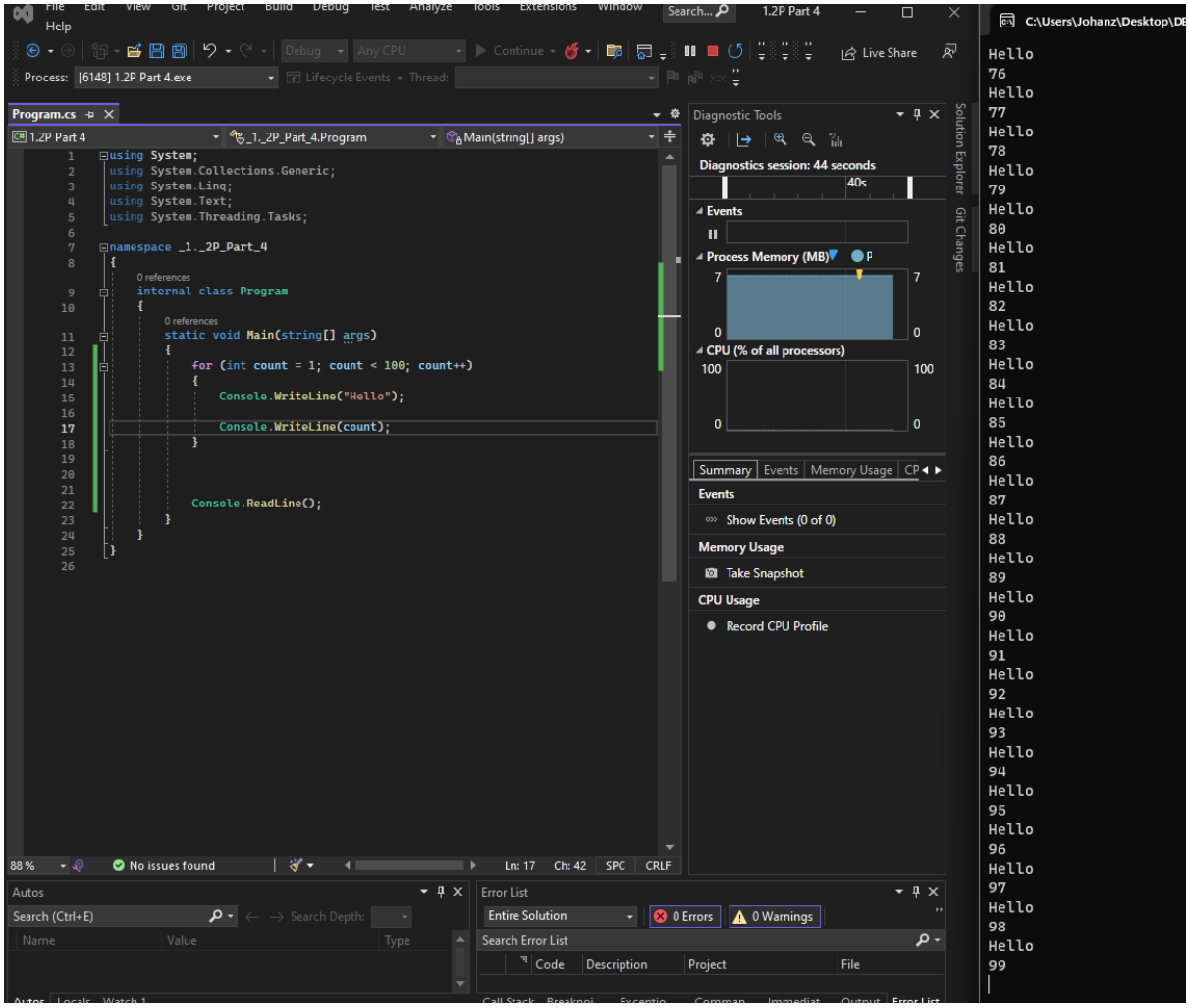

4.
y
10

e)


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search...
1.2P Part 4
Debug
Any CPU
Continue
Live Share
Process: [20624] 1.2P Part 4.exe
Lifecycle Events
Thread:
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
int z = 5;
while (z > 0)
{
z = z - 1;
Console.WriteLine("z: " + z);
}
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 2:51 minutes
2:50min
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
Show Events (0 of 0)
Take Snapshot
Solution Explorer
Git Changes
C:\Users\Johanz\D
z: 4
z: 3
z: 2
z: 1
z: 0


5.
z 5 4 3 2 1 0

f)


1.2P Part 4
Process: [6148] 1.2P Part 4.exe
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
for (int count = 1; count < 100; count++)
{
Console.WriteLine("Hello");
Console.WriteLine(count);
}
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 44 seconds
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
Show Events (0 of 0)
Take Snapshot
Record CPU Profile
88 %
No issues found
Ln: 17
Ch: 42
SPC
CRLF
Autos
Search (Ctrl+E)
Name
Value
Type
Error List
Entire Solution
0 Errors
0 Warnings
Search Error List
Code
Description
Project
File
C:\Users\Johanz\Desktop\DE
Hello
76
Hello
77
Hello
78
Hello
79
Hello
80
Hello
81
Hello
82
Hello
83
Hello
84
Hello
85
Hello
86
Hello
87
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89
Hello
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Hello
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Hello
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Hello
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Hello
94
Hello
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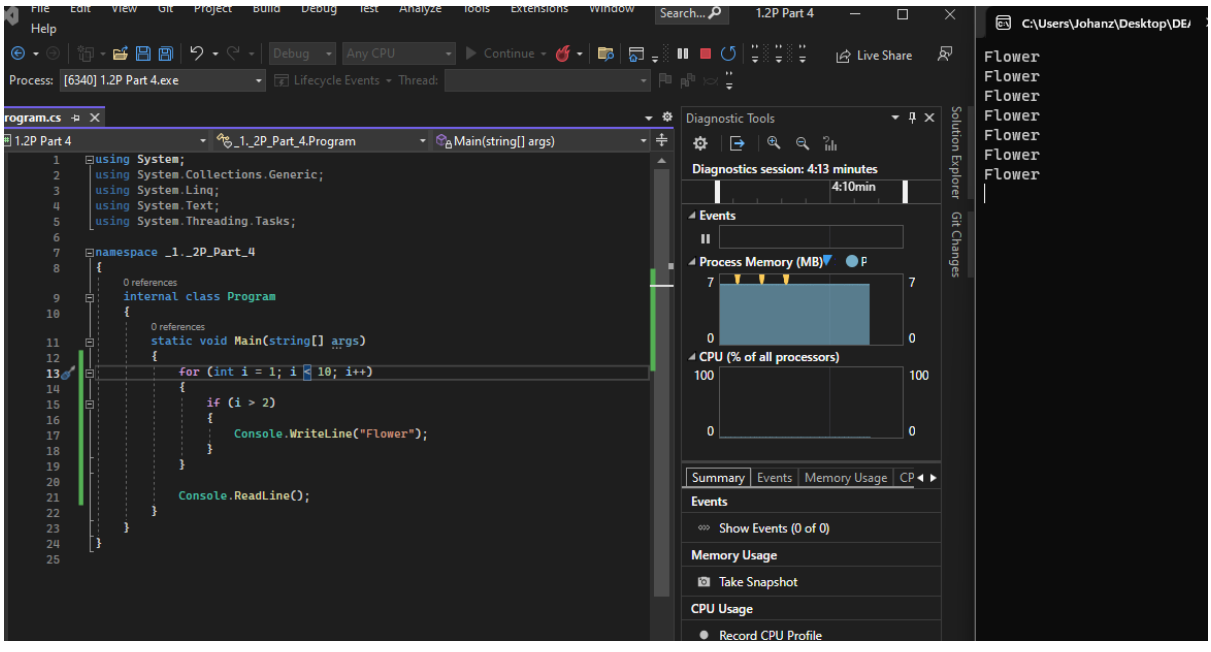
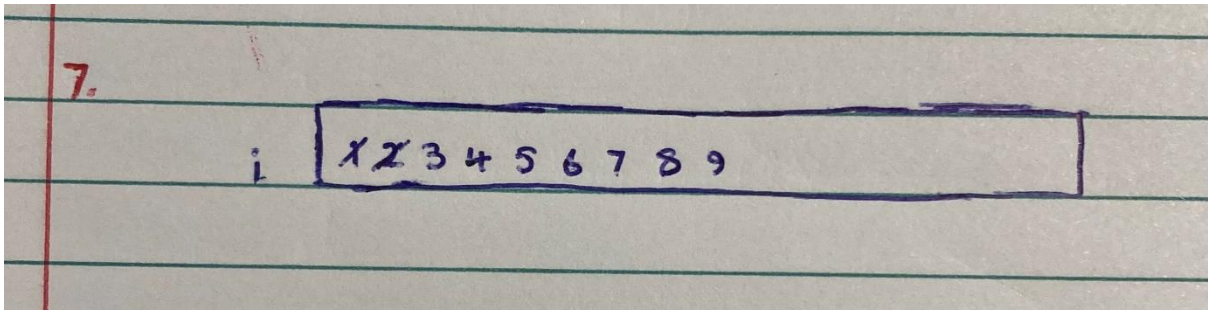
Hello
96
Hello
97
Hello
98
Hello
99

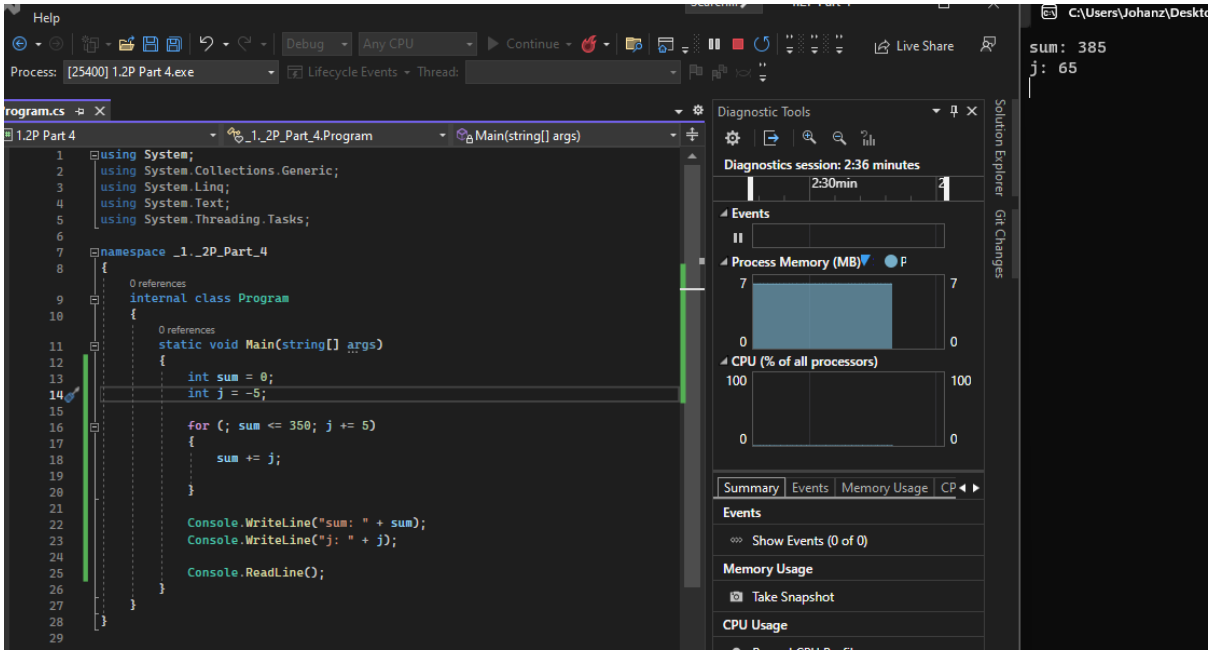
g)


1.2P Part 4
Process: [6340] 1.2P Part 4.exe
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
for (int i = 1; i < 10; i++)
{
if (i > 2)
{
Console.WriteLine("Flower");
}
}
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 4:13 minutes
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
Show Events (0 of 0)
Take Snapshot
Record CPU Profile
C:\Users\Johanz\Desktop\DE
Flower
Flower
Flower
Flower
Flower
Flower
Flower

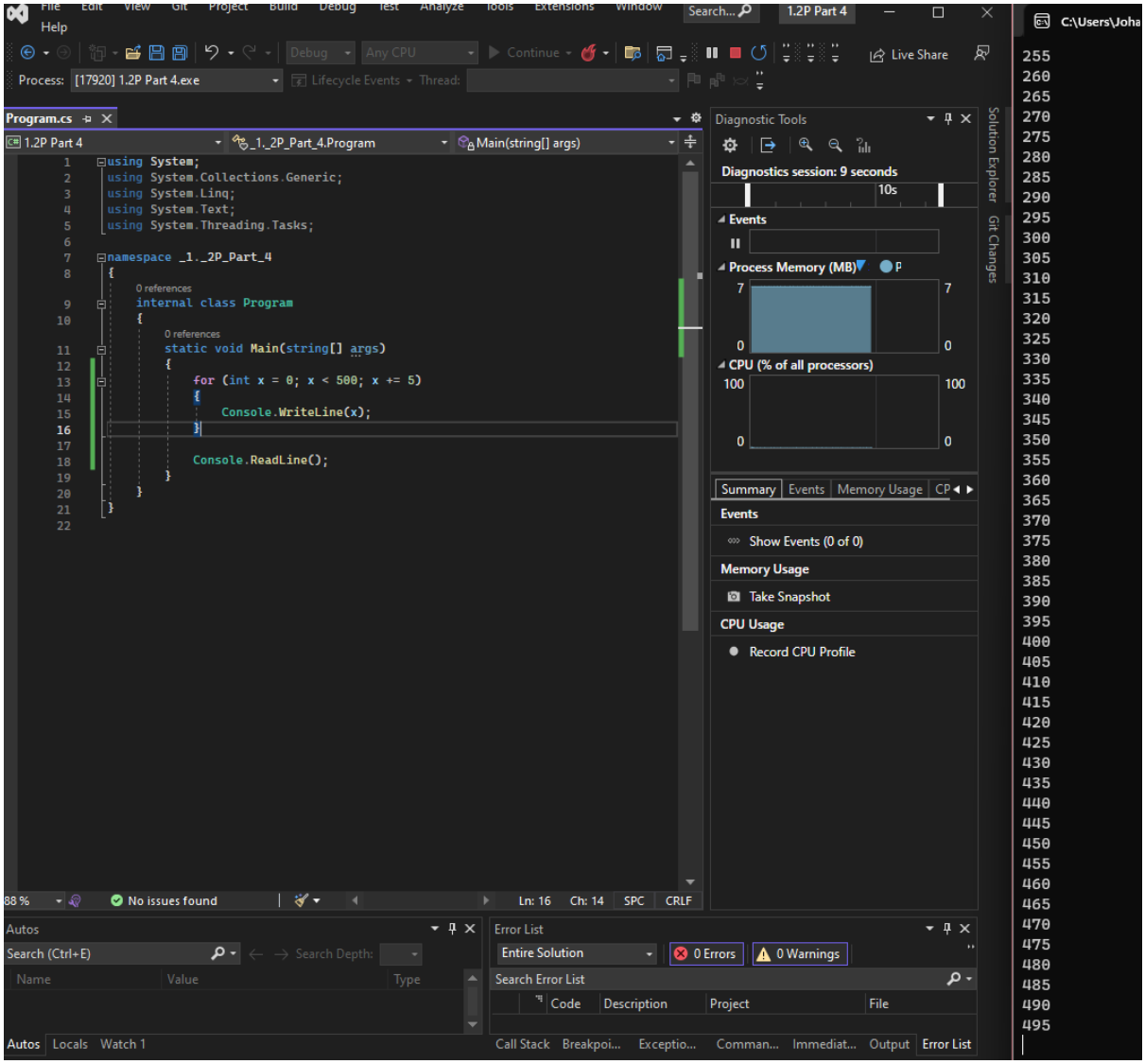


5. Rewrite both of the following fragments of code using for loops instead of while loops.

a)



b)


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search...
1.2P Part 4
Debug
Any CPU
Continue
Live Share
Process: [17920] 1.2P Part 4.exe
Lifecycle Events
Thread:
Program.cs
1.2P Part 4
_1._2P_Part_4.Program
Main(string[] args)
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace _1._2P_Part_4
{
0 references
internal class Program
{
0 references
static void Main(string[] args)
{
for (int x = 0; x < 500; x += 5)
{
Console.WriteLine(x);
}
Console.ReadLine();
}
}
}
Diagnostic Tools
Diagnostics session: 9 seconds
10s
Events
Process Memory (MB)
CPU (% of all processors)
Summary
Events
Memory Usage
Events
Show Events (0 of 0)
Memory Usage
Take Snapshot
CPU Usage
Record CPU Profile
Solution Explorer
Git Changes
88 %
No issues found
Ln: 16
Ch: 14
SPC
CRLF
Autos
Search (Ctrl+E)
Search Depth:
Name
Value
Type
Autos
Locals
Watch 1
Error List
Entire Solution
0 Errors
0 Warnings
Search Error List
Code
Description
Project
File
Call Stack
Breakpoi...
Exceptio...
Comman...
Immediat...
Output
Error List
C:\Users\Joha
255
260
265
270
275
280
285
290
295
300
305
310
315
320
325
330
335
340
345
350
355
360
365
370
375
380
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