

Answers for Q4 and Q5

Question 4 - Find existing issues

Issue 1

Original Issue: There is no curly braces so only the first line after is read inside the loop. C is never changed, leading to the condition always being true and an infinite loop.

Product starts at 0, so doing “product * 5” will always lead to 0

```
int c = 0, product = 1;
while (c <= 5) {
    product = product * 5;
    c = c + 1;
}
```

Issue 2

Original Issue: B will never become the same value as A, so this will become an infinite loop.

```
int a = 31, b = 0, sum = 0;
while (a != b) {
    sum = sum + a;
    b = b + 1;
}
```

Issue 3

Original Issue: total is never initialized

```
int x = 1;
int total = 0;
while (x <= 10) {
    total = total + x;
    x = x + 1;
}
```

Issue 4

Original Issue: y is initialized inside the while loop. It needs to be before it.

```
int y = 0;
while (y < 10) {
    Console.WriteLine("y " + y);
    y = y + 1;
}
```

Issue 5

Original Issue: the condition is never met, it will always be false.

```
int z = 5;
while (z > 0) {
    z = z - 1;
    Console.WriteLine("z: " + z);
}
```

Issue 6

Original Issue: There needs to be a semicolon after the initialized int count = 1; not a comma

```
for(int count = 1; count < 100; count++) {
    Console.WriteLine("Hello");
}
```

Issue 7

Original Issue: the variable should not be cast in capslock, thats only for constants. The naming of I is inconsistent.

i>10 will always be false and the loop will never run.

The wrong quotation marks are used.

```
for (int i = 1; i < 10; i++) {
    if (i > 2) {
        Console.WriteLine("Flower");
    }
}
```

Question 5 - Convert while loops

While loop 1

```
int sum = 0;
for (int j = -5; sum <= 350; j += 5) {
    sum += j;
}
```

While loop 2

```
for (int x = 0; x < 500; x += 5)
{
    Console.WriteLine(x);
}
```