C# Arrays and Looping Review

1. Create a C# console application
2. Define a 20 element integer array
3. Assign each element to be 0
4. Loop through the array and ask the user to enter a value for each element
5. Loop through the array and display and total the values that the user entered
6. Display the total value

Here is the code to do that program

```
string sTemp = ""; // We will need this to get data from the user;
int iTotal = 0; // this will be used to get the total
int [ ] iaUserValues = new int [20]; // this is line 2
// this is line 3
for (int iLoop = 0; iLoop < iaUserValues.Length; iLoop++)
{
        iaUserValues[iLoop] = 0;
}
// This is line 4
for (int iLoop = 0; iLoop < iaUserValues.Length; iLoop++)
{
        Console.Write("Enter a value for element {0}:", iLoop);
        sTemp = Console.ReadLine();
        iaUserValues[iLoop] = Convert.ToInt32(sTemp);
}
// This is Line 5
for (int iLoop = 0; iLoop < iaUserValues'Length; iLoop++)
{
        Console.WriteLine("For element {0}, you entered {1}", iLoop, iaUserValues[iLoop]);
        iTotal += iaUserValues[iLoop]; // this is the same as iTotal= iTotal + iaUserValues[iLoop]
}
// This is line 6
Console.WriteLine ("The total of all 20 numbers is {0}.", iTotal);
```

1. Create a C# console application
2. Define a two dimensional array to hold names and classes (20 names and 5 classes)
3. Assign each element to be " "
4. Get the 20 names from the user
5. Loop through the array and get the classes for each student
6. Loop through and display the list of classes for each student

```csharp
string sTemp = " "; // we'll  need this to get stuff from the user
string[,] saClasses = new string[20,6]; // this is line 2 – we are using 6 because Name + 5 classes = 6
// This is line 3
for (int iRow = 0; iRow < 20; iRow++)
{
        for (int iCol = 0; iCol < 5; iCol++)
        {
                saClasses[iRow, iCol] = " ";
        }
}
// this is line 4
for (int iLoop = 0; iLoop < 20; iLoop++)
{
        Console.Write("Enter name for student {0}:", iLoop);
        saClasses[iLoop, 0] = Console.ReadLine();
}
// This is line 5
for (int iRow = 0; iRow < 20; iRow++)
{
        Console.WriteLine("Enter classes for {0}", saClasses[iRow, 0]);
        for (int iCol = 1; iCol < 6; iCol++)
        {
                Console.Write ("Enter class {0}", iCol);
                sTemp = Console.ReadLine();
                saClasses[iRow, iCol] = sTemp;
        }
}

// This is Line 6
for (int iRow = 0; iRow < 20; iRow ++)
{
        Console.WriteLine("The classes for {0} are:", saClasses[iRow, 0]);
        for (int iCol = 1; iCol < 6; iCol++)
        {
                Console.Write("{0}   ", saClasses[iRow, iCol]);
        }
}
```