

1. In the code below write what is printed by each `Console.WriteLine` statement on the comment line to the right of the statement.

```
string s1 = "Red Jello is good!";  
string s2 = "Hello Mom";  
Console.WriteLine(s2.Length);  
Console.WriteLine(s1.Substring(6, 3));  
Console.WriteLine(s1.Remove(6, 7));  
Console.WriteLine(s2.IndexOf("o M"));  
Console.WriteLine(s1.LastIndexOf('e'));  
string s3;  
s3 = "DCBA" + s1.Substring(0, 1);  
Console.WriteLine(s3);  
s3 = s1.Replace('a', 'b');  
Console.WriteLine(s3);  
s3 = s2.Remove(4, 3);  
Console.WriteLine(s3);  
s3 = s2.ToLower();  
Console.WriteLine(s3);
```

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2. What is the purpose of a constructor in a class?

3. When we use the normal *String* class we find that strings are immutable and cannot be changed. If we use the *StringBuilder* class the strings are not immutable. Give an example of an operation that we could do with the *StringBuilder* class that we could not do with the *String* class.

4. What is printed by the following sequence:

```
String s1 = "ABCD";  
String s2 = "abcd";  
Console.WriteLine(s1.Compare(s2));
```

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5. A string consists of a sequence of letters, spaces, and punctuation. Write a method which will accept the string as an argument and print the ASCII code for each character in the string on a single line. For example if the string was "abc" your method would print 979899 since 97 is the ASCII code for 'a', 98 is the code for 'b', and 99 is the code for 'c'.

6. Write a method which receives two arguments: a string and a char. The method returns the number of occurrences of the char in the string as an int. For example, if the following call is made to the method name "HowMany":

```
int n = HowMany("bananas", 'a');
```

The value of n would be 3 since there are 3 *a* characters in the string.

7. Write a program to input a string from the user and print the string out such that every other word beginning with the second word is missing. For example, if the sentence entered is "Common sense is the collection of prejudices acquired by age 18."

the resulting output sentence would be

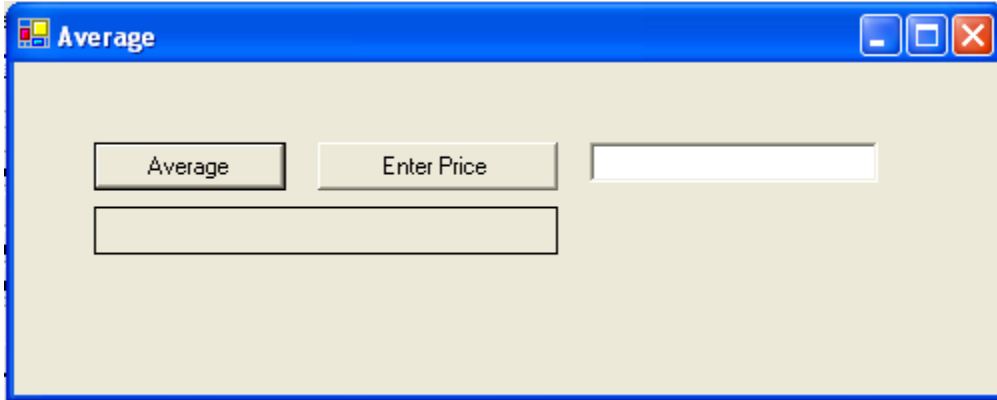
"Common is collection prejudices by 18."

8. Write a function which accepts a string, `s` and an integer, `n` as arguments. If `n` is 1 the function returns the number of digits in the string. If `n` is 2 it returns the number of spaces in the string. If `n` has any other value it returns -1.

**Engr 123**  
**Hour Exam**  
**Practical In Class**

**Name** \_\_\_\_\_  
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1. Write a program in C# which has a user interface similar to that pictured below. There are two buttons labeled "Average" and "Enter Price", a text box, and a blank label. The user will enter prices into the text box and each time a price is entered she will click on the "Enter Price" button. When she clicks on the "Average" button your program should display the average of all of the prices entered on the label.



Demonstrate your working program for your instructor and turn in a print out of the button click events.