# Group 4

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A screen shot of a computer

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This is the HTML Element class that inherits from the IElement class. IElement was an empty abstract class so there are no methods to inherit. HTMLElement will be the superclass of the element children classes, but they will handle all their own methods and elements.

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This is the HTMLDocument class. It contains two private members, one representing the file name and second being a List of HTML elements to be displayed on this document.

HTMLDocumen() is the constructor and is passed in a string parameter that will be used to set the filename

RunDocumen() is used to parse the List<IElement> hTMLElements list. It uses a Stream Writer to call the toString method and output the result to the stream. Each .toString() call will be utilized by the individual elements overridden toString method. Then it uses System.Diagnostics.Process… to open the created file in Chrome.

AddElement takes an IElement object and adds it to the list of HTML elements.

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This class is used to represent an image in a HTML file. It contains 3 attributes, filename, altText and TitleText. These are all strings that represent the necessary attributes of a HTML image attribute.

Next is the constructor for the HTML\_img, it will take in the string and set the appropriate variables.

ToString method overrides the HTML Element to string method to output the expected image string.

A screenshot of a computer program

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HTML List element class. An attribute to store whether it is an ordered or unordered list, as well as a List of strings to hold all the list items.

The toString method here is a little different since we have two different options ordered or unordered. Used a string builder to properly build the output we want. Iterate through the list items list and append the <li> tag to each one, indicating it is an item in the list. Then call on the built in toString method to convert the string builder to a string.

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Class to create HTML Table objects. Attributes that hold the column names and then a List of Lists of strings. This was done to separate each row

toString method was similar to that of a list, in terms of using a string builder. Printed out the columns first. Then used a nested foreach loop so that it would print each row, then all the elements in that row

A computer screen shot of text

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A screen shot of a computer code

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This is the concrete factory that implements the abstract factory. Since we want each concrete factory to be a singleton, we have a HTML factory object labelled instance, so that only one object can be created and will just always be referenced. This is done through the get instance method.

The next method is using the IDocument abstract method to pass a filename and create a new HTML document. Similar to that, the Create Element method will take the element type and the properties of the element, go through the switch and extract the appropriate properties from the list it is given and will create the appropriate element.