Q3 a)

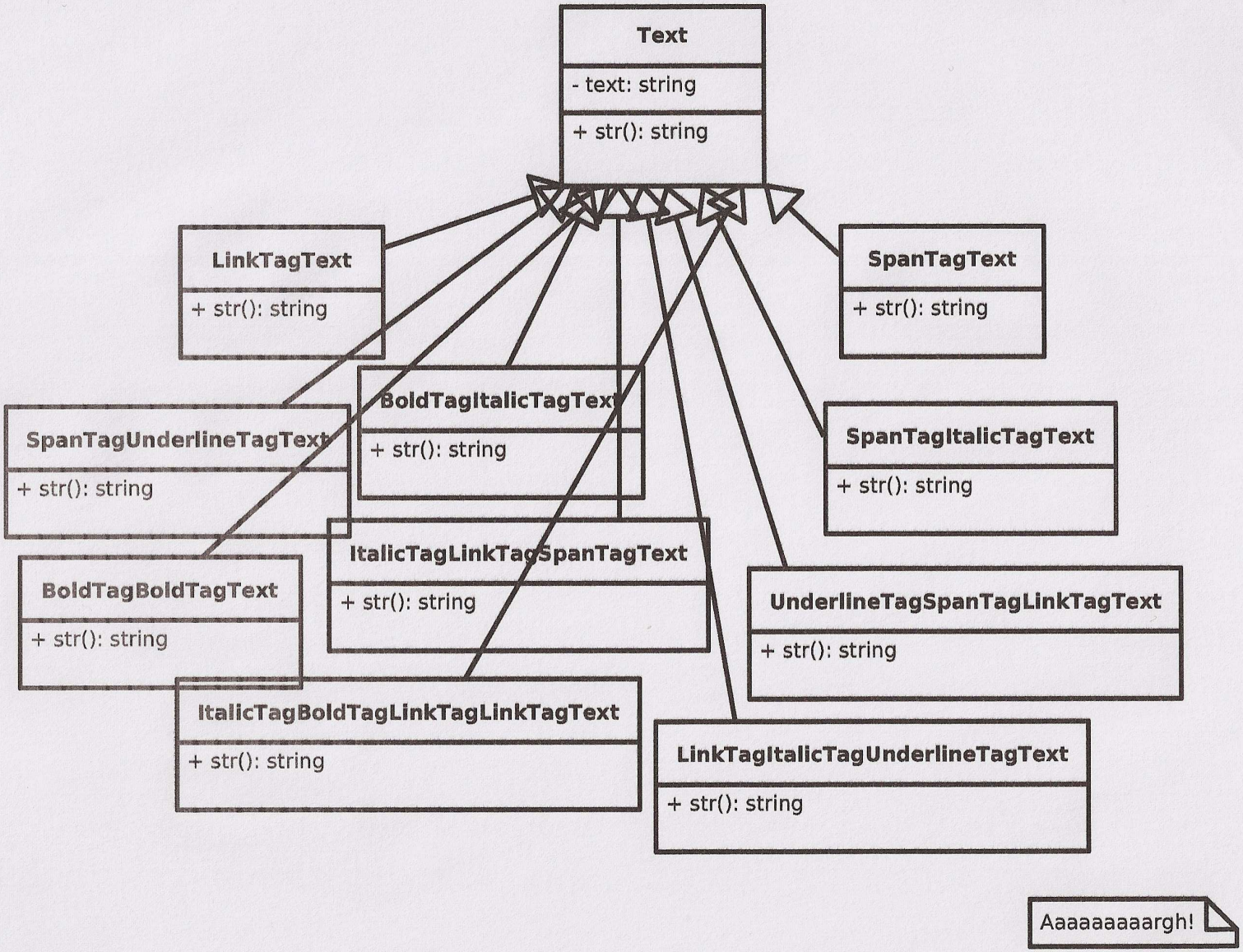
We wish to have a way to create an HTML expression composed of some plain text, and any combination (including duplicates) of the following HTML tags: <u><a>

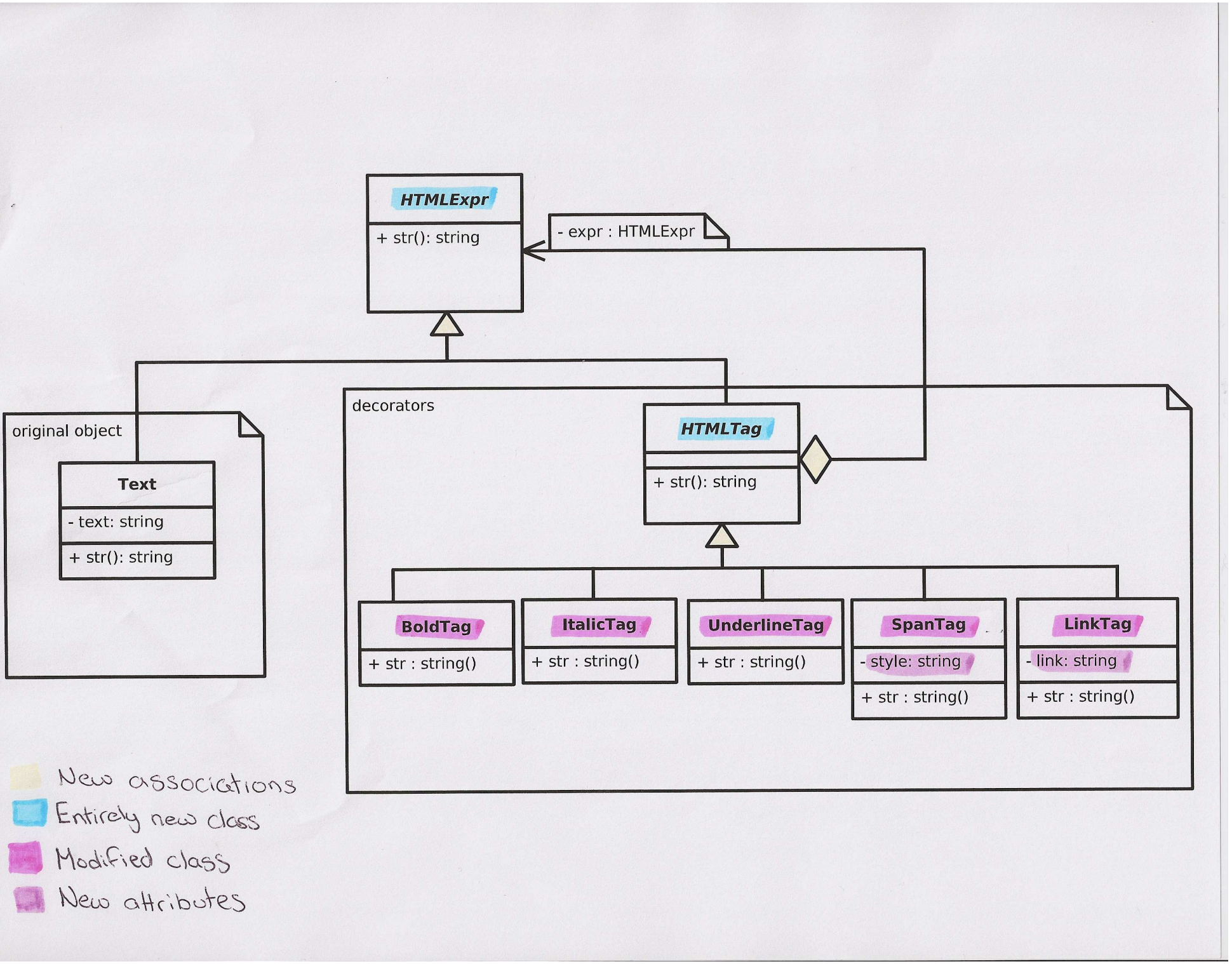
Both the <a> and require extra information, namely a value for the “href” and “style” parameters respectively.

We want a way to easily create proper HTML expressions from the client code using the above tags. Here is some sample output:

<u><span style=’margin-left: 70px;’>Plain text here!!!</u>

The following two figures represent 1) a UML model of the problem, and 2) a UML model of the problem with the **decorator** dessign pattern applied.


Text
- text: string
+ str(): string
LinkTagText
+ str(): string
SpanTagText
+ str(): string
BoldTagItalicTagText
+ str(): string
SpanTagUnderlineTagText
+ str(): string
SpanTagItalicTagText
+ str(): string
ItalicTagLinkTagSpanTagText
+ str(): string
BoldTagBoldTagText
+ str(): string
UnderlineTagSpanTagLinkTagText
+ str(): string
ItalicTagBoldTagLinkTagLinkTagText
+ str(): string
LinkTagItalicTagUnderlineTagText
+ str(): string
Aaaaaaaaargh!


HTMLExpr
+ str(): string
- expr : HTMLExpr
original object
Text
- text: string
+ str(): string
decorators
HTMLTag
+ str(): string
BoldTag
+ str : string()
ItalicTag
+ str : string()
UnderlineTag
+ str : string()
SpanTag
- style: string
+ str : string()
LinkTag
- link: string
+ str : string()
New associations
Entirely new class
Modified class
New attributes