JAVA – Constructor Overloading [2022]

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Write a program in Java to demonstrate the Constructor Overloading feature of an Object Oriented Programming Language:

Domelement.java:

```java
import java.util.Arrays;
import java.util.stream.Collectors;

public class Domelement {
    private final String tag;
    private final String content;
    protected boolean style;
    protected int width;
    protected int height;

    protected int borderTop;
    protected int borderRight;
    protected int borderBottom;
    protected int borderLeft;


    Domelement(String t){
        tag = t;
        content = "";
    }
    Domelement(String t, String c){
        tag = t;
        content = c;
    }

    String dom() {
        String temp_style = style?  " style=\"width: "+width+"px; " +
                "height: "+height+"px; " +
                "border-top: "+borderTop+"px; " +
                "border-right: "+borderRight+"px; " +
                "border-bottom: "+borderBottom+"px; " +
                "border-left: "+borderLeft+"px;\"" : "";

        String temp_content = Arrays.stream(content.split("\n"))
                .collect(Collectors.joining("\n\t"));
        return "<"+tag+temp_style+">\n\t"+temp_content+"\n</"+tag+">\n";
    }
}
```

Style_css_border.java:

```java
public class Style_css_border {

    Style_css_border(Domelement d) {
        d.borderTop = 1;
        d.borderRight = 1;
        d.borderBottom = 1;
        d.borderLeft = 1;
        d.style = true;
    }
    Style_css_border(Domelement d, int trbl) {
        d.borderTop = trbl;
        d.borderRight = trbl;
        d.borderBottom = trbl;
        d.borderLeft = trbl;
        d.style = true;
    }
    Style_css_border(Domelement d, int tb, int rl) {
        d.borderTop = tb;
        d.borderRight = rl;
        d.borderBottom = tb;
        d.borderLeft = rl;
        d.style = true;
    }
    Style_css_border(Domelement d, int t, int r, int b, int l) {
        d.borderTop = t;
        d.borderRight = r;
        d.borderBottom = b;
        d.borderLeft = l;
        d.style = true;
    }

}
```

Style_css_width.java:

```java
public class Style_css_width {
    Style_css_width(Domelement d, int w){
        d.width = w;
        d.style = true;
    }
}
```

Style_css_height.java:

```java
public class Style_css_height {
    Style_css_height(Domelement d, int h){
        d.height = h;
        d.style = true;
    }
}
```

Html.java:

```java
public class Html {
    public static Domelement html, head, body, title, div1, div2, div3, span1;
    Html() {
        div1 = new Domelement("div", "i am div1.");
        new Style_css_border(div1, 5); // overloaded constructor to set all side
                                       // border as 5px
        new Style_css_width(div1, 100);
        new Style_css_height(div1, 100);

        div2 = new Domelement("div", "i am div2.");
        new Style_css_border(div2, 5, 10); // overloaded constructor to set border
                                           // of top, bottom as 5px
                                           // and right, left as 10px

        div3 = new Domelement("div", "i am div3.");
        new Style_css_border(div3, 2, 4, 8, 10); // overloaded constructor to set
                                                 // all different border width of
                                                 // all side

        span1 = new Domelement("span");
        new Style_css_border(span1); // default overloaded constructor to set all
                                     // side border as 1px
        new Style_css_width(div1, 500);
        new Style_css_height(div1, 200);

        title = new Domelement("title", "This is title");

        head = new Domelement("head", title.dom());
        body = new Domelement("body", div1.dom() + div2.dom() + div3.dom()
                                      + span1.dom());
        html = new Domelement("html", head.dom() + body.dom());
    }

}
```

Main.java:

```java
public class Main {
    public static void main(String[] args) {
        new Html();
        System.out.println(Html.html.dom());
    }
}
```

Output:

```
Farhad ~ >> javac Main.java
Farhad ~ >> java Main
<html>
        <head>
                <title>
                        This is title
                </title>
        </head>
        <body>
                <div style="width: 500px; height: 200px; border-top: 5px; border-right: 5px;
border-bottom: 5px; border-left: 5px;">
                        i am div1.
                </div>
                <div style="width: 0px; height: 0px; border-top: 5px; border-right: 10px; border-
bottom: 5px; border-left: 10px;">
                        i am div2.
                </div>
                <div style="width: 0px; height: 0px; border-top: 2px; border-right: 4px; border-
bottom: 8px; border-left: 10px;">
                        i am div3.
                </div>
                <span style="width: 0px; height: 0px; border-top: 1px; border-right: 1px;
border-bottom: 1px; border-left: 1px;">

                </span>
        </body>
</html>
```

Github repository link:

https://github.com/Farhad618/html-dom-prototype.git

Thank You