

## **Task 1:**

Find the logic and code it in JAVA (Task1.txt) for the below functions:

1. append()
2. prepend()
3. after()
4. before()

## **Task Explanation:**

1. Each function consists of 3 params: givenString, id and stringToAdd.  
givenString: Given string (read from htmlFile.txt)  
id: Identification of the element where the action is going to happen  
(Each element will have unique id)  
stringToAdd: Contents to be added based on the position
2. Usage of each function:
  - i) Find the start tag and end tag of element corresponding to the given id.
  - ii) Add the string based on the functionality.  
append(): Add stringToAdd before end tag  
prepend(): Add stringToAdd after start tag  
after(): Add stringToAdd after end tag  
before(): Add stringToAdd before start tag
3. For singleTon tags (<img />, <input />), only after() and before() are possible.  
In case of - append(), prepend() - outputString=No output
4. Refer the screenshots for understanding the usage of these functions

### **Do's:**

1. Deadline - As mentioned in the mail
2. Reply to the mail along with your solution as Task1\_<YourName>.txt
3. In case, you are new to JAVA,
  - a. Try to find the solution in the language you are comfortable (C, C++, Python, etc...)
  - b. Then, learn and try to achieve the same solution in JAVA and complete it within a week
  - c. Submit both JAVA and your C/C++/Python/other solution

### **Don'ts:**

1. Should not use following related libraries:  
XML, HTML Element, JSOUP  
Pattern, Matcher  
or other libraries.  
You have to deduce the logic from scratch.
2. Tab spaces in the screenshots are for your understanding purpose.  
givenString & outputString should not have any \t, \r, \n, etc ...

### **Note:**

The task does not require Javascript, HTML, XML, etc... ..

## Sample use case: [for after(), before() - refer Page 4]

```
append()
givenString:<div id="1"><div id ="2"><div id="3"></div></div></div>
id: 2
stringToAdd:<div id="4"></div>
outputString:<div id="1"><div id ="2"><div id="3"></div><div id="4"></div></div></div>
prepend()
givenString:<div id="1"><div id ="2"><div id="3"></div><div id="4"></div></div></div>
id: 2
stringToAdd:<div id="5"></div>
outputString:<div id="1"><div id ="2"><div id="5"></div><div id="3"></div><div id="4"></div></div></div>
```

**Note:** Dotted lines in above image depicts the addition of the string

Tab spaces (indentation) in all these screenshots are for understanding purposes, givenString will be without white spaces, like the above **Sample use case**

## Add position reference

### append()

```
1 <div id="1">
2   <div id ="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26    <div id="appendSample">
27    </div>
28  </div>
29 </div>
```

### prepend()

```
1 <div id="1">
2   <div id ="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <div id="prependSample">
12    </div>
13    <img id="7" />
14    <input id="8" />
15    <br id="9" />
16    <span id="10">
17      <div id="11">
18        <div id="12">
19        </div>
20      </div>
21    </span>
22    <div id="13">
23      <pre id="14">
24      </pre>
25    </div>
26    <span id="15">
27    </span>
28  </div>
29 </div>
```

### after()

```
1 <div id="1">
2   <div id ="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26    <div id="afterSample">
27    </div>
28  </div>
29 </div>
```

### before()

```
1 <div id="1">
2   <div id ="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="beforeSample">
11  </div>
12  <div id="6">
13    <img id="7" />
14    <input id="8" />
15    <br id="9" />
16    <span id="10">
17      <div id="11">
18        <div id="12">
19        </div>
20      </div>
21    </span>
22    <div id="13">
23      <pre id="14">
24      </pre>
25    </div>
26    <span id="15">
27    </span>
28  </div>
29 </div>
```

## Note:

The task does not require Javascript, HTML, XML, etc... ..

givenString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26  </div>
27 </div>
```

append()

outputString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26    <div id="appendSample">
27    </div>
28  </div>
29 </div>
```

append(givenString, "6", "<div id='appendSample'></div>")

givenString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26  </div>
27 </div>
```

prepend()

outputString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <div id="prependSample">
12    </div>
13    <img id="7" />
14    <input id="8" />
15    <br id="9" />
16    <span id="10">
17      <div id="11">
18        <div id="12">
19        </div>
20      </div>
21    </span>
22    <div id="13">
23      <pre id="14">
24      </pre>
25    </div>
26    <span id="15">
27    </span>
28  </div>
29 </div>
```

prepend(givenString, "6", "<div id='prependSample'></div>")

Note:

The task does not require Javascript, HTML, XML, etc... ..

givenString

after()

outputString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26  </div>
27 </div>
```

after(givenString, "6", "<div id='afterSample'></div>")

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26  </div>
27  <div id="afterSample" >
28  </div>
29 </div>
```

givenString

before()

outputString

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="6">
11    <img id="7" />
12    <input id="8" />
13    <br id="9" />
14    <span id="10">
15      <div id="11">
16        <div id="12">
17        </div>
18      </div>
19    </span>
20    <div id="13">
21      <pre id="14">
22      </pre>
23    </div>
24    <span id="15">
25    </span>
26  </div>
27 </div>
```

before(givenString, "6", "<div id='beforeSample'></div>")

```
1 <div id="1">
2   <div id="2">
3     <span id="3">
4     </span>
5     <div id="4">
6       <div id="5">
7       </div>
8     </div>
9   </div>
10  <div id="beforeSample" >
11  </div>
12  <div id="6">
13    <img id="7" />
14    <input id="8" />
15    <br id="9" />
16    <span id="10">
17      <div id="11">
18        <div id="12">
19        </div>
20      </div>
21    </span>
22    <div id="13">
23      <pre id="14">
24      </pre>
25    </div>
26    <span id="15">
27    </span>
28  </div>
29 </div>
```

Note:

The task does not require Javascript, HTML, XML, etc... ..