# DOM Selection in JavaScript

```html
<!DOCTYPE html>
<html>
<head>
  <title>DOM Selection Lab</title>
</head>
<body>
  <h2 id="heading">Welcome to DOM Lab</h2>
  <p id="para1">This is the first paragraph.</p>
  <p class="intro">This is the second paragraph with class intro.</p>
  <p class="intro">This is the third paragraph with class intro.</p>
  <p name="note">This paragraph uses a name attribute.</p>

  <ul>
    <li class="item">Apple</li>
    <li class="item">Banana</li>
    <li class="item">Cherry</li>
  </ul>

  <button onclick="runCode()">Run</button>
  <div id="output"></div>

  <script>
    function runCode() {
      //Part A
      document.getElementById("heading").textContent = "DOM Lab in Progress";

      let intros = document.getElementsByClassName("intro");
      for (let p of intros) {
        p.style.color = "blue";
      }

      let totalP = document.getElementsByTagName("p").length;
      document.getElementById("output").textContent = "Total <p> elements: " +
totalP;

      document.getElementsByName("note")[0].style.backgroundColor =
"lightgray";


      //part B
      document.querySelector("li").style.fontWeight = "bold";
```

```javascript
        document.querySelector("#para1").textContent += " (Modified)";
        document.querySelectorAll("li").forEach(li => li.style.color = "green");
        document.querySelectorAll(".intro").forEach(p =>
console.log(p.textContent));


        //part C
        let el1 = document.getElementById("para1");
        let el2 = document.querySelector("#para1");
        console.log("Same element?", el1 === el2);

        console.log("getElementsByClassName:",
document.getElementsByClassName("intro"));
        console.log("querySelectorAll:", document.querySelectorAll(".intro"));


        //part D
        document.querySelector("ul li:last-child").textContent = "Orange";
        document.querySelectorAll(".item").forEach((li, i) => {
          li.textContent = (i + 1) + ". " + li.textContent;
        });
        document.getElementsByTagName("p")[1].style.display = "none";
        document.querySelector("p.intro").style.textDecoration = "underline";
        let items = document.getElementsByClassName("item");
        for (let li of items) {
          li.style.backgroundColor = "lightyellow";
        }


        //part E
        console.log("Heading tag name:",
document.querySelector("#heading").tagName);
        document.querySelector("[name='note']").style.color = "red";
        document.querySelectorAll("p").forEach(p => console.log(p.innerHTML));
        document.getElementById("para1").id = "firstPara";
        let newLi = document.createElement("li");
        newLi.textContent = "Grapes";
        document.querySelector("ul").appendChild(newLi);


        //part F
        document.querySelectorAll("p").forEach(p => {
          let size = window.getComputedStyle(p).fontSize;
          let newSize = parseInt(size) + 2 + "px";
          p.style.fontSize = newSize;
        });

        document.querySelectorAll("li").forEach(li => {
          li.style.backgroundColor = "lightgreen";
```

```
    });

    let countIntro = document.querySelectorAll(".intro").length;
    document.getElementById("output").textContent += " | Intro paragraphs: "
+ countIntro;

    let tag = "p"; // example: count <p>
    let elems = document.getElementsByTagName(tag);
    document.getElementById("output").textContent += " | <" + tag + ">
count: " + elems.length;

    document.querySelector("h2").onclick = function() {
      this.style.color = (this.style.color === "red" ? "black" : "red");
    };
  }
  </script>
</body>
</html>
```