

```

1 // *****Homework4 Pt 2 script*****
2 // Array of interest rates
3 const interestRates = ["5", "6", "7"];
4
5 // Function to create a table for a given interest rate
6 function createTable(interestRate) {
7     // Generate a unique ID for each table
8     const tableId = `table-${interestRate.replace('%', '')}`;
9
10    // Create a container div for the table
11    const containerDiv = document.createElement("div");
12    containerDiv.id = tableId;
13    containerDiv.classList.add("hwkpt2");
14
15    // Append the container div to the parent element
16    const parentDiv = document.getElementById("table-box");
17    parentDiv.appendChild(containerDiv);
18
19    // Create a title above the table
20    const title = document.createElement("h3");
21    title.textContent = `Compound ${interestRate}% Interest Rate`;
22    containerDiv.appendChild(title);
23
24    // Create the table inside the container div
25    const table = document.createElement("table");
26    table.setAttribute("border", "1");
27
28    const caption = document.createElement("caption");
29    caption.style.display = "none";
30    caption.textContent = "Amount and rate table";
31
32    const thead = document.createElement("thead");
33    const theadRow = document.createElement("tr");
34    theadRow.style.backgroundColor = "#1d0e6b";
35    theadRow.style.color = "white";
36
37    const thYear = document.createElement("th");
38    thYear.setAttribute("scope", "col");
39    thYear.textContent = "Year";
40
41    const thAmount = document.createElement("th");
42    thAmount.setAttribute("scope", "col");
43    thAmount.textContent = "Amount on deposit ($)";
44
45    const thInterestRate = document.createElement("th");
46    thInterestRate.setAttribute("scope", "col");
47    thInterestRate.textContent = "Interest Rate (%)";
48
49    theadRow.appendChild(thYear);
50    theadRow.appendChild(thAmount);
51    theadRow.appendChild(thInterestRate);
52
53    thead.appendChild(theadRow);
54
55    const tbody = document.createElement("tbody");
56
57    // Loop through years (n)
58    for (let n = 1; n <= 5; n++) {
59        const row = document.createElement("tr");
60        row.style.backgroundColor = n % 2 === 0 ? "#e20707" : "#417bcb"; // Rotate
        colors for each row
61
62        const tdYear = document.createElement("td");
63        tdYear.style.border = "1px solid gray";
64        tdYear.textContent = n;
65
66        const tdAmount = document.createElement("td");
67        tdAmount.style.border = "1px solid gray";
68

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69         // Calculate the amount (A) using the formula
70         const P = 1000; // Principal amount
71         const r = parseFloat(interestRate) / 100; // Convert interest rate to a decimal
72         const A = P * Math.pow(1 + r, n);
73
74         tdAmount.textContent = A.toFixed(2); // Format the amount to two decimal places
75
76         const tdInterestRate = document.createElement("td");
77         tdInterestRate.style.border = "1px solid gray";
78         tdInterestRate.textContent = interestRate;
79
80         row.appendChild(tdYear);
81         row.appendChild(tdAmount);
82         row.appendChild(tdInterestRate);
83
84         tbody.appendChild(row);
85     }
86
87     table.appendChild(caption);
88     table.appendChild(thead);
89     table.appendChild(tbody);
90
91     containerDiv.appendChild(table);
92 }
93
94 // Create tables for each interest rate
95 document.addEventListener("DOMContentLoaded", function () {
96     for (let i = 0; i < interestRates.length; i++) {
97         createTable(interestRates[i]);
98     }
99 });
```