

Loops + Functions + Switch — TODOs

TODO-1: Implement runOperation(arr, op) (Functions + Switch + Loops)

Problem Statement

Complete the function runOperation(arr, op) so that it returns a single result based on the selected operation.

The parameter op is a string chosen from the dropdown: "sum", "product", "max", or "count-even". Use a switch statement to select the operation and loops (for or while) to compute results.

What to implement

Inside runOperation(arr, op):

- Use switch (op) { ... }.
- For each case:
 - sum: return the sum of all numbers in arr.
 - product: return the product of all numbers in arr.
 - If arr is empty, return 0.
 - max: return the largest number in arr.
 - If arr is empty, return "N/A".
 - count-even: return how many numbers in arr are even (i.e., divisible by 2).
- For any unknown operation, return "Unknown op".

Constraints & Rules

- You must use a switch.
- Use at least one loop for the computations (no reduce for this task).
- Do not modify HTML/CSS; edit only app.js.

Examples

- arr = [5, 2, 7, 2, 8], op = "sum" -> 24
- arr = [5, 2, 7, 2, 8], op = "product" -> 1120
- arr = [5, 2, 7, 2, 8], op = "max" -> 8
- arr = [5, 2, 7, 2, 8], op = "count-even" -> 3
- arr = [], op = "max" -> "N/A"
- arr = [], op = "product" -> 0
- arr = [1, 3, 5], op = "count-even" -> 0

Hints

- Initialize sum with 0, product with 1, and max with the first element (if array not empty).
- Even check: $n \% 2 === 0$.

Acceptance Criteria

- Uses switch with all required cases.
- Correct results for the provided examples.
- No crashes for empty arrays.

TODO-2: Implement summarizeEvenOdd(arr) (Loops + Function Return)

Problem Statement

Complete the function summarizeEvenOdd(arr) to count even and odd numbers in the provided array and return an object with two properties: { even: , odd: }.

What to implement

Inside `summarizeEvenOdd(arr)`:

- Use a loop to traverse `arr`.
- For each number:
- If even -> increment even
- Else -> increment odd
- Return the final object: `{ even, odd }`.

Constraints & Rules

- Must use a loop (for or while).
- Do not modify function parameters or the return shape.
- No array helpers (filter, reduce) for counting—explicit loop required.

Examples

- `arr = [5, 2, 7, 2, 8]` -> `{ even: 3, odd: 2 }`
- `arr = [1, 3, 5]` -> `{ even: 0, odd: 3 }`
- `arr = []` -> `{ even: 0, odd: 0 }`

Hints

- Initialize: `let even = 0, odd = 0;`
- Even check: `n % 2 === 0`.
- Return exactly `{ even, odd }`.

Acceptance Criteria

- Returns an object with both keys present.
- Correct counts for the examples above.
- Works for empty arrays without errors.