

Title: Counter Controlled While Loop

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Description: Prompts for a series of numbers and keeps track of running totals of odd values and of even values. Then displays the odd running total and the even running total.

Initial Algorithm:

1. Get how many numbers to input
2. Get number
3. Increase counter
4. Calculate running totals of odd and even numbers
5. Display the running totals when enough numbers are entered

Data Requirements:

Input:

- Ending value
- Entered number

Output:

- Odd total
- Even total

Additional Data:

- Counter

Formulas:

- $\text{Counter} = \text{Counter} + 1$
- $\text{Odd total} = \text{Odd total} + \text{Entered number}$
- $\text{Even total} = \text{Even total} + \text{Entered number}$

Refined Algorithm:

1. Initialize Counter to 0
2. Initialize Odd total to 0
3. Initialize Even total to 0
4. Input Ending value
5. WHILE Counter < Ending value
 - a. Input Entered number
 - b. Increase Counter

- Counter = Counter + 1
- c. IF Entered number is odd THEN
 - Compute Odd running total
 - Odd total = Odd total + Entered number
- d. ELSE
 - Computer Even running total
 - Even total = Even total + Entered number
- e. END IF
- 6. END WHILE
- 7. Output the Odd total
- 8. Output the Even total