

Algorithm for Java Menu-Driven Program

The algorithm outlines the execution flow of the menu-driven Java program that supports multiple operations including values, arrays, recursion, sorting, and stack operations.

Step 1: Start the program.

Step 2: Display the main menu with available options (Values, Arrays, Recursion, Sorting, Stack, Exit).

Step 3: Read the user's choice.

Step 4: If Values option selected → show Values submenu and perform respective operations (display, sum, swap methods, max).

Step 5: If Arrays option selected → show Array submenu and perform respective operations (print, return, multiply, sum, max, min, special conditions).

Step 6: If Recursion option selected → show Recursion submenu and perform respective operations (sum, factorial, numbers 1 to n, numbers n to 1, reverse characters).

Step 7: If Sorting option selected → show Sorting submenu and perform respective operations (bubble sort ascending/descending, selection sort ascending/descending).

Step 8: If Stack option selected → show Stack submenu and perform operations (isEmpty, size, push, pop, peek, search, predefined stack).

Step 9: Repeat the process until the user chooses Exit.

Step 10: Stop the program.