This course has mentioned over and over the importance of having a plan (defining diagram, solution algorithm, and desk checking) before starting to write any code in a programming language, such as Java, as part of the problem solving process. With an accurate plan, coding in a programming language usually becomes mostly trivial and makes problem solving much more manageable.

Review the defining diagram and solution algorithm below:

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| accountBalance Set of accountTransactions:                 transactionAction                 transactionAmount | * Prompt for accountBalance * Read accountBalance * Validate accountBalance * Prompt for accountTransaction * Read accountTransaction * Validate accountTransaction * Calculate newAccountBalance * Display newAccountBalance * Accumulate transaction action counts * Display transaction action counts | accountBalance finalAccountBalance numDeposits numWithdrawals |

Write a Java program that implements the diagram identified. Your Java code should carefully follow what has been listed in the diagram.

**Note:** For input/output, you must use the JOptionPane class.