Pseudocode Design

# Respecting this syntax:

 **START** - Marks the beginning of the algorithm.

 **END** - Marks the end of the algorithm.

 **INPUT** - Used for user input.

 **OUTPUT** - Used to display information.

 **IF** - Starts a conditional statement.

 **THEN** - Indicates the action to take if the condition is true.

 **ELSE** - Indicates the action to take if the condition is false.

 **ENDIF** - Ends a conditional block.

 **FOR** - Starts a loop that iterates a fixed number of times.

 **TO** - Indicates the range of a loop.

 **DO** - Specifies the actions to be performed in the loop.

 **ENDFOR** - Ends a loop.

 **WHILE** - Starts a loop that continues while a condition is true.

 **BREAK** - Exits a loop prematurely.

 **ENDWHILE** - Ends a WHILE loop.

1. Find the Largest of Three Numbers:

**Solution:**

START

INPUT num1, num2, num3

IF num1 > num2 AND num1 > num3

THEN largest ← num1

ELSE IF num2 > num3

THEN largest ← num2 ELSE largest ← num3

ENDIF OUTPUT "The largest number is: ", largest

END

1. Check Even or Odd:

**Solution:**

START

INPUT num1, num2, num3

IF num1 > num2 AND num1 > num3

THEN largest ← num1

ELSE IF num2 > num3

THEN largest ← num2

ELSE largest ← num3

ENDIF

OUTPUT "The largest number is: ", largest

END

1. Sum of First N Natural Numbers

**Solution:**

START

INPUT N

sum ← 0

FOR i ← 1 TO N DO

sum ← sum + i

ENDFOR

OUTPUT "The sum is: ", sum

END

1. Check for Prime Number

**Solution:**

START

INPUT num

isPrime ← TRUE

FOR i ← 2 TO num - 1 DO

IF num MOD i = 0

THEN isPrime ← FALSE

BREAK

ENDIF

ENDFOR

IF isPrime

THEN OUTPUT "The number is prime"

ELSE

OUTPUT "The number is not prime"

ENDIF

END

1. Generate Multiplication Table

**Solution:**

START

INPUT num

FOR i ← 1 TO 10 DO

OUTPUT num, " x ", i, " = ", num \* i

ENDFOR

END

1. Reverse a Number

**Solution:**

START

INPUT num reverse ← 0

WHILE num > 0 DO

digit ← num MOD 10

reverse ← reverse \* 10 + digit

num ← num DIV 10

ENDWHILE

OUTPUT "The reversed number is: ", reverse

END