Assignment 9 – Group: Francisco, Victor, Bruno, Yasser

**Exercise 35**

**Analysis:**

INPUT: number1, number2 - integers

OUTPUT: sum - integer

INTERNAL DATA: i - integer

PROCEDURE:

Get the user input for the first and last number, verify if the numbers are positives (>0), if yes, create a loop between the first number and the last number with jumps of 1, and sum all the numbers in the loop, including the first and last numbers. Display the result of this sum to the user.

If the number typed by the user is <0, print the message of error and ask for the user to type again a number >0.

**PSEUDOCODE:**

VARIABLES:

n1 – int (input)

n2 – int (input)

small\_n – int (temporary)

big\_n – int (temporary)

i – int (temporary)

sum – int (output)

START

WRITE “ Enter with the first number”

READ n1

IF n1<0 THEN WRITE “Number negative is not accepted, please try again”

ELSE WRITE “Enter with the last number”

ENDIF

READ n2

IF n2<0 THEN WRITE “Number negative is not accepted, please try again”

ENDIF

IF n1>n2 THEN

big\_n 🡨 n1

small\_n 🡨 n2

ELSE

big\_n 🡨 n2

small\_n 🡨 n1

ENDIF

sum 🡨 0

FOR i=small\_n TO big\_n JUMP 1

sum += i

END FOR

WRITE “The sum of the numbers is: “, sum

END

**TRACE TABLE**

Example when n1 = 2 and n2 = 5

|  |  |  |  |
| --- | --- | --- | --- |
| **input** | **output** |  |  |
| *n1 = 2* | *sum* | i |  |
| *n2 = 5* | 0 |  |  |
|  | 2 | 2 | small\_n |
|  | 5 | 3 |  |
|  | 9 | 4 |  |
|  | 14 | 5 | big\_n |