Lab 2 : Arithmetic Operations

Aim

- Write a program using 8085 & test for typical data:

1. Multiplication of Two 8-Bit Numbers by Bit Rotation Method/shift and add process.

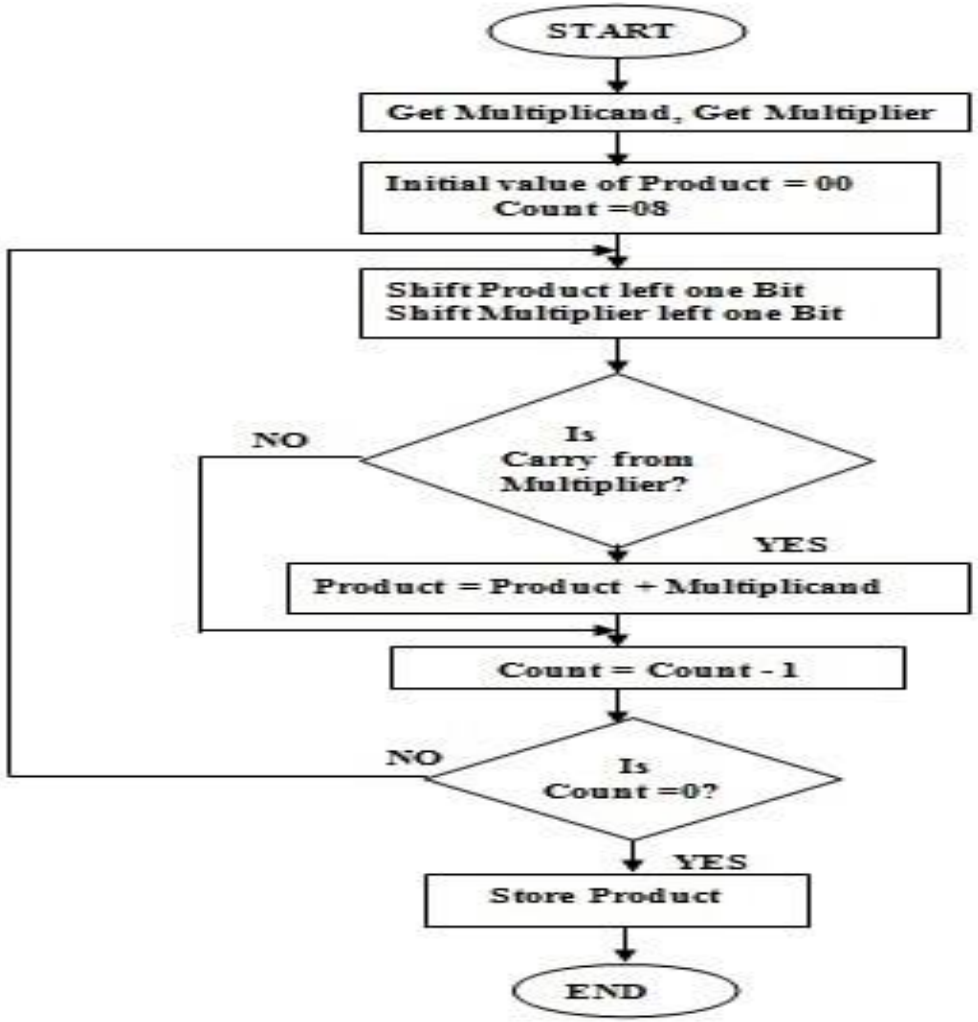
- (a) Store two 8-bit numbers at locations 7501H and 7503H.
- (b) Perform multiplication of these numbers.
- (c) Store the result in memory location 7504.

2. Division of Two 8-Bit Numbers by Repeated Subtraction Method.

- (a) Store two 8-bit numbers at locations 7501H and 7503H.
- (b) Perform divison of these numbers.
- (c) Store the result in memory location 7504.

2- Procedure

Sequence of steps for **Multiplication** of two 8-bit numbers

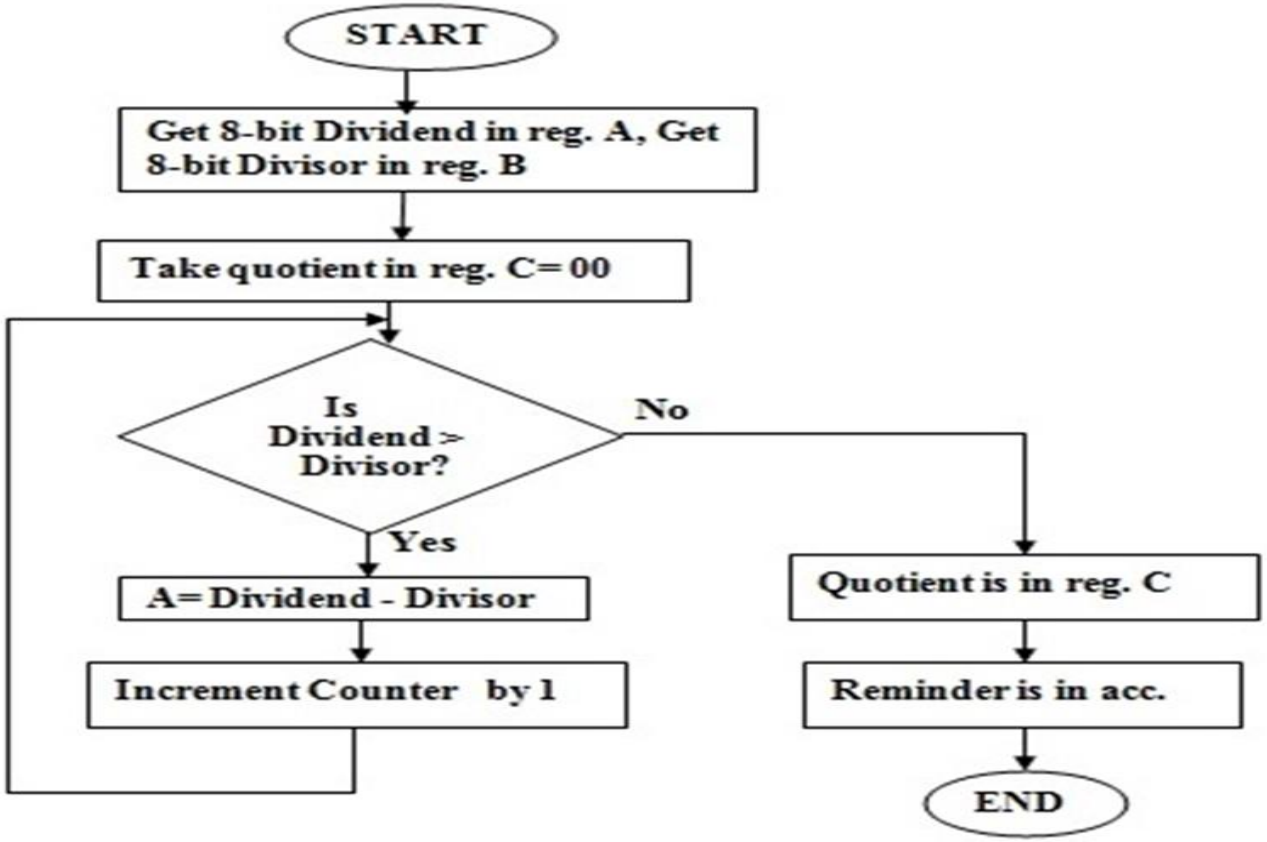


Pseudocode:

- # ORG 7000H
- // Get Multiplicand in H-L pair.
- // Exchange HL pair with DE pair
- // Get 2nd no. in acc.
- // Initial product in HL=00
- // Count=08 in reg .C
- // Shift partial product left by 1 bit
- // Rotate multi. by 1 bit. Is multiplier = 1?
- // No, go to ahead
- // Product=Product + Multiplicand
- // Decrement Count
- // Jump until C=0
- // Store result
- // Terminate
- #ORG 7501H // Store inputs at the address
- # DB 25,00,05 // Get the numbers from successive locations

2- Procedure

Sequence of steps for **Division** of two 8-bit numbers



THANKYOU