# PROGRAM 4: DIVISION

**INTRO:** To write a program to perform division of two 8-bit numbers using 8085.

**FLOW CHART:**

END

Check for carry

Subtract B from accumulator

Jump

Store the value of accumulator

Move C contents to acc.

Store the value of accumulator

Compare A & B

Two 8 bit data is assigned

Assign 00H to C register

Start

|  |  |  |
| --- | --- | --- |
| ADDRESS | MNEMONICS | EXPLANATION |
| 4100 | MVIC,00H | Initialize register C for quotient at zero |
| 4102 | MVIA ,06H | Initialize acc. For dividend |
| 4104 | MVIB,03H | Initialize register B for divisor |
| 4106 (loop 2) | CMP B | Compare the value of register B with accumulator |
| 4107(loop 1) | JC 410F | Jump if carry (if dividend is less)to 410F |
| 410A | SUB B | Else, subtract B from acc. |
| 410B | INR C | Increment C register by 1 |
| 410C(loop 2) | JMP 4106 | Jump to 4106 |
| 411F(loop1) | STA 4225 | Store value of accumulator at 4225 (quotient) |
| 4112 | MOVA,C | Move value of c to accumulator for remainder |
| 4113 | STA 4226 | Store value of accumulator |
| 4116 | HLT | Halt/Terminate |

**MODEL CALCULATIONS:**

Ex:

Input 6/3= Quotient (at address 4225) =2

Remainder (at 4226) = 0

END