

2000 HLT

5 Program to addition of two 16 bit Numbers
(Using DAD command) Double addition.

(Space)

2000 LXI B 25~~13~~¹¹ H // Load 25~~13~~¹¹ H into B-L Register Pair
2003 LXI H 32~~13~~²⁰¹³ H // Load 32~~13~~²⁰¹³ H into H-L Register Pair
2006 DAD B // Double Addition
2007 MOV A, H // Copy H Register into Accumulator
2008 STA 20~~56~~⁵⁷ H // Store Result at location 20~~56~~⁵⁷ H (MSB)
200B MOV A, L // Copy L Register into Accumulator
200C STA 20~~57~~⁵⁷ H // Store Result at Location 20~~57~~⁵⁷ H (LSB)
200E HLT // End of program.

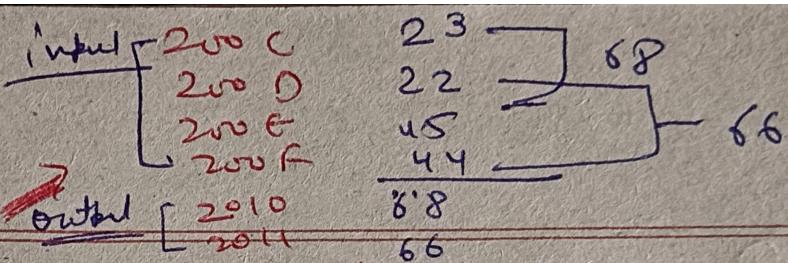
Output : QAD :- $\begin{array}{r} 25 \\ \hline 20 \end{array}$ $\begin{array}{r} 11 \\ \hline 13 \end{array}$ \Rightarrow $\begin{array}{r} 25 \\ \hline B \end{array}$ $\begin{array}{r} 11 \\ \hline C \end{array}$
 $\begin{array}{r} 25 \\ \hline 20 \end{array}$ $\begin{array}{r} 11 \\ \hline 13 \end{array}$ $=)$ $\begin{array}{r} 20 \\ \hline H \end{array}$ $\begin{array}{r} 13 \\ \hline L \end{array}$

\Rightarrow

95 24

$\begin{array}{r} 2016 - 45 \\ \hline 2011 - 24 \end{array}$

9/11/2024



6 Addition of 16 bit B numbers using 16-bit operations.

2000	LHLD 2006	//	H-L ← 200 C
2003	XCHG	//	D <-> H & E <-> L
2004	LHLD 200E	//	H-L ← 200E
2007	DADD	//	H ← H+D & L ← L+E
2008	SHLD 2010	//	L → 2010 & H → 2011
200B	HLT	//	HLT End of the program

8 Program to find largest of 3 Numbers

```
2000 LXIH 2050H  
2003 MOV A, M  
2004 INX H  
2005 MOV B, M  
2006 INX H  
2007 MOV C, M  
2008 CMP B  
2009 JC 2014  
200C CM C  
200D JNC 201A  
2010 MOV A, C  
2011 JMP 201f  
2014 MOV A, B  
2015 CMP C  
2016 JNC 201A  
2019 MOV A, C  
201A STA 2020H  
201D HLT
```

The result will store at Memory Location 2020H.

- > 2050 → input
- 2051 → input
- 2052 → input

11/2024

q. Program an 8-bit Number ⁱⁿ 8085 Microprocessor.

2000 LDA 2010

2003 RLC

2004 RLC

2005 RLC

2006 RLC

2007 STA 2012

2008 HLT

\Rightarrow 2010 \Rightarrow input

input → 2020

11. 1's complement of a number.

2000 LDA 200A // Get the number

2003 CMA // Complement number

2004 STA 2010 // Store the result

2007 HLT

input 200A → 34
0011 0100
↓ 1's complement
2010 → (CB) output

12 2's Complement of a number

2000 LDA 200A H // Get the number

2003 CMA // Complement the number

2004 ADI 01H // Add one in the number

2006 STA 2010 // Store the result

2009 HLT // Terminate program execution.

input → 200A H ⇒ 34

2010 output ⇒ CC