Flow Chart to Add Two 16-bit Numbers Without Carry

```
                        ╭─────────────╮
                        │    Start    │
                        ╰─────────────╯
                               │
                               ▼
                    ╱──────────────────────╱
                   ╱  Load H-L pair with  ╱
                  ╱   data from 3000 H   ╱
                 ╱──────────────────────╱
                               │
                               ▼
                 ┌──────────────────────────┐
                 │ Exchange H-L pair with   │
                 │       D-E pair           │
                 └──────────────────────────┘
                               │
                               ▼
                    ╱──────────────────────╱
                   ╱  Load H-L pair with  ╱
                  ╱   data from 3002 H   ╱
                 ╱──────────────────────╱
                               │
                               ▼
                 ┌──────────────────────────┐
                 │  Add D-E pair with       │
                 │       H-L pair           │
                 └──────────────────────────┘
                               │
                               ▼
                    ╱──────────────────────╱
                   ╱  Store the result at ╱
                  ╱   location 3004 H    ╱
                 ╱──────────────────────╱
                               │
                               ▼
                        ╭─────────────╮
                        │    Stop     │
                        ╰─────────────╯
```
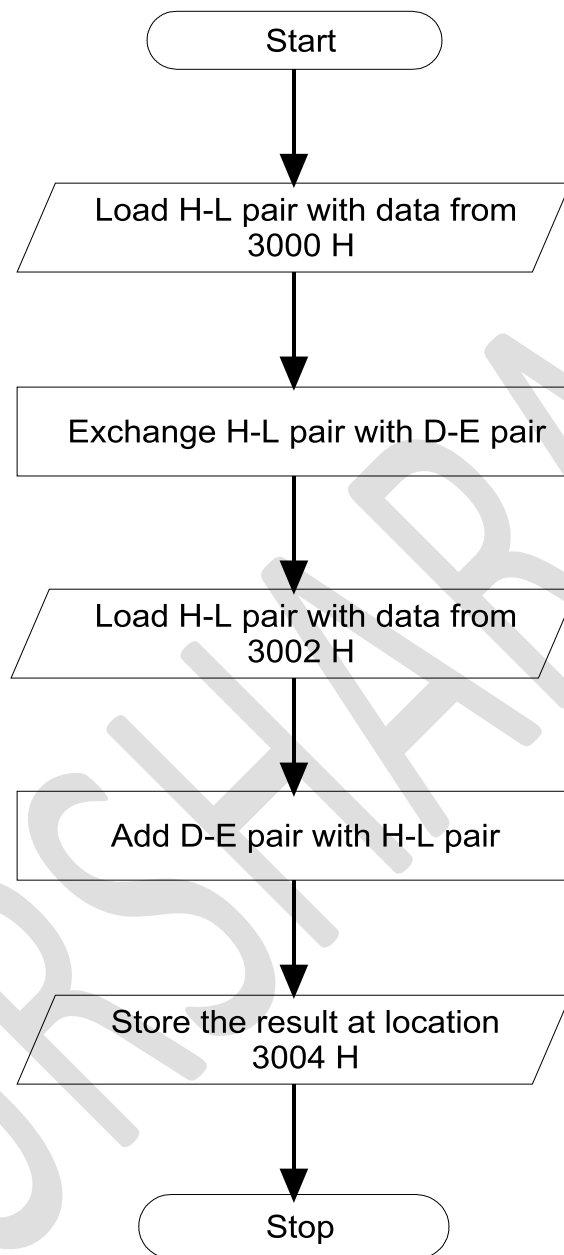
Program to Add Two 16-bit Numbers Without Carry

Address	Mnemonics	Operand	Opcode	Remarks
2000	LHLD	3000 H	2A	Load H-L pair with data from 3000 H
2001			00	
2002			30	
2003	XCHG		EB	Exchange H-L pair with D-E pair
2004	LHLD	3002 H	2A	Load H-L pair with data from 3002 H
2005			02	
2006			30	
2007	DAD	D	19	Add D-E pair with H-L pair
2008	SHLD	3004 H	22	Store the result at location 3004 H
2009			04	
200A			30	
200B	HLT		76	Halt

Before Execution:

3000: 02 H
3001: 01 H
3002: 04 H
3003: 05 H

After Execution:

3004: 06 H
3005: 06 H