

8085 INSTRUCTION SET

INSTRUCTION SUMMARY

DATA TRANSFER INSTRUCTIONS

MOV	Copy from source to destination
MVI	Move immediate 8-bit
LDA	Load accumulator
LDAX	Load accumulator indirect
LXI	Load register pair immediate
LHLD	Load H and L registers direct
STA	Store accumulator direct
STAX	Store accumulator indirect
SHLD	Store H and L registers direct
XCHG	Exchange H and L with D and E
SPHL	Copy H and L registers to the stack pointer
XTHL	Exchange H and L with top of stack
PUSH	Push register pair onto stack
POP	Pop of stack to register pair
OUT	Output data from accumulator to a port with 8-bit address
IN	Input data to accumulator from a port with 8-bit address

ARITHMETIC INSTRUCTIONS

ADD	Add register or memory to accumulator
ADC	Add register to accumulator with carry
ADI	Add immediate to accumulator
ACI	Add immediate to accumulator with carry
DAD	Add register pair to H and L registers
SUB	Subtract register or memory from accumulator
SBB	Subtract source and borrow from accumulator
SUI	Subtract immediate from accumulator
SBI	Subtract immediate from accumulator with borrow
INR	Increment register or memory by 1
INX	Increment register pair by 1
DCR	Decrement register or memory by 1
DCX	Decrement register pair by 1
DAA	Decimal adjust accumulator

CONTROL INSTRUCTIONS

NOP	No operation
HLT	Halt
DI	Disable interrupts
EI	Enable interrupts
RIM	Read interrupt mask
SIM	Set interrupt mask

BRANCHING INSTRUCTIONS

JMP	Jump unconditionally
JC	Jump on carry
JNC	Jump on no carry
JP	Jump on positive
JM	Jump on minus
JZ	Jump on zero
JNZ	Jump on no zero
JPE	Jump on parity even
JPO	Jump on parity odd
CALL	Call unconditionally
CC	Call on carry
CNC	Call on no carry
CP	Call on positive
CM	Call on minus
CZ	Call on zero
CNZ	Call on no zero
CPE	Call on parity even
CPO	Call on parity odd
RET	Return unconditionally
RC	Return on carry
RNC	Return on no carry
RP	Return on positive
RM	Return on minus
RZ	Return on zero
RNZ	Return on no zero
RPE	Return on parity even
RPO	Return on parity odd
PCHL	Load program counter with HL contents
RST	Restart

LOGICAL INSTRUCTIONS

CMP	Compare register or memory with accumulator
CPI	Compare immediate with accumulator
ANA	Logical AND register or memory with accumulator
ANI	Logical AND immediate with accumulator
XRA	Exclusive OR register or memory with accumulator
XRI	Exclusive OR immediate with accumulator
ORA	Logical OR register or memory with accumulator
ORI	Logical OR immediate with accumulator
RLC	Rotate accumulator left
RRC	Rotate accumulator right
RAL	Rotate accumulator left through carry
RAR	Rotate accumulator right through carry
CMA	Complement accumulator
CMC	Complement carry
STC	Set carry