Lab 05

Q1. WAP to convert a hexadecimal number less than 10H (*Assume 0EH*) into an equivalent BCD number.

```
MVI A, 0EH
ADI 06H
HLT
```

```
MVI A, 0EH
DAA
HLT
```

Q2. Convert an eight-bit binary number into equivalent BCD number.

```
        MVI C,FF
        MVI D, 00
LOOP2:  ADI 01   // COUNT THE NUMBER ONE BY ONE
        DAA      // ADJUST FOR BCD COUNT
        JNC SKIP
        INR D
SKIP:   DCR C
        JNZ LOOP2
        STA 9000 // STORE THE LEAST SIGNIFICANT BYTE
        MOV A,D
        STA 9001 // STORE THE MOST SIGNIFICANT BYTE
        HLT
```

Q3. WAP for converting a 2-digit BCD number to its binary equivalent in 8085.

```
MVI B, 00100011B
MOV A, B
ANI 0FH
MOV E, A

MOV A, B
ANI F0H
RRC
```

```
RRC

RRC

RRC

MOV D, A


XRA A

MVI C, 0AH

MULTIPLY: ADD C

DCR D

JNZ MULTIPLY

ADD E

HLT
```

Q4. WAP to convert a hexadecimal digit into ASCII code.

Add [0-9 -> 30H, A-F ->37H]

```
MVI A, 0CH

CPI 0AH           ;A-0AH

JC SKIP7ADD

ADI 07H

SKIP7ADD: ADI 30H

HLT
```

Q5. WAP to convert ASCII into BCD conversion.

```
MVI A, 31H

CPI 39H     ;A-0AH

JC SKIP7ADD

SUI 07H

SKIP7ADD: SUI 30H

HLT
```