

Lecture 13

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Q1/Write ALP to find the summation of odd order contents of memory locations starting from 3000 to 3009H and save the result in 4000H.

Q2/Write ALP to find the largest number of contents of memory locations starting from 3000 to 3009H and save the result in 4000H.

Q3/Write ALP to find the summation of odd parity contents of memory locations starting from 3000 to 3009H and save the results in 4000H and 4001 H.

Q4/Write ALP to find the summation of even parity contents of memory locations starting from 3000 to 3009H and save the result in 4000H.

Q1 solution

```
LXI H, 3000
MVI C, 00
MVI B, 0A
MOV A, M    YY
ANI 01
JZ          XX
MOV A, C
ADD M
MOV C, A
INR L      XX
DCR B
JNZ        YY
MOV A, C
STA 4000
HLT
```

Q2 solution

```
LXI H, 3000
MVI B, 0A
MOV A, M
INR L      XX
CMP M
JNC       YY
MOV A, M
DCR B     YY
JNZ XX
STA 4000
HLT
```

Q3 solution

```
LXI H, 3000
MVI C, 00
MVI E, 00
MVI B, 0A
MOV A, M   YY
ADI 00
JPE       XX
MOV A, C
ADD M
JNC       ZZ
INR E
MOV C, A  ZZ
INR L     XX
DCR B
JNZ       YY
MOV A, C
STA 4000
MOV A, E
STA 4001
HLT
```


Q4 solution

```
LXI H, 3000
MVI C, 00
MVI B, 0A
MOV A, M   YY
ADI 00
JPO        XX
MOV A, C
ADD M
MOV C, A
INR L     XX
DCR B
JNZ       YY
MOV A, C
STA 4000
HLT
```