

# Microprocessors – Laboratory 04

#	Student ID	Student Name	Grade (10)
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1. Write following codes

```
MOV BX, 3256H
MOV CX, 1554H
AND CX, BX
HLT
```

Observe content of CX register. What operation happened here?

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2. Write following codes

```
MOV BX, 3256H
MOV CX, 1554H
XOR CX, BX
HLT
```

Observe content of CX register. What operation happened here?

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3. Write following codes

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MOV AX, 1027H
MOV BX, 5A27H
MOV CX, 54A5H
OR AX, BX
XOR AX, CX
NOT AX
TEST CX, BX
AND CX, AX
HLT

```

Perform this operation in single step mode and write the values of registers for every step. Obtain binary values for upper hexadecimal values and perform bit by bit operation for every step. Compare your hand calculation with obtained result

A series of horizontal dotted lines for writing the results of the assembly code execution.



Jump command sammary

Command	Condition of Jump
JA/JNBE	CF = 0, ZF = 0
JBE/JNA	CF = 0 or ZF = 0
JNB/JAE/JNC	CF = 0
JB/JNAE/JC	CF = 1
JG/JNLE	SF $\nabla$ OF = 0, ZF = 0
JLE/JNG	SF $\nabla$ OF = 0, ZF = 1
JGE/JNL	SF $\nabla$ OF = 0
JL/JNGE	SF $\nabla$ OF = 1
JZ/JE	ZF = 1
JNZ/JNE	ZF = 0
JS	SF = 1
JNS	SF = 0
JPE/JP	PF = 1
JPO/JNP	PF = 0
JO	OF = 1
JNO	OF = 0
JCXZ	CX = 0





5. Write following codes

```
MOV AX, 7A24H
MOV BX, 95A3H
ADD AX, BX
JC L3T2
EEE316: OR AX, 23H
JNZ Last
L3T2: MOV CX, 0FC7H
SUB AX,CX
JZ EEE316
Last: HLT
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Update the register values in every step

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