

Assembly language Lab Final

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Submitted by:

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Sec: R1

1. Task 1

```
INCLUDE 'EMU8086.INC'

.MODEL SMALL
.STACK 100H
.DATA
.CODE
MAIN PROC
    PRINTN "          RESTURANT          "
    PRINTN "Product Name: "
    PRINTN "    1. Soup"
    PRINTN "    2. Noodles"
    PRINTN "    3. Kabab"
    PRINTN "Press 1, 2 or 3"

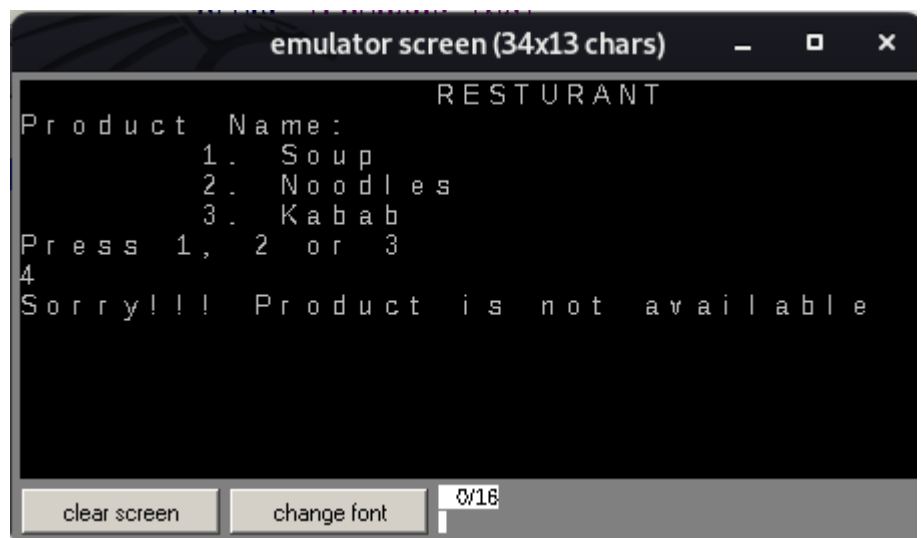
    MOV AH, 01
    INT 21H
    MOV BL, AL

    CMP BL, 49
    JE CONSOLE2
    JNE I1
CONSOLE2:
    PRINTN ""
    PRINTN "          SOUP          "
    PRINTN "Select from menu: "
    PRINTN "    1. Thai Soup"
    PRINTN "    2. Corn Soup"
    PRINTN "    3. Vegetable Soup"
    PRINTN "Press 1, 2 or 3"
    JMP INPUT

I1:
    CMP BL, 50
    JE CONSOLE2
    JNE I2

I2:
    CMP BL, 51
    JE CONSOLE2
    JNE I3

I3:
    PRINTN ""
    PRINTN "Sorry!!! Product is not available"
    JMP EXIT
```



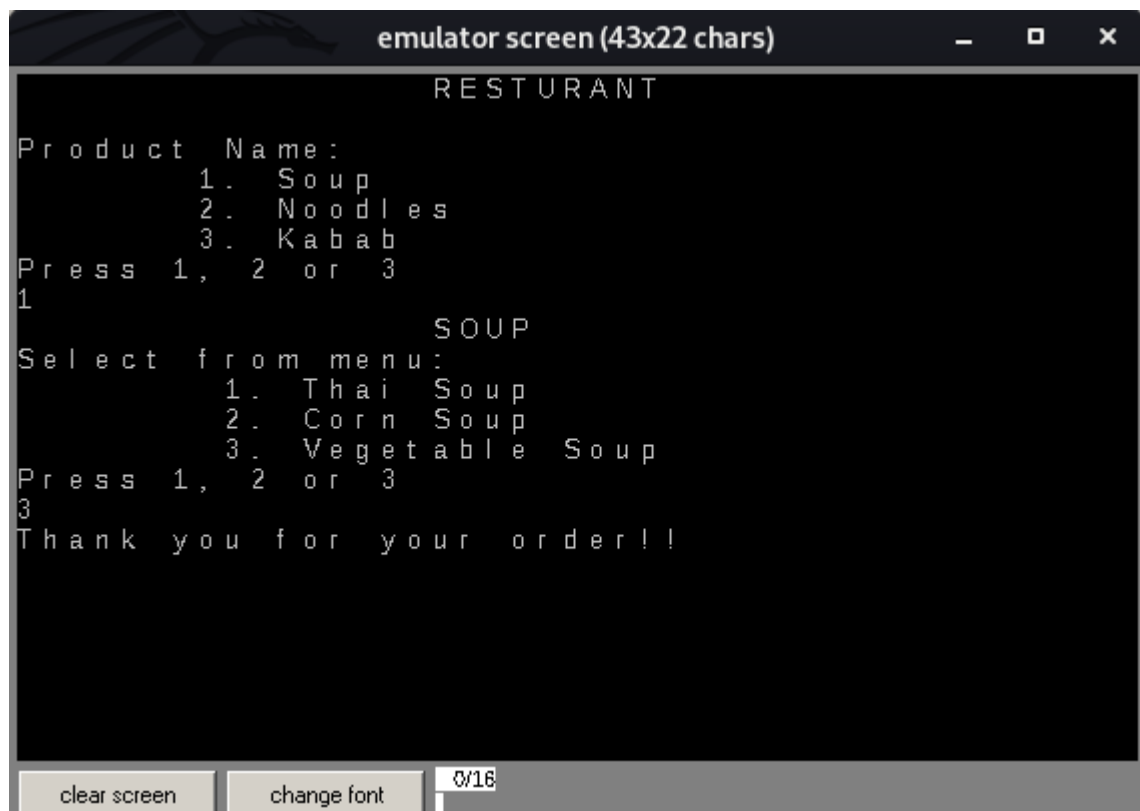
```
INPUT:
MOV AH, 01
INT 21H
MOV BH, AL
```

```
CMP BH, 51
JLE CONSOLE3
JNE EXIT
```

```
CONSOLE3:
CMP BH, 48
JE EXIT
JNE ORDER
```

```
ORDER:
PRINTN ""
PRINTN "Thank you for your order!!"
JMP EXIT
```

```
EXIT:
MOV AH, 4CH
INT 21H
MAIN ENDP
END MAIN
```



```
emulator screen (43x22 chars)
                                RESTURANT
Product  Name:
      1.  Soup
      2.  Noodles
      3.  Kabab
Press 1, 2 or 3
1
                                SOUP
Select from menu:
      1.  Thai Soup
      2.  Corn Soup
      3.  Vegetable Soup
Press 1, 2 or 3
3
Thank you for your order!!

clear screen  change font  0/16
```

2. Task 2

```
INCLUDE 'EMU8086.INC'
TITLE EQUATION_SOLVING 2A-B+3C
.MODEL SMALL
.STACK 100H
.DATA
    A DB ?
    B DB ?
    C DB ?
    CNST1 DB 2
    CNST2 DB 3

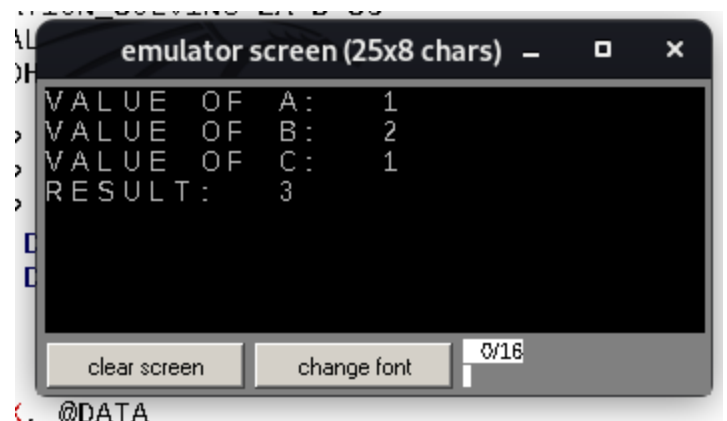
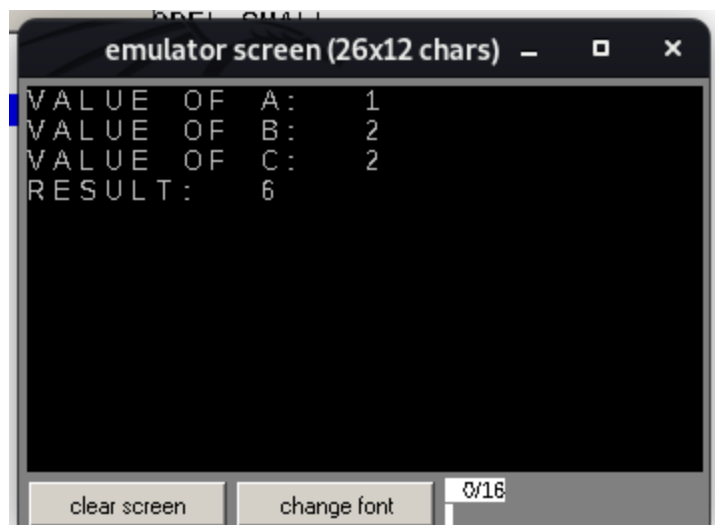
.CODE
MAIN PROC
    MOV AX, @DATA
    MOV DS, AX

    PRINT "VALUE OF A: "
    MOV AH, 01
    INT 21H
    SUB AL, 48
    MUL CNST1
    MOV A, AL

    PRINTN
    PRINT "VALUE OF B: "
    MOV AH, 01
    INT 21H
    SUB AL, 48
    SUB AL, A
    MOV B, AL

    PRINTN
    PRINT "VALUE OF C: "
    MOV AH, 01
    INT 21H
    SUB AL, 48
    MUL CNST2
    ADD AL, B
    MOV C, AL
    ADD C, 48

    PRINTN
    PRINT "RESULT: "
    MOV AH, 02
    MOV DL, C
    INT 21H
```



```
EXIT:
MOV AH, 4CH
INT 21H
MAIN ENDP
END MAIN
```

3. Task 3

```
INCLUDE 'EMU8086.INC'
```

```
.MODEL SMALL
.STACK 100H
.DATA
.CODE
```

```
MAIN PROC
    MOV AH, 01
    INT 21H
    MOV BL, AL
```

```
    CMP BL, 65
    JL EXIT
    JE VOWEL
    JNE V1
```

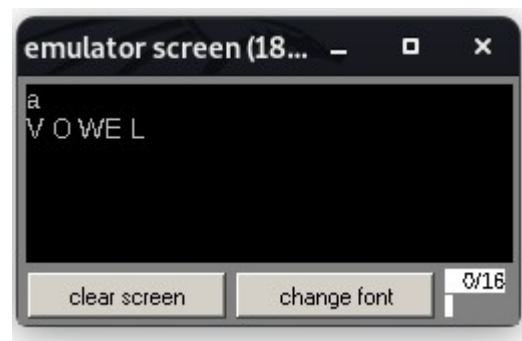
```
V1:
    CMP BL, 69
    JE VOWEL
    JNE V2
```

```
V2:
    CMP BL, 73
    JE VOWEL
    JNE V3
```

```
V3:
    CMP BL, 79
    JE VOWEL
    JNE V4
```

```
V4:
    CMP BL, 85
    JE VOWEL
    JNE V5
```

```
V5:
```



```
CMP BL, 97
JE VOWEL
JNE V6
```

```
V6:
CMP BL, 101
JE VOWEL
JNE V7
```

```
V7:
CMP BL, 105
JE VOWEL
JNE V8
```

```
V8:
CMP BL, 111
JE VOWEL
JNE V9
```

```
V9:
CMP BL, 117
JE VOWEL
JNE CONSONANT
```

```
VOWEL:
PRINTN ""
PRINTN "VOWEL"
JMP EXIT
```

```
CONSONANT:
CMP BL, 91
JGE INS
JNE INS2
```

```
INS:
CMP BL, 96
JLE EXIT
```

```
INS2:
PRINTN ""
PRINTN "CONSONANT"
JMP EXIT
```

```
EXIT:
MOV AH, 4CH
INT 21H
MAIN ENDP
END MAIN
```

