------------------------------------------------------------------

Name: Akshay Chaudhari

Std: SE Div: A

Roll no.:32

------------------------------------------------------------------

**PROGRAM:**

section .data

msg db 10,"Menu",10,"1.Addition",10,"2.Substraction",10,"3.Multiplication",10,"4.Division",10,"5.Exit",10

msglen:equ $-msg

msg1 db 10,"Enter your choice",10

msglen1:equ $-msg1

num1 db 40

num2 db 20

msg2 db 10,"Addtion is",10

msglen2:equ $-msg2

msg3 db 10,"Substraction is",10

msglen3:equ $-msg3

msg4 db 10,"Multiplication is",10

msglen4:equ $-msg4

msg5 db 10,"Division is",10

msglen5:equ $-msg5

msg6 db 10,"Menu",10,"1.Arithmetic",10,"2.Logical",10,"3.Exit",10

msglen6:equ $-msg6

msg7 db 10,"Menu",10,"1.AND",10,"2.OR",10,"3.XOR",10,"4.NOT",10,"5.Exit",10

msglen7:equ $-msg7

section .bss

res2 resb 4

dispnum resb 8

choice resb 2

result resb 8

result1 resb 8

%macro menu 4

mov eax,%1

mov ebx,%2

mov ecx,%3

mov edx,%4

int 80h

%endmacro

section .text

global \_start

\_start:

menu1:

menu 4,1,msg6,msglen6

menu 4,1,msg1,msglen1

menu 3,0,choice,2

mov ax,[choice]

lbl1:

cmp al,31h

jne lbl2

call arithmatic

lbl2:

cmp al,32h

jne ext

call logical

arithmatic:

label:

menu 4,1,msg,msglen

menu 4,1,msg1,msglen1

menu 3,0,choice,2

mov ax,[choice]

label1:

cmp al,31h

jne label2

menu 4,1,msg2,msglen2

call addition

jmp label

label2:

cmp al,32h

jne label3

menu 4,1,msg3,msglen3

call substraction

jmp label

label3:

cmp al,33h

jne label4

menu 4,1,msg4,msglen4

call multiplication

jmp label

label4:

cmp al,34h

jne menu1

menu 4,1,msg5,msglen5

call division

jmp label

addition:

mov al,[num1]

mov bl,[num2]

add al,bl

jnc abc

inc ah

abc:

mov [result1],al

mov [result],ah

xor eax,eax

mov [dispnum],eax

mov ah,[result]

mov al,[result1]

call disp

menu 4,1,dispnum,8

ret

substraction:

mov eax,[num1]

mov ebx,[num2]

sub eax,ebx

mov [result],eax

xor eax,eax

mov [dispnum],eax

mov al,[result]

call disp

menu 4,1,dispnum,8

ret

multiplication:

xor eax,eax

mov al,[num1]

xor ebx,ebx

mov bl,[num2]

mul bx

mov [res2],eax

xor ecx,ecx

mov [dispnum],ecx

mov al,[res2]

call disp

menu 4,1,dispnum,8

ret

division:

mov edx,00

mov al,[num1]

mov bl,[num2]

div bx

mov [result],eax

xor eax,eax

mov [dispnum],eax

mov al,[result]

call disp

menu 4,1,dispnum,8

ret

ret

logical:

label5:

menu 4,1,msg7,msglen7

menu 4,1,msg1,msglen1

menu 3,0,choice,2

mov ax,[choice]

label6:

cmp al,31h

jne label7

call log1

jmp label5

label7:

cmp al,32h

jne label8

call log2

jmp label5

label8:

cmp al,33h

jne label9

call log3

jmp label5

label9:

cmp al,34h

jne menu1

call log4

jmp label5

log1:

xor eax,eax

mov al,[num1]

mov bl,[num2]

AND al,bl

mov [dispnum],eax

call disp

menu 4,1,dispnum,8

ret

log2:

xor eax,eax

mov al,[num1]

mov bl,[num2]

OR al,bl

mov [dispnum],eax

call disp

menu 4,1,dispnum,8

ret

log3:

xor eax,eax

mov al,[num1]

mov bl,[num2]

XOR al,bl

mov [dispnum],eax

call disp

menu 4,1,dispnum,8

ret

log4:

xor eax,eax

mov al,[num1]

NOT al

mov [dispnum],eax

call disp

menu 4,1,dispnum,8

ret

ret

disp:

mov esi,dispnum+7

mov ecx,8

cnt:

mov edx,0

mov ebx,10

div ebx

cmp dl,09h

jbe skip

add dl,07h

skip:

add dl,30h

mov [esi],dl

dec esi

dec cx

jnz cnt

ret

ext:

mov eax,1

mov ebx,0

int 80h

ret

**OUTPUT :**

[student@localhost ~]$ nasm -f elf64 menu.asm -o menu.o

[student@localhost ~]$ ld -o menu menu.o

[student@localhost ~]$ ./menu

Menu

1.Arithmetic

2.Logical

3.Exit

Enter your choice

1

Menu

1.Addition

2.Substraction

3.Multiplication

4.Division

5.Exit

Enter your choice

1

Addtion is

00000060

Menu

1.Addition

2.Substraction

3.Multiplication

4.Division

5.Exit

Enter your choice

2

Substraction is

00000020

Menu

1.Addition

2.Substraction

3.Multiplication

4.Division

5.Exit

Enter your choice

3

Multiplication is

00000800

Menu

1.Addition

2.Substraction

3.Multiplication

4.Division

5.Exit

Enter your choice

4

Division is

00000002

Menu

1.Addition

2.Substraction

3.Multiplication

4.Division

5.Exit

Enter your choice

5

Menu

1.Arithmetic

2.Logical

3.Exit

Enter your choice

2

Menu

1.AND

2.OR

3.XOR

4.NOT

5.Exit

Enter your choice

1

00000000

Menu

1.AND

2.OR

3.XOR

4.NOT

5.Exit

Enter your choice

2

00000060

Menu

1.AND

2.OR

3.XOR

4.NOT

5.Exit

Enter your choice

3

00000060

Menu

1.AND

2.OR

3.XOR

4.NOT

5.Exit

Enter your choice

4

00000215

Menu

1.AND

2.OR

3.XOR

4.NOT

5.Exit

Enter your choice

5

Menu

1.Arithmetic

2.Logical

3.Exit

Enter your choice

3

[student@localhost ~]$