|  |
| --- |
| **Program #1** |
| ALP TO SUBTRACT TWO 8-BIT NUMBERS. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** DIFF.ASM

\* **Description** **:** TO FIND THE DIFFERENCE

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 18/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

A DW 0004H

B DW 0002H

DIF DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,A

MOV BX,B

SUB AX,BX

MOV DI,OFFSET DIF

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number A: 0004H  Enter Number B: 0002H | Difference is : 0002H |

|  |
| --- |
| **Program #2** |
| ALP TO ADD TWO 8-BIT NUMBERS. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** SUM.ASM

\* **Description** **:** TO FIND THE SUM

\* **Author** **:** ANJALISOOREJ

\* **Date** **: 19/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

A DW 0004H

B DW 0002H

SUM DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,A

MOV BX,B

ADD AX,BX

MOV DI,OFFSET SUM

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number A: 0004H  Enter Number B: 0002H | Sum is : 0006H |

|  |
| --- |
| **Program #3** |
| ALP TO MULTIPLY TWO 8-BIT NUMBERS. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** MUL.ASM

\* **Description** **:** TO FIND THE PRODUCT

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 19/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

A DW 0002H

B DW 0004H

PRO DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,A

MOV BX,B

MUL BX

MOV DI,OFFSET PRO

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number A: 0002H  Enter Number B: 0004H | Product is : 0008H |

|  |
| --- |
| **Program #4** |
| ALP TO DIVIDE TWO 8-BIT NUMBERS. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** DIV.ASM

\* **Description** **:** TO FIND THE QUOTIENT

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 24/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

A DW 0004H

B DW 0002H

QUO DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,A

MOV BX,B

DIV BX

MOV DI,OFFSET QUO

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number A: 0004H  Enter Number B: 0002H | Quotient is : 0002H |

|  |
| --- |
| **Program #5** |
| WRITE AN ALP TO FIND SQUARE & CUBE OF A NUMBER |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** CUBE.ASM

\* **Description** **:** TO FIND SQUARE AND CUBE

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 25/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

A DW 0002H

SQ DW 01 DUP(?)

CU DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,A

MOV BX,A

MUL AX

MOV DI,OFFSET SQ

MOV [DI],AX

MUL BX

MOV DI,OFFSET CU

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 0002H | Square is : 0004H  Cube is : 0006H |

|  |
| --- |
| **Program #6** |
| ALP TO FIND ONE’S COMPLEMENT AND 2’S COMPLEMENT OF A 16 BIT NUMBER. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** COMPLE.ASM

\* **Description** **:** TO FIND ONE’S AND TWO’S COMPLEMENT

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 25/01/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME DS:DATA,CS:CODE

DATA SEGMENT

NUM DW 0002H

ONE DW 01 DUP(?)

TWO DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,NUM

NOT AX

MOV DI,OFFSET ONE

MOV [DI],AX

INC AX

MOV DI,OFFSET TWO

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 0002H | One’s complement is : FFFD  Two’s complement is: FFFE |

|  |
| --- |
| **Program #7** |
| WRITE AN ALP TO FIND THE SUM OF N NATURAL NUMBERS |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** SUMN.ASM

\* **Description** **:** TO FIND SUM OF NATURAL NUMBERS

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 01/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

N DW 0004H

SUM DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,0000H

MOV BX,N

LABEL1:ADD AX,BX

DEC BX

JNZ LABEL1

MOV DI,OFFSET SUM

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 0004H | Sum is : 000AH |

|  |
| --- |
| **Program #8** |
| WRITE AN ALP TO FIND FACTORIAL OF A NUMBER |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** FACT.ASM

\* **Description** **:** TO FIND FACTORIAL OF A NUMBER

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 04/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

N DW 0003H

FACT DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,0001H

MOV BX,N

LABEL1:MUL BX

DEC BX

JNZ LABEL1

MOV DI,OFFSET FACT

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 0003H | Factorial is : 0006H |

|  |
| --- |
| **Program #9** |
| WRITE AN ALP TO FIND AREA AND PERIMETER OF A SQUARE |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** AREAPERIMETER.ASM

\* **Description** **:** TO FIND AREA AND PERIMETER OF RECTANGLE

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 04/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

L DW 0002H

B DW 0003H

A DW 01 DUP(?)

P DW 01 DUP(?)

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,L

MOV BX,B

MUL BX

MOV DI,OFFSET A

MOV [DI],AX

MOV AX,L

MOV BX,B

ADD AX,BX

MOV BX,0002H

MUL BX

MOV DI,OFFSET P

MOV [DI],AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter L: 0002H  Enter L: 0003H | Area is : 0006H  Perimeter is:000AH |

|  |
| --- |
| **Program #10** |
| WRITE AN ALP TO DISPLAY A MESSAGE. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** MESSAGE.ASM

\* **Description** **:** TO DISPLAY A MESSAGE

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 08/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

M DB 'WELCOME$'

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

LEA DX,M

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Message: WELCOME | Message is : WELCOME |

|  |
| --- |
| **Program #11** |
| WRITE AN ALP TO CHECK WHETHER AN INPUT NUMBER IS ODD OR EVEN. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** ODDEVEN.ASM

\* **Description** **:** TO CHECK WHETHER A NUMBER IS ODD OR EVEN

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 08/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

ASSUME CS:CODE,DS:DATA

DATA SEGMENT

X EQU 09H

MSG1 DB " ODD $ "

MSG2 DB " EVEN $ "

DATA ENDS

CODE SEGMENT

START:MOV AX,DATA

MOV DS,AX

MOV AX,X

MOV BL,02

DIV BL

CMP AH,0

JZ EVE

JMP ODD

ODD:LEA DX,MSG1

MOV AH,09

INT 21H

MOV AH,4CH

INT 21H

EVE:LEA DX, MSG2

MOV AH,09

INT 21H

MOV AH,4CH

INT 21H

CODE ENDS

END START

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 0H | ODD |

|  |
| --- |
| **Program #12** |
| WRITE AN ALP TO IMPLEMENT VARIOUS ADDRESSING MODES. |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** ADDRESS.ASM

\* **Description** **:** TO DEMOSTRATE ADDRESSING MODES

\* **Author** **:** ANJALI SOOREJ

\* **Date** **: 14/02/2019**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 3 | Factorial is : 6 |

|  |
| --- |
| **Program #13** |
| Question |

|  |
| --- |
| SOURCE CODE |

'''\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Filename** **:** SUMOFN.ASM

\* **Description** **:** TO FIND SUM OF NUMBERS

\* **Author** **:** ANJALI SOOREJ

\* **Date** **:**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'''

Program

|  |
| --- |
| RESULT |

|  |  |
| --- | --- |
| Input | Output |
| Enter Number: 3 | Factorial is : 6 |