Q.no.1

|  |
| --- |
| .DATA |
|  | M DB 01H,02H,03H,04H |
|  | N DB 05H,06H,07H,08H |
|  | CNT DB 04H |
|  | TEMP DB ? |
|  | RES DB ? |
|  | .CODE |
|  | START: MOV AX,@DATA |
|  | MOV DS,AX |
|  | MOV CL,CNT |
|  | LEA SI ,M |
|  | LEA DI,N |
|  |  |
|  |  |
|  | L1:MOV AL,[SI] |
|  | MOV BL,[DI] |
|  | SUB AL,BL |
|  | PUSH AX |
|  | INC SI |
|  | INC DI |
|  | LOOP L1 |
|  | CALL STORE |
|  |  |
|  |  |
|  |  |
|  | STORE PROC |
|  | POP AX |
|  | LEA SI,RES |
|  | ADD SI,04H |
|  | MOV CL,04H |
|  | L2:POP AX |
|  | MOV [SI],AL |
|  | DEC SI |
|  | LOOP L2 |
|  | INT 3H |
|  | RET |
|  | STORE ENDP |
|  |  |
|  | END START |

# Q.no.2

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Description automatically generated

# Q.no.3

include Irvine32.inc

.data

num1 BYTE "1st Number: ", 0

num2 BYTE "2nd Number: ", 0

g BYTE "GCD: ", 0

Prime BYTE "Numbers are Relative Prime", 0

Nonprime BYTE "Numbers are not Relative Prime", 0

Var1 DWORD 0

Var2 DWORD 0

.code

gcd proc USES edx ebx

mov eax, Var1

mov ebx, Var2

start :

mov edx, 0

div ebx

CMP edx, 0

JE terminate

mov eax, ebx

mov ebx, edx

JMP start

terminate :

mov eax, ebx

RET

gcd endp

pnp proc

CMP eax, 1

JE yes

mov edx, offset Nonprime

call writestring

JMP no

yes :

mov edx, offset Prime

call writestring

no :

RET

pnp endp

DEC\_OUT proc

mov Var2, eax

mov edx, offset g

call writestring

call gcd

call writedec

call crlf

call pnp

call crlf

call waitmsg

RET

DEC\_OUT endp

main proc

mov edx, offset num1

call writestring

call ReadInt

CMP eax, 0

JGE l1

NEG eax

l1 :

mov Var1, eax

mov edx, offset num2

call writestring

call ReadInt

CMP eax, 0

JGE l2

NEG eax

l2 :

call DEC\_OUT

exit

main endp

end main

# Q.no.4

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