TITLE COAL LAB PROJECT BASIC ENCRYPTOR

INCLUDE irvine32.inc

INCLUDE macros.inc

.data

Message BYTE "Enter a Word: ",0

Cypher BYTE "Encrypted code: ",0

Message1 BYTE "\*\*\*\*\* CYPHING MODE \*\*\*\*\* ",0

Message2 BYTE "\*\*\*\*\* DECYPHING MODE \*\*\*\*\* ",0

caption BYTE "Project Leave ",0

question BYTE "Do you want to leave? ";

opt BYTE 0

ct BYTE 0

Data DWORD 100 DUP (?)

Encrypted DWORD 100 dup(?)

Shift BYTE ?

Key BYTE ?

Quotient DWORD 100 DUP(?)

Decrypted DWORD 100 DUP(?)

Display DWORD 100 dup(?)

prime DWORD 89

n DWORD 5

BUFFER\_SIZE = 501

buffer BYTE BUFFER\_SIZE DUP(?)

filename BYTE "output.txt",0

fileHandle HANDLE ?

stringLength DWORD ?

bytesWritten DWORD ?

.code

main PROC

mov eax, 3

call settextcolor

mwrite " ================================================= "

call crlf

call crlf

call crlf

mwrite " || COAL LAB PROJECT BASIC ENCRYPTOR || "

call crlf

call crlf

call crlf

mwrite " ================================================= "

call crlf

call crlf

mwrite " \_\_"

call crlf

mwrite " '-- |\*\*| --'"

call crlf

mwrite " |\_\_\_\_|"

call crlf

mwrite " /\ /\"

call crlf

cyph:

call Cyphing

call crlf

mov ebx, OFFSET caption

mov edx, OFFSET question

call MsgBoxAsk

cmp al, 6

je \_exit

call clrscr

call main

\_exit:

exit

main ENDP

Cyphing PROC

Enter 0,0

mov edx, offset Message1

Call writestring

call crlf

mov al, 10

call delay

mwrite "Choose the option: "

call crlf

mov al, 10

call delay

mwrite "1. Word"

call crlf

mov al, 10

call delay

mwrite "2. Sentence"

call crlf

mov al, 10

call delay

call readdec

mov opt, al

cmp opt, 1

je Words

jne Sentences

Words:

call crlf

mwrite "Tell the size of input: "

call readdec

mov n, eax

mov edx, offset Message

Call writestring

call crlf

jmp select

Sentences:

call crlf

mwrite" Tell the size of input: "

call readdec

mov n, eax

call crlf

mwrite "Enter a Sentence: "

select:

mov ecx, n

mov esi, 0

mov edi, 0

L1:

call readchar

call writechar

mov Data[esi], eax

mov buffer[edi], al

add esi, 4

add edi, 1

loop L1

call crlf

call crlf

mov edx,OFFSET filename

call CreateOutputFile

mov fileHandle, eax

mov stringLength,3

mov eax,fileHandle

mov edx,OFFSET buffer

mov ecx,stringLength

call WriteToFile

mov bytesWritten,eax

call CloseFile

Mov ecx, n

Mov ebx,0

Mov esi, 0

L2:

mov edx,0

Mov ebx, prime

Mov eax, data[esi]

add eax, 3d

Div ebx

Mov encrypted[esi],edx

Mov Quotient[esi],eax

add esi, 4

loop L2

Mov ecx,n

Mov esi,0

L3:

Mov eax, encrypted[esi]

Add eax, 65d

Mov display[esi],eax

add esi, 4

Loop L3

call crlf

mwrite "Select the mode of display:"

call crlf

mwrite "1. Hexadecimal"

call crlf

mwrite "2. Decimal"

call crlf

mwrite "3. Binary"

call crlf

call readdec

mov opt, al

cmp opt, 1

je hexa

cmp opt, 2

je deci

cmp opt, 3

je Bina

hexa:

mov edx, offset Cypher

Call writestring

mov ecx, n

mov esi, 0

L4:

mov eax, display[esi]

call writehex

add esi, 4

loop L4

jmp outer

deci:

mov edx, offset Cypher

Call writestring

mov ecx, n

mov esi, 0

L5:

mov eax, display[esi]

call writedec

add esi, 4

loop L5

jmp outer

Bina:

mov edx, offset Cypher

Call writestring

mov ecx, n

mov esi, 0

L6:

mov eax, display[esi]

call writeBin

add esi, 4

loop L6

jmp outer

outer:

call crlf

call Decyphing

Leave

ret

Cyphing ENDP

Decyphing PROC

Enter 0,0

call crlf

call crlf

mov edx, offset Message2

Call writestring

call crlf

Mov ecx,n

Mov esi,0

Mov ebx,0

Mov edx,0

L7:

Mov ebx,prime

Mov eax,Quotient[esi]

Mul ebx

Add eax,encrypted[esi]

Mov decrypted[esi],eax

add esi, 4

Loop L7

Mov ecx,n

Mov esi,0

call crlf

mwrite "Decrypted Code: "

L8:

mov eax, decrypted[esi]

sub eax, 3

call writechar

add esi, 4

loop L8

mov edx,OFFSET filename

call OpenInputFile

mov fileHandle,eax

mov edx, OFFSET buffer

mov ecx, BUFFER\_SIZE

call ReadFromFile

mov buffer[eax],0

mov esi,OFFSET buffer

mov edi,OFFSET decrypted

cmpsd

ja yes

jna no

yes:

call crlf

mwrite"Successful Decryption!"

jmp ex

no:

call crlf

mwrite "Unsuccessful Decryption"

ex:

call Crlf

mov eax,fileHandle

call CloseFile

Leave

ret

Decyphing ENDP

END main