Lab 10

23k-0071

Urooj Baloch

Task 1:

INCLUDE Irvine32.inc

.data

Str1 BYTE "127&j~3#^&\*#\*45^",0

key BYTE "#", 0

res BYTE "'#' found at index: ", 0

index SDWORD 0

.code

main PROC

mov al, key

mov edi, offset Str1

mov ecx, lengthof Str1

call scan\_string

exit

main ENDP

scan\_string PROC

cld

repne scasb

jnz notfound

sub edi, offset Str1

dec edi

mov index, edi

jmp done

notfound:

mov index, -1

done:

mov edx, offset res

call writestring

mov eax, index

call writeint

call crlf

ret

scan\_string ENDP

END main

Output:

A black background with white text

AI-generated content may be incorrect.

TASK 2:

INCLUDE Irvine32.inc

.data

Str1 BYTE "127&j~3#^&\*#\*45^", 0

key BYTE "#", 0

res BYTE "'#' found at index: ", 0

index SDWORD 0

.code

main PROC

mov eax, 0

mov al, key

mov esi, offset Str1

push esi

push eax

call scan\_string

exit

main ENDP

scan\_string PROC

mov edi, [esp+8]

mov al, [esp+4]

mov ecx, lengthof Str1

cld

repne scasb

jnz notfound

sub edi, [esp+8]

dec edi

mov index, edi

jmp done

notfound:

mov index, -1

done:

mov edx, offset res

call writestring

mov eax, index

call writeint

call crlf

ret 8

scan\_string ENDP

END main

Output:

A black screen with white text

AI-generated content may be incorrect.

TASK 3:

INCLUDE Irvine32.inc

.data

s1 BYTE 10 dup (?)

s2 BYTE 10 dup (?)

equal byte "Strings are equal!",0

inequal byte "Not Equal.",0

input byte "Input string (10 length max): ",0

.code

main proc

push offset s1

push offset s2

mov edx, offset input

call writestring

mov edx, offset s1

mov ecx, 10

call readstring

push eax

call crlf

mov edx, offset input

call writestring

mov edx,offset s2

mov ecx, 10

call readstring

call crlf

call isCompare

call crlf

exit

main endp

isCompare proc

push ebp

mov ebp,esp

mov ecx, [ebp + 8]

mov edi, [ebp + 12]

mov esi, [ebp + 16]

cld

repz cmpsb

jz areEqual

mov edx, offset inequal

call writestring

done:

pop ebp

ret 12

areEqual:

mov edx, offset equal

call writestring

jmp done

isCompare endp

end main

output:

Task 4:

INCLUDE Irvine32.inc

.data

s1 BYTE 10 dup (?)

s2 BYTE 10 dup (?)

equal byte "Strings are equal!",0

inequal byte "Not Equal.",0

input byte "Input string (10 length max): ",0

.code

main proc

push offset s1

push offset s2

mov edx, offset input

call writestring

mov edx, offset s1

mov ecx, 10

call readstring

call crlf

push eax

call str\_reverse

mov edx,offset s2

call writestring

call crlf

exit

main endp

str\_reverse proc

push ebp

mov ebp, esp

mov ecx, [ebp + 8]

mov edi, [ebp + 12]

mov esi, [ebp + 16]

add esi, ecx

dec esi

L1:

std

lodsb

cld

stosb

loop l1

mov byte ptr [edi], 0

pop ebp

ret 12

str\_reverse endp

end main

Task 5:

INCLUDE Irvine32.inc

.data

arr DWORD 1, 2, 3, 4, 5

input byte "Input a number to multiply with: ",0

.code

main PROC

push offset arr

push lengthof arr

mov edx, offset input

call writestring

call readint

push eax

call crlf

call load

mov ecx, 0

mov edi,offset arr

loop2:

mov eax,[edi+ecx]

call writedec

mov eax,' '

call writechar

add ecx,4

cmp ecx,sizeof arr

jnz loop2

exit

main endp

load proc

push ebp

mov ebp,esp

mov edi,[ebp+16]

mov esi,edi

mov ecx,[ebp+12]

mov ebx,[ebp+8]

cld

loop1:

lodsd

imul ebx

stosd

dec ecx

cmp ecx,0

jnz loop1

pop ebp

ret 8

load endp

END main

A black background with white text

AI-generated content may be incorrect.