Coal Lab no 6  
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Qno 1

Code: INCLUDE Irvine32.inc

.data

.code

main PROC

mov eax,0

mov ebx,1

mov ecx,10

Fibloop:

call WriteInt

call crlf

add eax,ebx

xchg eax,ebx

loop Fibloop

exit

main ENDP

END main

**Output**

**A black screen with a white border

AI-generated content may be incorrect.**

**Qno 2**

**Code:**

INCLUDE Irvine32.inc

.data

prompt BYTE "Enter a number: ",0

buffer BYTE 20 DUP(?)

.code

main PROC

mov edx, OFFSET prompt

call WriteString

mov edx, OFFSET buffer

mov ecx, SIZEOF buffer

call ReadString

mov ecx, eax

mov esi, OFFSET buffer

rowLoop:

mov edi, esi

mov ebx, ecx

colLoop:

mov al, [edi]

movzx eax, al

call WriteChar

inc edi

dec ebx

jnz colLoop

call Crlf

inc esi

loop rowLoop

exit

main ENDP

END main

**Output**

A black screen with white text

AI-generated content may be incorrect.

**Qno 3**

**Code:**

INCLUDE Irvine32.inc

.data

EmployeeId WORD 5 DUP(?)

employeeBirthYear WORD 5 DUP(?)

employeeSalary DWORD 5 DUP(?)

prompt1 BYTE "Enter Employee ID for 5 employees: ",0

prompt2 BYTE "Enter Birth Year for 5 employees: ",0

prompt3 BYTE "Enter Salary for 5 employees: ",0

output1 BYTE "Employee ID: ",0

output2 BYTE "Birth Year of employees: ",0

output3 BYTE "Salary of Employees: ",0

totalMsg BYTE "Total Salary: ",0

.code

main PROC

mov edx, OFFSET prompt1

call WriteString

mov ecx, 5

mov esi, OFFSET EmployeeId

empLoop1:

call ReadInt

mov [esi], ax

add esi, TYPE EmployeeId

loop empLoop1

mov edx, OFFSET prompt2

call WriteString

mov ecx, 5

mov esi, OFFSET employeeBirthYear

empLoop2:

call ReadInt

mov [esi], ax

add esi, TYPE employeeBirthYear

loop empLoop2

mov edx, OFFSET prompt3

call WriteString

mov ecx, 5

mov esi, OFFSET employeeSalary

empLoop3:

call ReadInt

mov [esi], eax

add esi, TYPE employeeSalary

loop empLoop3

mov ecx, 5

mov esi, OFFSET EmployeeId

empDisplay1:

mov edx, OFFSET output1

call WriteString

mov ax, [esi]

call WriteInt

call Crlf

add esi, TYPE EmployeeId

loop empDisplay1

mov ecx, 5

mov esi, OFFSET employeeBirthYear

empDisplay2:

mov edx, OFFSET output2

call WriteString

mov ax, [esi]

call WriteInt

call Crlf

add esi, TYPE employeeBirthYear

loop empDisplay2

mov ecx, 5

mov esi, OFFSET employeeSalary

empDisplay3:

mov edx, OFFSET output3

call WriteString

mov eax, [esi] ; fix: use eax (DWORD), not ax

call WriteInt

call Crlf

add esi, TYPE employeeSalary

loop empDisplay3

mov ecx, 5

mov esi, OFFSET employeeSalary

mov eax, 0

empTotalSal:

add eax, [esi]

add esi, TYPE employeeSalary

loop empTotalSal

mov edx, OFFSET totalMsg

call WriteString

call WriteInt

call Crlf

exit

main ENDP

END main

**Output**

A screenshot of a computer

AI-generated content may be incorrect.

**Qno 4**

**Code:**

INCLUDE Irvine32.inc

.data

source BYTE "Hello, World!",0

destination BYTE 20 DUP(?)

og BYTE "The original string is: ",0

prompt BYTE "The copied string is: ",0

.code

main PROC

mov edx, OFFSET og

call WriteString

mov edx, OFFSET source

call WriteString

call Crlf

mov esi, OFFSET source

mov edi, OFFSET destination

copyloop:

mov al,[esi]

mov [edi],al

inc edi

inc esi

cmp al,0

jne copyloop

mov edx, OFFSET prompt

call WriteString

mov edx, OFFSET destination

call WriteString

call Crlf

exit

main ENDP

END main

**Output:**

A screen shot of a computer program

AI-generated content may be incorrect.

**Qno 5**

**Code:**

Include Irvine32.inc

.data

prompt BYTE "Enter a number: ",0

resultMsg BYTE "Factorial is: ",0

num DWORD ?

factorial DWORD 1

.code

main proc

mov edx, OFFSET prompt

call WriteString

call ReadInt

mov num, eax

mov ecx, eax

mov eax, 1

factloop:

mul ecx

loop factloop

mov factorial, eax

mov edx, OFFSET resultMsg

call WriteString

mov eax, factorial

call WriteInt

call Crlf

exit

main endp

end main

**Output**

A screen shot of a computer

AI-generated content may be incorrect.