23K-0032
Saif (Assignment 1) aue:
(Question 1)
(i) A single statement in C++ expands into
multiple assembly language instructions this is a one-to-many relationship. While each assembly language instruction consesponds to a single impediate language
this is a one-to-many relationship.
While each assembly language instruction
congregande to a single l'imperine language
instruction, this is a me-to-one relativeship
C++ code line $d = 0*b + 10$
d = 0*6 +10
0 11 1 0A 10 0 1.
Assembly language Madine ade
Mov eax, A A1 004 04000
MI Q = F7 19004 Dumu
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Mov Deax A3 00404008
700
(ii) In direct mode the instructions specify
the absolute memory address of where
the openand is located.
e.g:- MOV AX, [1234h]; move the values
stored at
adaness 1234h into
AX.
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/)	a	1	0	
1	u	U	C	

In indirect made a register holds the address where the operand is located. Example:

MOV SI, 1234h MOV AX, [SI]

In indexed mode, an index is stored lin a register which is added to the base address. Example:-

MOV 31,1000h MOV BX, 05h MOV AX, [31+BX

it is designed for a specific processor

in) Real address mode is available in windows 96,
MS DOS program runs in this mode, it has
only 1 MB of memory. In protected mode,
each program can address max 4 GB memory
and programs are programs are prevented
from accessing each others memory. It is
used by windows NT, XP and LINUX

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(1) The 20	le of	memory seo	mentation is to
en sume	that	memory &	ddaecaina is
done	efficientl	1 ph coups	ing a segment
registen	and	'an offset	
13			On domini
(vi) There	ase for	un steps i	n reading a
instance	tion , her	ce four a	voles and Inequired.
	Linco Hange		1 ON VIEW
	(0)	restion 2)	COLUMN HICK
(i) Adda		/	ffset
	= 0	040 x 10 + 01	DEF
	= 0	OILEE	
011	11 - 1	011	-
Hodness	Value	Adress	Value
HEF	FC FE	11FC 11FD	PF D6
11 F 1	03	NFE	FF
11 45	01	IIFF	01
1153	00	1200	00
114	10	1501	00
11175	00	1303	03
1176	20	1204	00
+ + II F +	00	1205	00
+ 11FB	30	60510	00
3 11 t d	00	1207	03
? IIFA	40	1509	00
P IIFB	FO	HOSI	- 06
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Date:	

Address	Value	(ii) -(a) FCh (j) 3FFC
1208	04	(b) 20h
	U	1 2 2 2 2 1 2 2 2 1
1500	00	(c) 0000 1000h
COSI	00	(1) 3000 h
ISOE	00	(e) FFFOb
130E	05	(F) 4000h
1510	00	(g) 00000001h
1511	00	(h) 3001h
1313	00	(i) OOH
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(Question 3)

rain PROC mov esi, O

loop-stant:

ige exit_loop

movzx eax, BYTF PTR and [esi*2]

add eax, ebx

mov ecx, DWORD PTR and [esi*4]

moy OWORD PTR and [esi*4], ecx inc esi jmp loop-stant exit loop: INVOKE ExitProcess, O
inc esi jmp loop-stant exit loon:
exit long:
exit long:
exit loop: TNIVOKF ExitProcess.
main ENP
ENO main