Paging in Memory Management
Maia Manay
=> Main Memory. Formulas
Dhysical address Space = Size of main memory
Size of main memory = Total number of
Physical address space = Size of main memory Size of main memory = Total number of frames * Page Size Frame Size = Page size
· Frame size = Page size
· If the number of frames in the main memory = 2x, then number of
main memory = 2x, then number of
bits in frame number = x bits.
· The page size = 2x bytes, then number of bits in page offset = x bits To represent 8 pages we need 3 bits
of bits in page offset = x bits
· To represent & pages we need 3 bits
i.e a = 8
· If the size of main mending = 2" Bytes, then number of bits in physical
address = X bits
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=) Page Table:
· Number of pages = Logical Address Space Page Size · Number of frames = Physical Address Space / Frame Size
· Number of frames = Physical Address Space / Frame Size
· Size of the page table = Number of
entries in page table * Page table entrysize
· Number of entries in page table =
Number of pages the process is divided into
· rage table ently size = Number of ois
in the frame number + Number of
bits used for optional fields if any

Simple Bas	ics;		
22 4		00-100	
2 ³ - 8	a" = 69 a" = 128	720	24 - 1K
		ວ <u>າ</u> ວຼ	10
25 : 32	2 = 512	240 =	16
	5 = 31A		
Tota	D. word 8	words	
Each	word of si	20 16-6	its.
	U		
Capacity of	memory =	Number on	f words
Capacity of in	the memory	+ X MORC	1 size
Capacity =	8 x 16 bit	5	Jacob Company
i U	= 8x2byle	25	
The state of the s	= 16 bjte	Numerica	
0	, v	Jumerica	l
Guestion	Vo #1.	<u> </u>	
Consider a address ea	SJStem i	n which	logical
address es	year to a	27 bits	ald
The Ph	Jsical ado	ress Yea	Justes
XI DILS!	ne Dage	SIZO IS	AK monds
(alculate	the nur	uper of	Pages
and the	unupa	of the	amesol
Solution:			
Colonia C	Al-leas	OT WH.	Qa7
- Cogical F	Oddkas =	31 MT	291
Physical	Address = . Address = . Yk :	4 - 2	10
tage Size	391	3, 20	10
		~ 3, × 8	=> a'a
		A 4	

Imber of pages: Logical Address/ Page s = 23 15 = 25 x 210 = 38 x k = 38k mber of frames: Physical Address/ Frames
= 2 ¹ / ₂ = 2 ¹ / ₃ = 2 ⁵ × 2 ¹⁰ = 32 × k = 32 × k
= 2's = 25 x 2'0 = 30 x k = 30 k. = 30 k. mbev of frames = Physical Address/Frames
= 2's = 25 x 2'0 = 30 x k = 30 k. = 30 k. mbev of frames = Physical Address/Frames
= 2 ⁵ x 2 ¹⁰ = 32 x k = 32k. _ 32k. _ mbev of frames = Physical Address/Fra.
= 2 ⁵ x 2 ¹⁰ = 32 x k = 32k. _ 32k. _ mbev of frames = Physical Address/Fra.
= 32 x k = 32k. mbev of frames = Physical Address/Frames
= 3ak. mbev of frames = Physical Address/Frames
mber of frames = Physical Address Fra.
= 224 9
면 있다는 마음을 통해 있다면 경기를 가면 있다면 하는 것이 있다면 하는데 보고 있다면 하는데 보고 있다면 하는데 하는데 그는데 보고 있다면 하는데 보고 있다면 하는데 보고 있다.
2tx
= 29
= 512 trames
vestion No # 2
with logical oddress
U prigsica 1,1
a bits as The page size is
1-4 (120 15
what is the approximate size
of the page.

Soluti	on:
D	2 butes
logic	al Address = 30 bits = 0
Phy	sical Address = 64 M.
Pag	size = 4k.
4	2 4 x 2 "
	$= a^{2} \times a^{10} = a^{2+10}$
	= a ¹² .
Numbe	ox of pages = Logical address/Pages
	2 337 10
	aux 1
44.11	2 220
Size of	page table in bytes = 200 x 2 byte
<u> </u>	page table in bytes = 200 x 2 bytes
<u> </u>	1.04
	= 1M x 2 bytes
	= 2MB
Dunetin	on No #3
yoursu	
C -2.10-4	- Cual-
Consider table	with 4k entries, logical so of 29 bits. 4
table	with the entries of logical
addre	the Object of How many
L 115	DINGC CO.
if	the system of 510
	Old transi
	11 Times.

Solution:
Malay of frame = DID
Logical Address = 29 bits.
Number of entries in page table = 4k.
1. 20
$= 2^{3} \times 2^{10}$ $= 2^{12}$
$=$ $\frac{2}{3}$
Number of pages = logical Address Page size.
- 349 17
= 349 17 248
= 214
= 29 x 210
= 128 k
Frame size = Page- size.
Number of frames = Physical Address Framesix
512 = Physical Address
512 = Physical Address
29 - Physical Address
a [₽]
29 x 217 = Physical Address 29 +17 = Physical Address 26bit= Physical Adress.
29+17 = Physical Address
226 bits Physical Adress.
V