Artiukhov Dmitrii

№ 8.1

Physical Memory: $M = 256$ KiB $= 262144$ Bytes

Page size: $p = 2048$ Bytes

Max pages per program: $T = 16$

a) Frames count: $M/p = 128$

b) Logical Address: $\log_2(T \cdot p) = \log_2(32768) = 15$ bits

Physical Address: $\log_2(M) = \log_2(262144) = 18$ bits

c) Page number bits: $\log_2(16) = 4$ bits

Offset within page bits: 11 bits

№ 8.2

a) P_1: page table

{
$p_{1,0}$: 8 (r-x-v)
$p_{1,1}$: 6 (r-x-v)
$p_{1,6}$: 11 (rw--v)
$p_{1,8}$: 3 (rw--v)
}

P_2 : page table

{
$p_{2,0}$: 3 (r-x-v)
$p_{2,1}$: 12 (r-x-v)
$p_{2,4}$: 4 (rw--v)
$p_{2,5}$: 1 (rw--v)
}

b) P_1 : page table

{
$p_{1,0}$: 8 (r-x-v)
$p_{1,1}$: 6 (r-x-v)
$p_{1,2}$: 2 (rw-dv)
$p_{1,5}$: 5 (rw-dv)
$p_{1,6}$: 11 (rw--v)
$p_{1,8}$: 3 (rw--v)
}

P_2 : page table

{
$p_{2,0}$: 3 (r-x-v)
$p_{2,1}$: 12 (r-x-v)
$p_{2,4}$: 4 (rw--v)
$p_{2,5}$: 1 (rw--v)
$p_{2,6}$: 10 (rw-dv)
$p_{2,8}$: 7 (rw-dv)
}

c) P_1 : page table

{
$p_{1,0}$: 8 (r-x-v)
$p_{1,1}$: 6 (r-x-v)
$p_{1,2}$: 2 (rw-dv)
$p_{1,5}$: 5 (rw-dv)
$p_{1,4}$: 13 (rw-dv)
$p_{1,6}$: 11 (rw--v)
$p_{1,8}$: 3 (rw--v)
}

P_2 : page table

{
$p_{2,0}$: 3 (r-x-v)
$p_{2,1}$: 12 (r-x-v)
$p_{2,2}$: 14 (rw-dv)
$p_{2,4}$: 4 (rw--v)
$p_{2,5}$: 1 (rw--v)
$p_{2,6}$: 10 (rw-dv)
$p_{2,8}$: 7 (rw-dv)
}

Frame	Physical Addresses	Loaded Page
0	0x000-0x0FF	OS
1	0x100-0x1FF	$p_{2,5}$
2	0x200-0x2FF	- $p_{1,2}$
3	0x300-0x3FF	$p_{1,8}$
4	0x400-0x4FF	$p_{2,4}$
5	0x500-0x5FF	- $p_{1,5}$
6	0x600-0x6FF	$p_{1,1}$
7	0x700-0x7FF	- $p_{2,3}$
8	0x800-0x8FF	$p_{1,0}$
9	0x900-0x9FF	$p_{2,0}$
10	0xA00-0xAFF	- $p_{2,6}$
11	0xB00-0xBFF	$p_{1,6}$
12	0xC00-0xCFF	$p_{2,1}$
13	0xD00-0xDFF	- $p_{1,4}$
14	0xE00-0xEFF	- $p_{2,2}$
15	0xF00-0xFFF	-