







		FEEDB4	ACK - 5	
<ul> <li>How di</li> <li>This i</li> </ul>	d you fi is just a	gure out what th hypothetical examp	e base/bounds are in the ble. Numbers are provided.	e table?
	VI	rtual Address	Physical Address	
		0	16384	
		1024	17408	
		3000	19384	
		4400	20784 (out of bounds)	
<ul> <li>Since y change</li> <li>The c</li> <li>Print</li> <li>There</li> </ul>	you can e the va code seg ing the a e is no va	get access to fui lues in these me ment is read only ddress of a functio triable to change	nctions on the stack, car mory addresses? m, just shows location	n you
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Why is it when we print the addresses

Why is it only the OS knows about the

are virtual?

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things?

FEEDBACK

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6		OBJECTIVE
in a program that they real addresses of	<ul> <li>Chapter 15</li> <li>Address Tran:</li> <li>Chapter 16</li> <li>Memory Segr</li> <li>Chapter 17</li> <li>Free Space M</li> </ul>	slation nentation lanagement
L12.7	May 11, 2017	TCSS422: Operating Systems [Spring 2017]















DYNAMI	C RELOC	ATION OF PROGRAMS	
Hardware requ	irements:		
Requirements		HW support	
Privileged mode		CPU modes: kernel, user	
Base / bounds regist	ers	Registers to support address translation	
Translate virtual add bounds	r; check if in	Translation circuitry, check limits	
Privileged instruction(s) to update base / bounds regs		Instructions for modifying base/bound registers	
Privileged instruction to register exception	ı(s) handlers	Set code pointers to OS code to handle faults	
Ability to raise except	otions	For out-of-bounds memory access, or attempts to access privileged instr.	
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FR	EE SPACE MANAGEMENT
Management	t of memory using
<ul> <li>Only fixed-siz</li> <li>Easy: keep</li> <li>Memory red</li> <li>Simple se</li> </ul>	zed units a list quest → return first free entry arch
With variable	e sized units
More challe	enging
Results from	m variable sized malloc requests
Leads to fra	agmentation
	TCCC422, On antipa Customs (Carlos 2017)

























