CSGE602055 Operating Systems
CSF2600505 Sistem Operasi
Minggu 02: Protection, Security, Privacy, & C-language

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http://rms46.vlsm.org/2/207.html

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OS181 | X1 X2/X3 X4:00-X5:00 | Y1 Y2/Y3 Y4:00-Y5:00 | Z1 Z2/Z3 Z4:00-Z5:00

Minggu 00	05 Feb - 10 Feb 2018	Intro & Review1
Minggu 01	12 Feb - 17 Feb 2018	Review2 & Scripting
Minggu 02	19 Feb - 24 Feb 2018	Protection, Security, Privacy, & C-language
Minggu 03	26 Feb - 03 Mar 2018	I/O, BIOS, Loader, & Systemd
Minggu 04	05 Mar - 10 Mar 2018	Addressing, Shared Lib, & Pointer
Minggu 05	12 Mar - 17 Mar 2018	Virtual Memory
Ming. UTS	26 Mar - 31 Mar 2018	(sementara)
Minggu 06	02 Apr - 07 Apr 2018	Concurency: Processes & Threads
Minggu 07	09 Apr - 14 Apr 2018	Synchronization
Minggu 08	16 Apr - 21 Apr 2018	Scheduling
Minggu 09	23 Apr - 28 Apr 2018	File System & Persistent Storage
Minggu 10	30 Apr - 05 Mei 2018	I/O Programming & Network Sockets Programming
Cadangan	07 Mei - 12 Mei 2018	(sementara)
Ming. UAS	14 Mei - 26 Mei 2018	(sementara)

Agenda

- Reference: (OSCE2e ch13-4) (ETC 050-1 C001-8) (OLD 01)

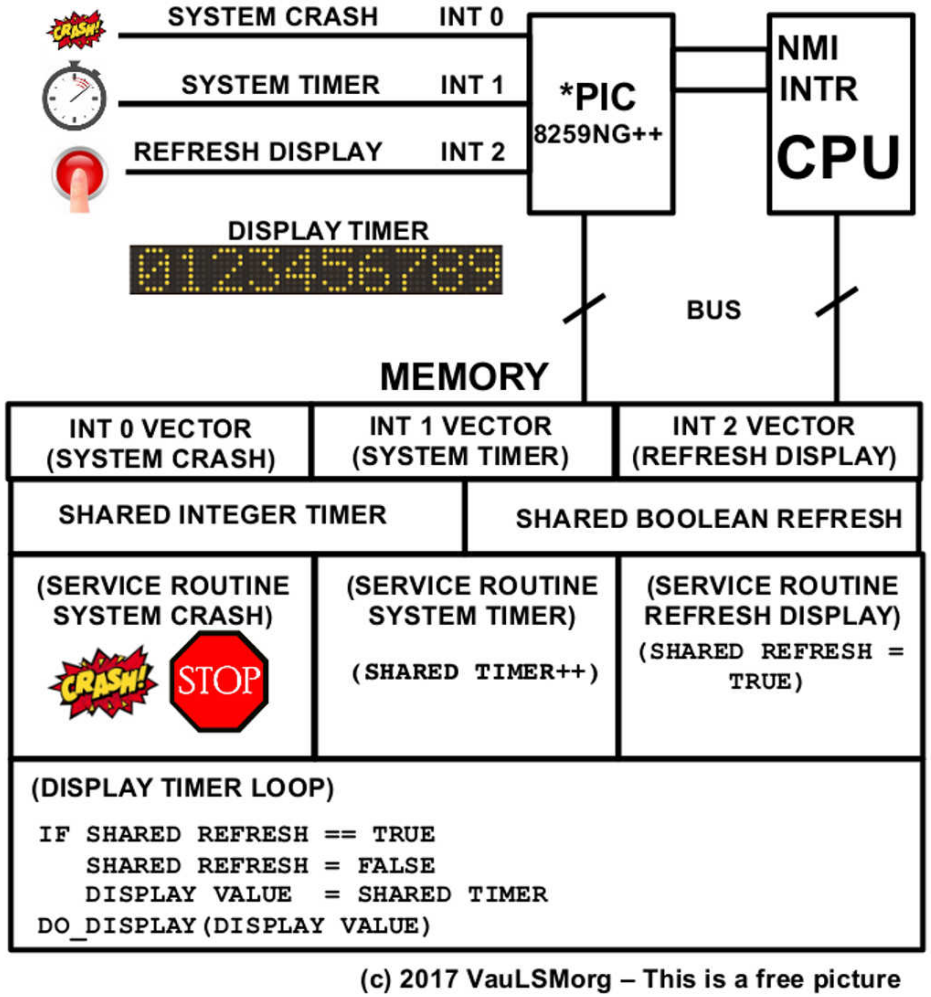

Figure: How to protect and secure this design?

Goals and Principles of Protection

- Principle of Least Privilege
- Domain Structure and Access Matrix
- Domain = set of Access-rights (eg. **user-id**).
- Access-right = <object-name, rights-set> (eg. object: file).

	File1	File2	File3	Printer
User1	Read		Read	
User2				Print
User3		Read	Execute	Print
User4	R/W		R/W	Print

- Access-right Plus Domain (Users) as Objects

	F1	F2	F3	Printer	U1	U2	U3	U4
U1	R		R			SW		
U2				Print			SW	SW
U3		R	EXEC	Print				
U4	R/W		R/W	Print	SW			

Copy Rights

- Start

	File1	File2	File3
User1	Exec		Write*
User2	Exec	Read*	Exec
User3	Exec		

- User3: Read access to File2 (by User2)

	File1	File2	File3
User1	Exec		Write*
User2	Exec	Read*	Exec
User3	Exec	**Read**	

- Owner Rights

	File1	File2	File3
User1	O & E		W
User2		O & R* & W*	O & R* & W
User3		W	W

The Security Problem

- Security Violation Categories
- Security Measure Levels
- Encryption
- Linux Security
- gnupg & sha1sum

Privacy (Wikipedia)

- Privacy can mean different things in different contexts; different people, cultures, and nations have different expectations about how much privacy a person is entitled to or what constitutes an invasion of privacy.
- Considering all discussions as one of these concepts
  - Right to be let alone (such as one's own home).
  - Limited access (no information collection).
  - Control over information (in the era of big data).
  - States of privacy: solitude, intimacy, anonymity, and reserve.
  - Secrecy: does not apply for any already publicly disclosed.
  - Personhood and autonomy.
  - Self-identity and personal growth.

C Language

- Reference: (Any C Language Tutorial)

The End

- This is the end of the presentation.