

University Institute of Computer Science and Application
(UICSA) RDVV, Jabalpur

Session 2019-2020

**Presentation on Object oriented Analysis
and Design MCA IV th Sem**

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Problem Definition

- Security is very important and major issue today in any organization
- Security and management problems for the endpoint seem to be getting worse day by day.
- It is difficult for organizations to protect their potential data without any security mechanisms
- Thus rather to concentrate on their work they have to take measures to protect their data or appoint any specialist to care of security of their system.

Proposed Solution

- Thus to protect the crucial data points of any system in organization security system is important.
- This system will protect not only your data but will keep whole of your system secure.

Objective

We are implementing a software that will ensure the overall security of the system that is hardware security, software security , network security , Remote network security.

REGISTRY

- The registry is a hierarchal database of information about system configuration used by all windows operating systems
- The registry is used by the Windows OS to store hardware and software configuration information, user preferences and setup information.
- The registry is essential for windows performance and functioning, this is why the registry is important.
- The registry contains information for all microsoft and third party applications.

REGISTRY continued...

- Many changes are made to the system configuration through various control panel applets and applied to Registry
- if registry editor is incorrect , serious problems may result that require reinstalling the operating system.

REGISTRY

- Microsoft Windows registry uses some specific root keys;
- The Registry is presented in a hierarchal series of trees and branches.
- Each branch is called a key and contains logically grouped information.
- Top-level keys are called root keys and are defined and named by windows.

Registry Structure

The screenshot shows the Windows Registry Editor window. The left pane displays a tree view of the registry structure. The right pane shows a list of registry values for the selected path.

Registry Editor

File Edit View Favorites Help

My Computer

- HKEY_CLASSES_ROOT
- HKEY_CURRENT_USER
- HKEY_LOCAL_MACHINE
 - HARDWARE
 - SAM
 - SECURITY
 - SOFTWARE
 - SYSTEM
- HKEY_USERS
- HKEY_CURRENT_CONFIG
 - Software
 - Auto Intuit Internal Printer on ARIANES
 - Fonts
 - Intuit Internal Printer
 - Microsoft
 - System

Name	Type	Data
(Default)	REG_SZ	(value not set)
FIXEDFON.FON	REG_SZ	vgafix.fon
FONT.S.FON	REG_SZ	vgasys.fon
LogPixels	REG_DWORD	0x00000060 (96)
OEMFONT.FON	REG_SZ	vgaoem.fon

My Computer\HKEY_CURRENT_CONFIG\Software\Fonts

Registry continued

- The right pane displays the value entries:
- Named parameters for control settings or configuration data
- Each value entry is composed of three elements
 - The entry name
 - Data type
 - Data value

Security implementation for PC/Remote Machine

HARDWARE SECURITY

In this we can secure our hardware from unauthorized users by enabling/disabling devices according to permissions like

- Disk Drives
- Mice and Keyboards
- Network and Modems
- Printers and Plotters
- Video and Graphics

➤ SOFTWARE SECURITY

In this we can secure our Software from unauthorized user by enabling/disabling devices according to permissions like

- Microsoft office
- Outlook express
- Windows Messenger
- Any Media player
- and similarly any other software

➤ NETWORK SECURITY

can be implemented by following

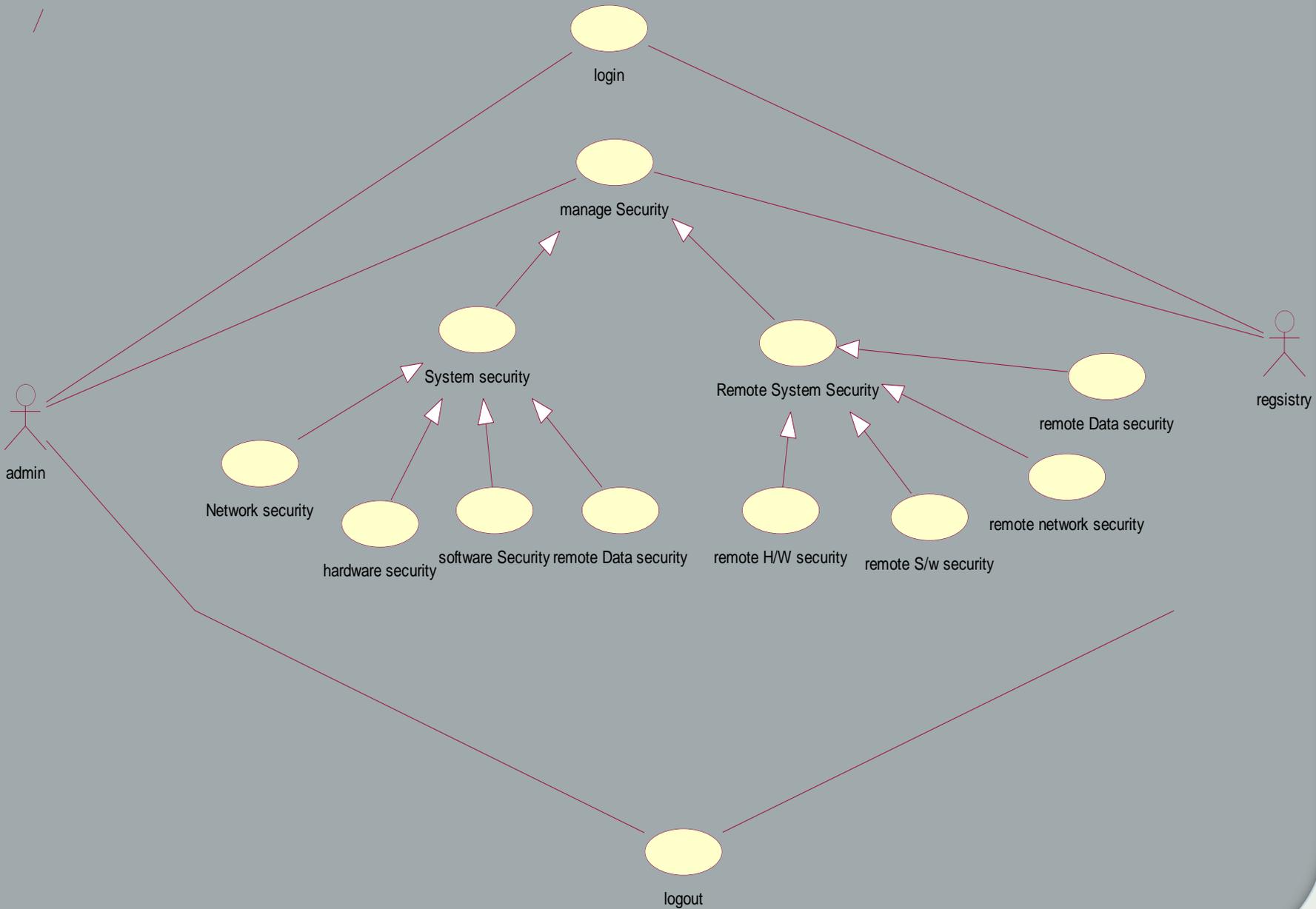
- Enable/Disable any Protocols like:
- HTTP
- FTP
- SMTP etc and many more.

➤ **DATA SECURITY:**

- Firstly data security can be implemented by using cryptography
- Diverting the path of file to other file

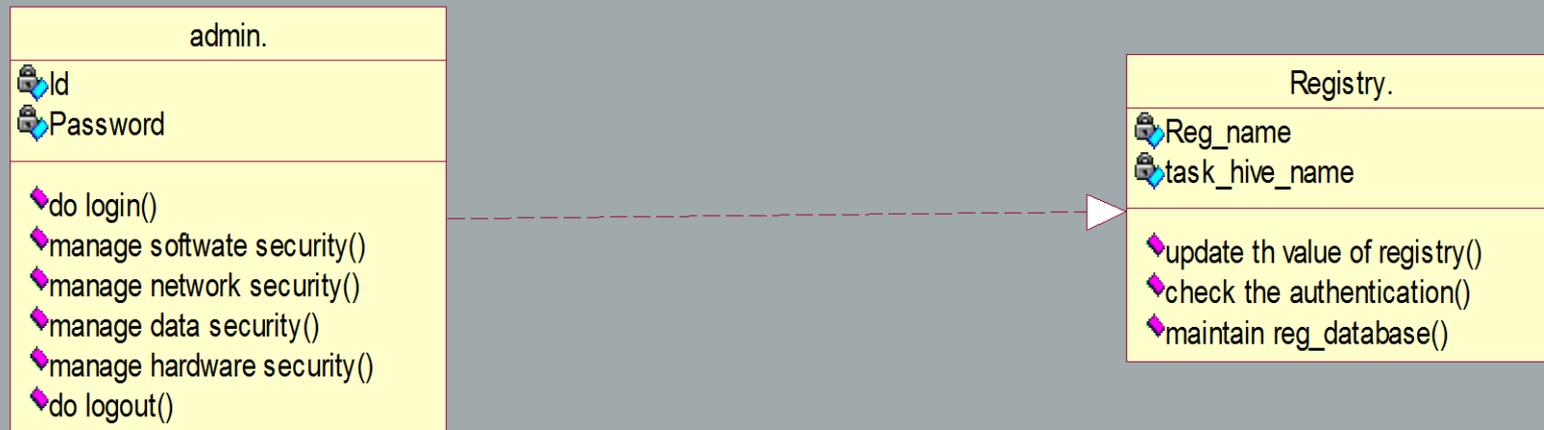
Analysis and Design Diagrams

Use-case Diagram



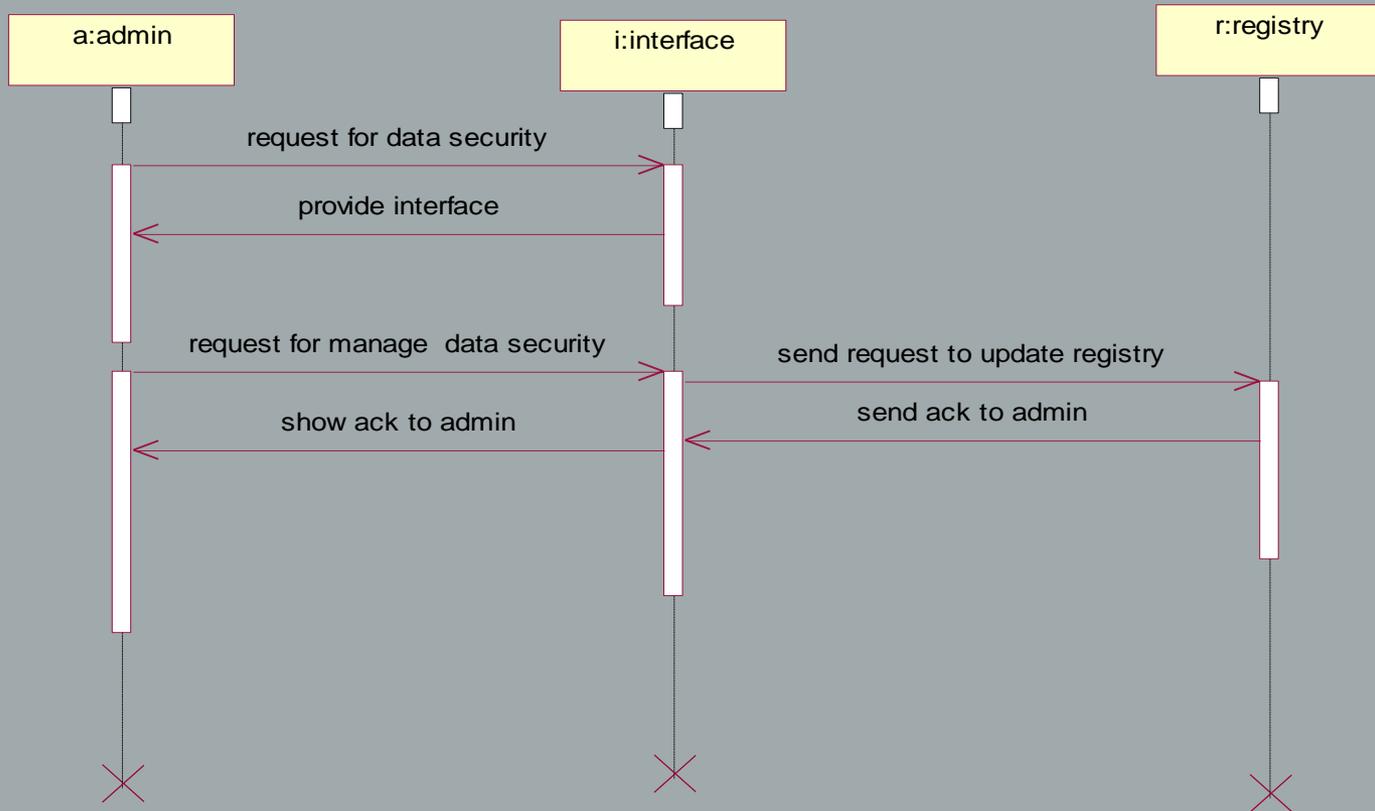
Class-Diagram

class diagram for security system

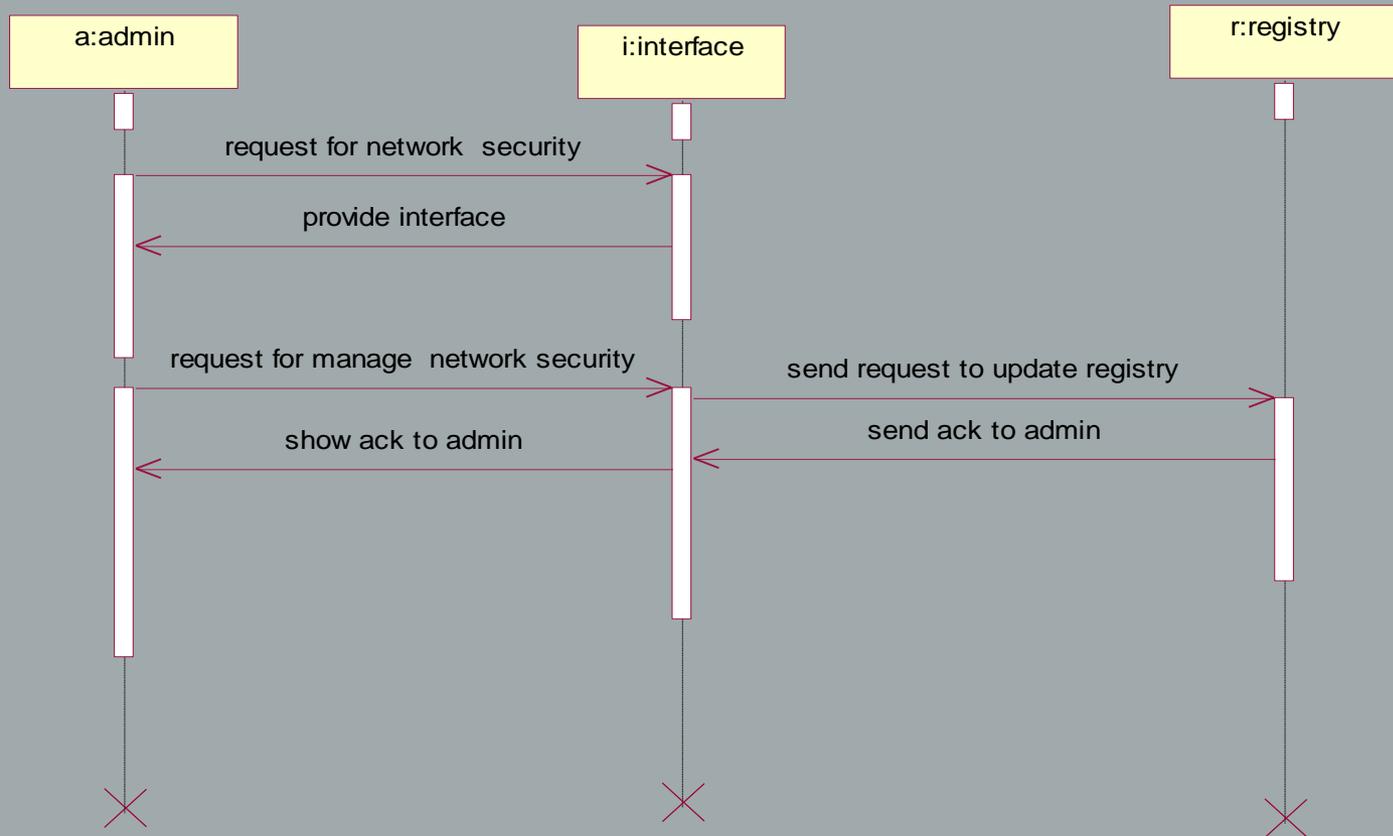


SEQUENCE DIAGRAMS

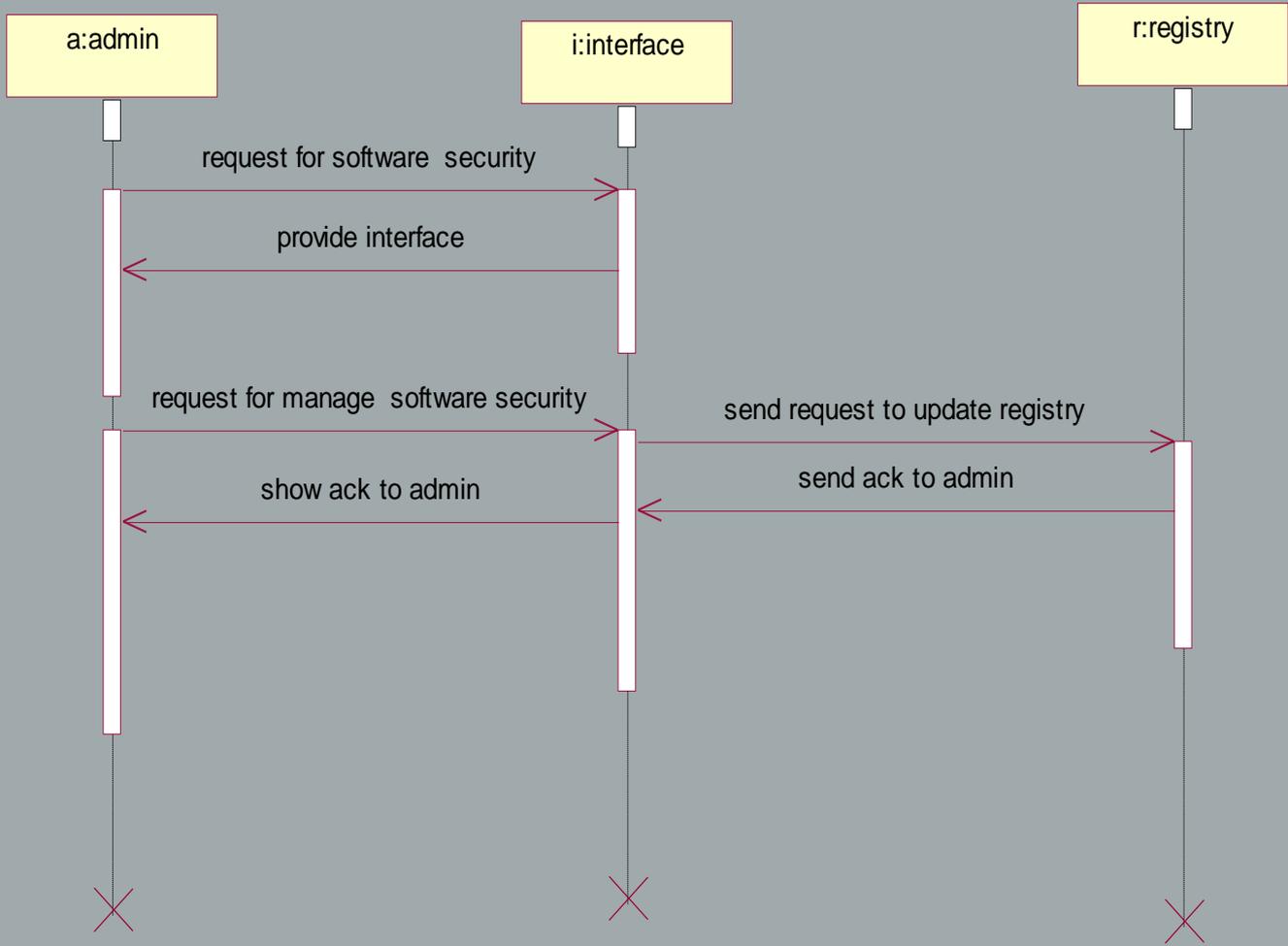
Sequence diagram for system data security



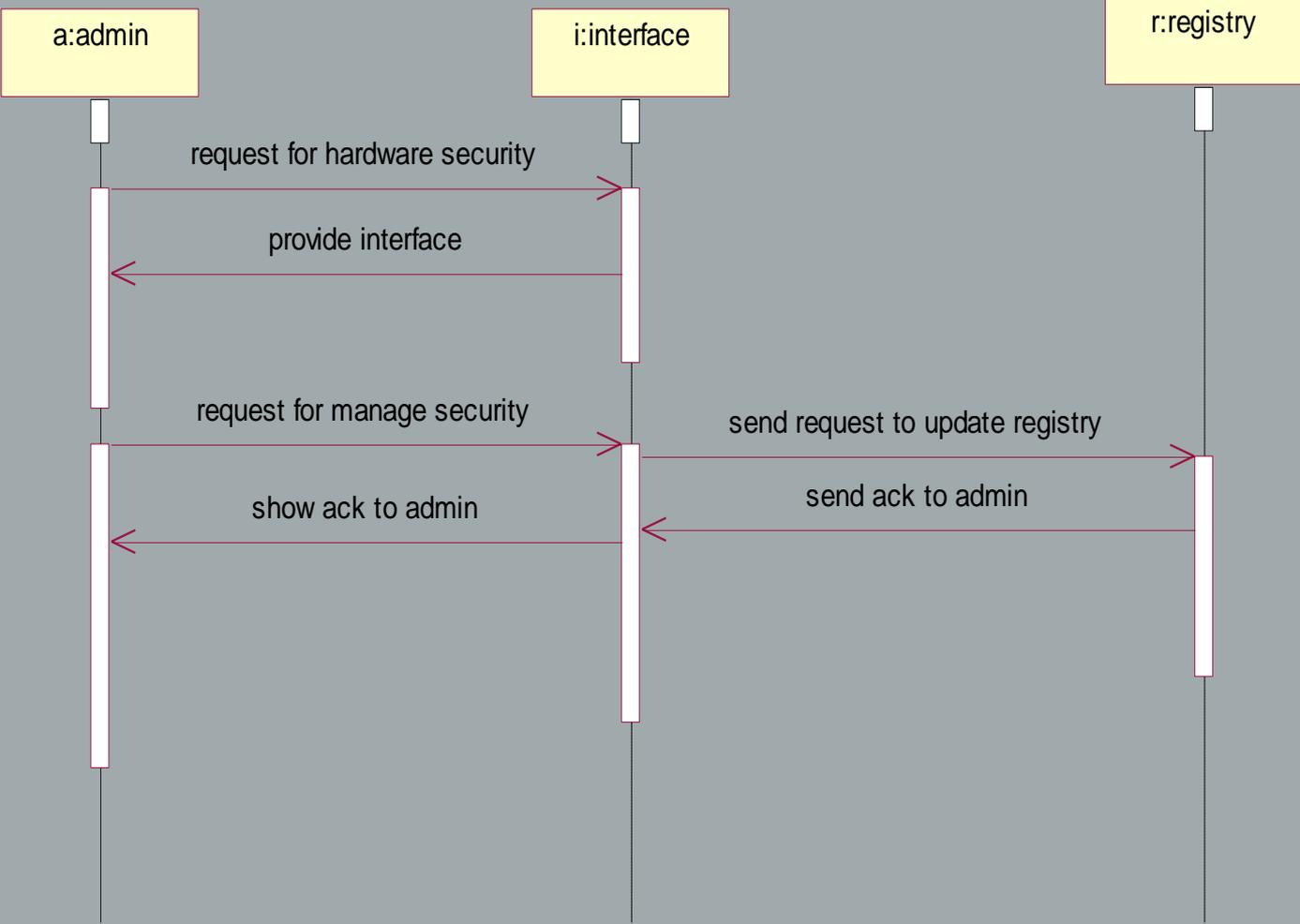
Sequence diagram for system network security



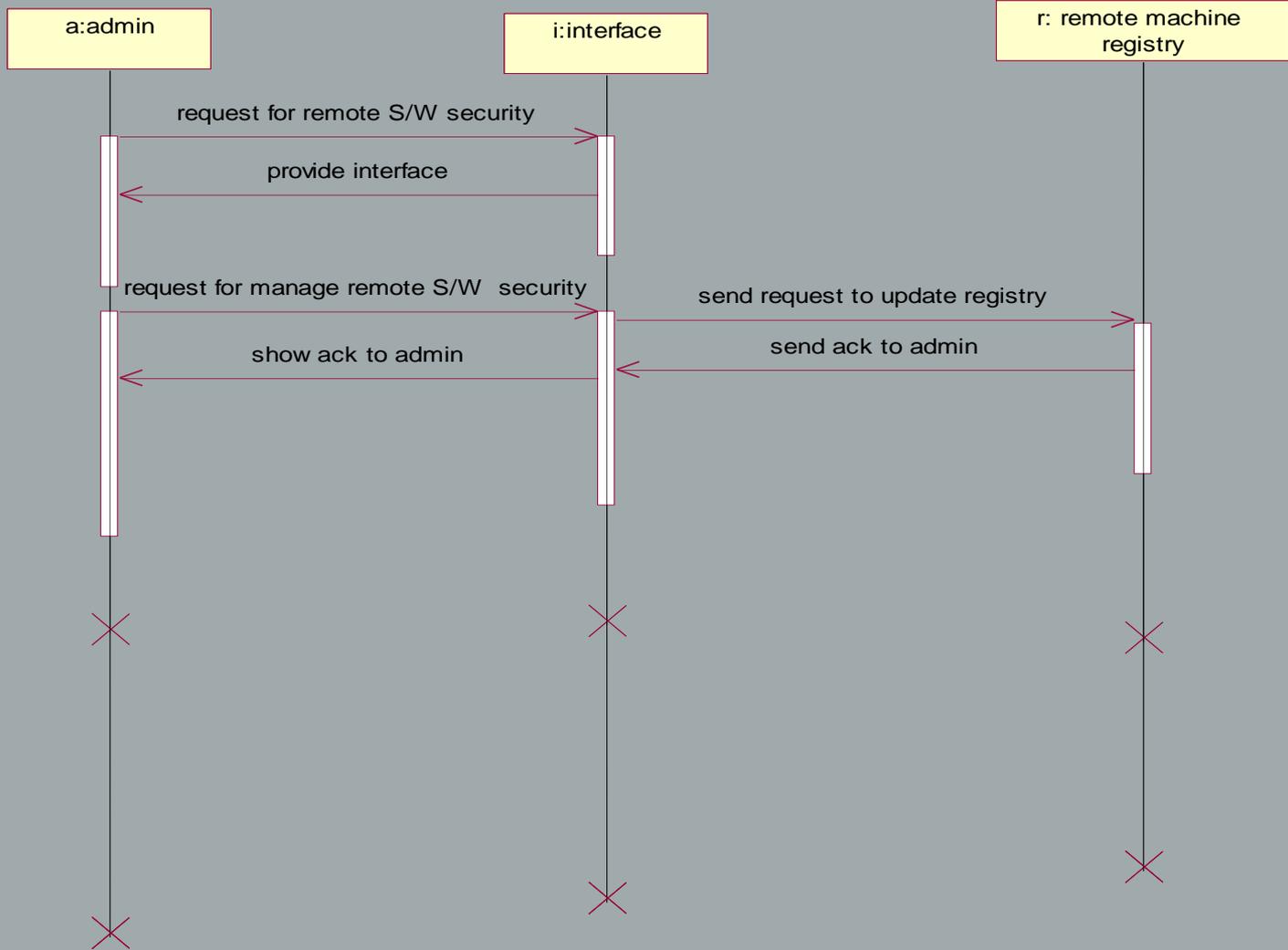
Sequence diagram for system software security



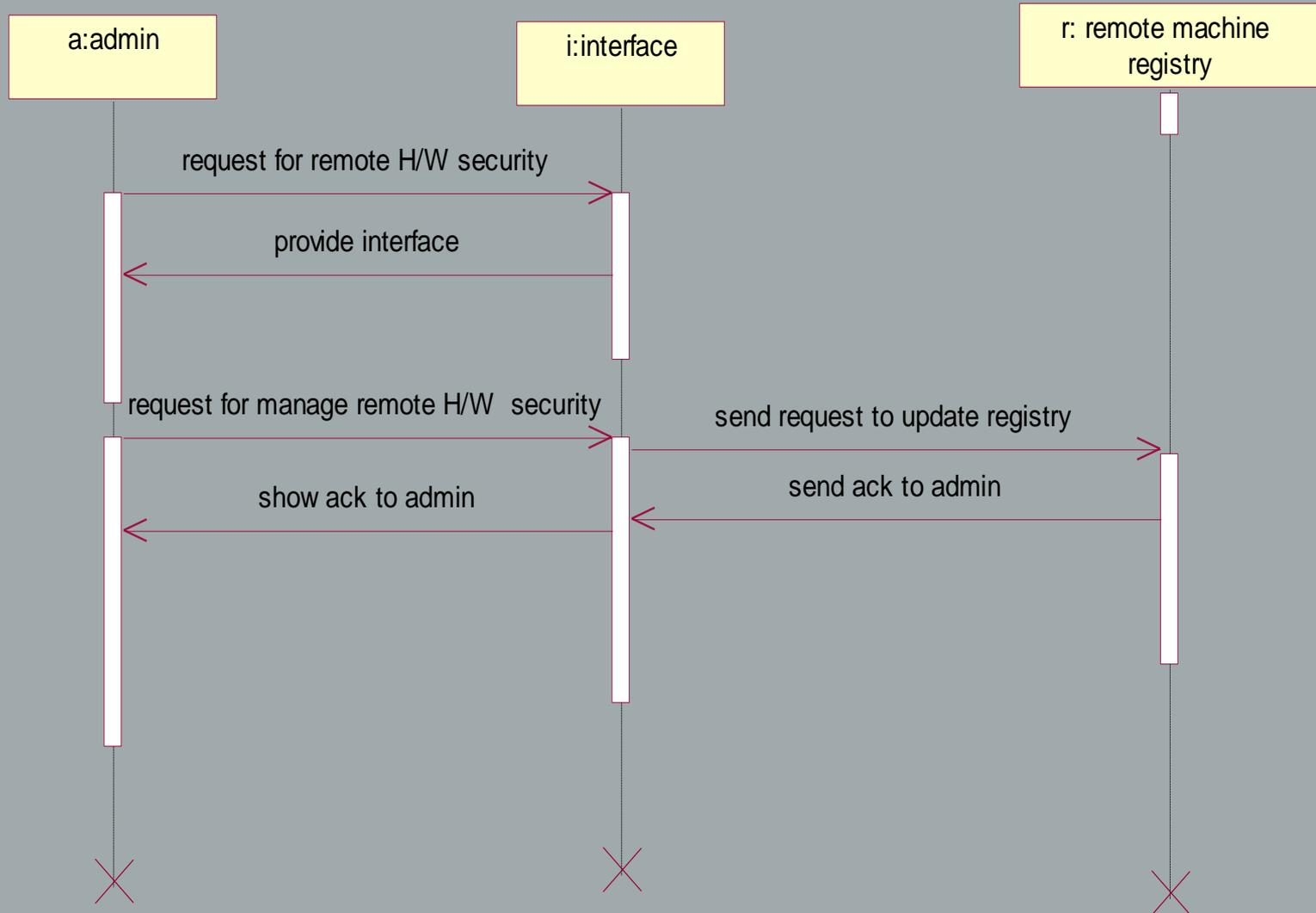
Sequence diagram for hardware security



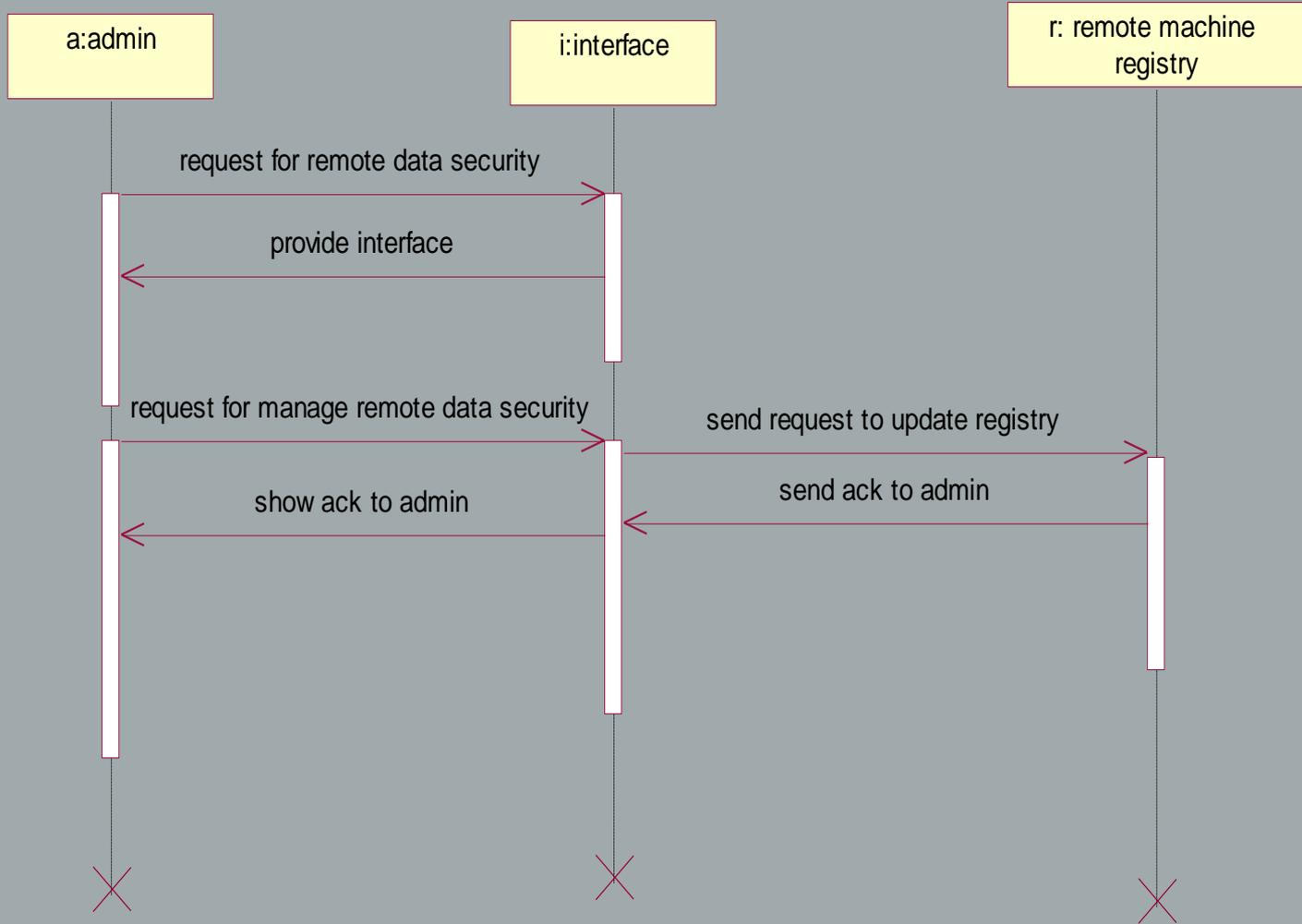
Sequence diagram for remote software security



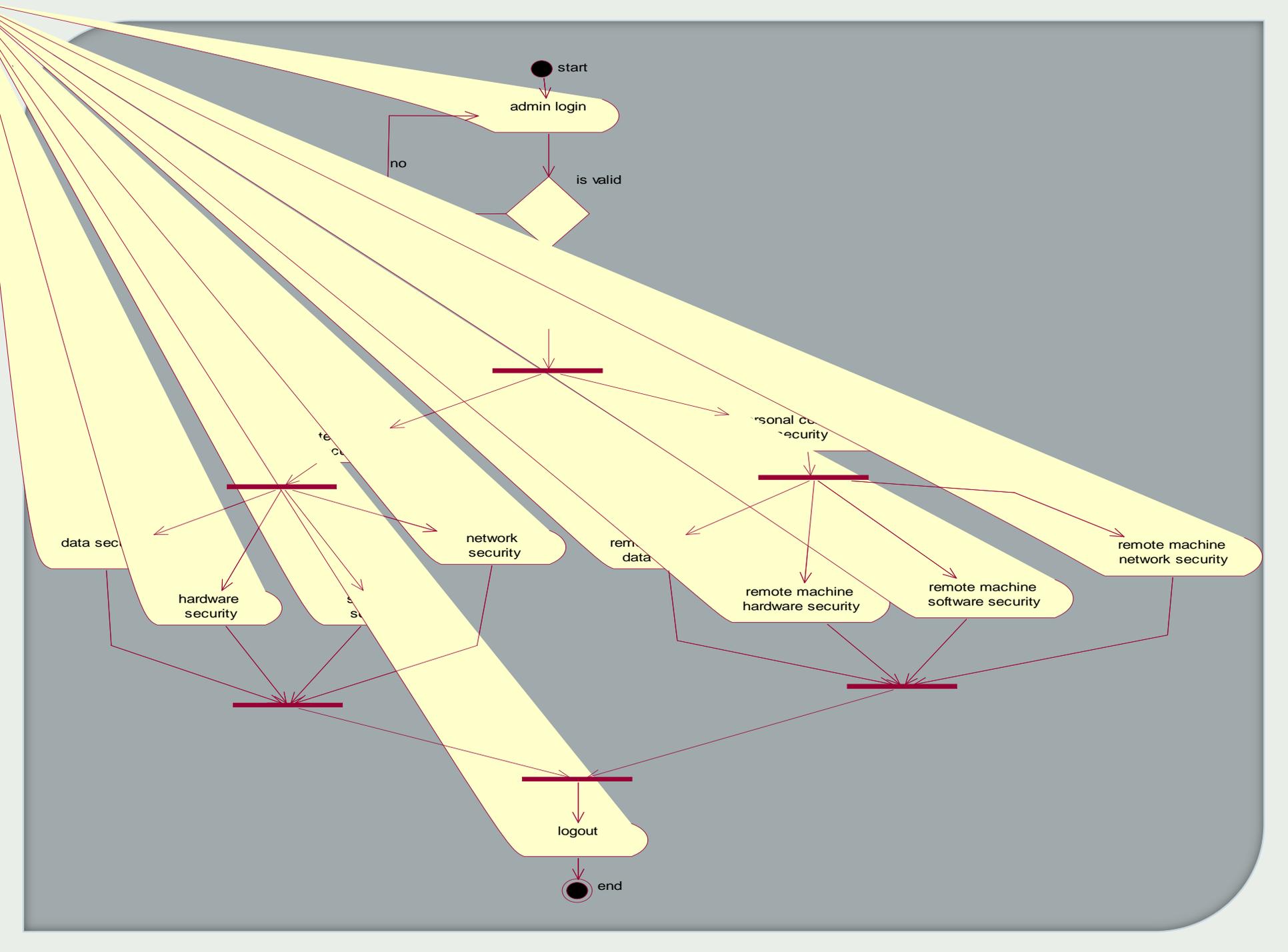
Sequence diagram for remote hardware security



Sequence diagram for remote data security



Activity Diagram



start

admin login

is valid

no

data security

hardware security

network security

remote machine hardware security

remote machine hardware security

remote machine software security

remote machine network security

logout

end

Note: Sometimes you need to Restart or Log off in order to activate a feature

System			
Network Security	Automatic Updates	<input type="radio"/> Enable	<input type="radio"/> Disable
Hardware Security			
Accessories			
Software	My Computer	<input type="radio"/> Show	<input type="radio"/> Hide
	Task Manager	<input type="radio"/> Enable	<input type="radio"/> Disable
	Control Panel	<input type="radio"/> Enable	<input type="radio"/> Disable
	Hibernate	<input type="radio"/> Enable	<input type="radio"/> Disable

Note: Sometimes you need to Restart or Log off in order to activate a feature

System			
Network Security	HTTP	<input type="radio"/> Enable	<input type="radio"/> Disable
Hardware Security			
Accessories			
Software	SMTP	<input type="radio"/> Enable	<input type="radio"/> Disable
	FTP	<input type="radio"/> Enable	<input type="radio"/> Disable
	HTTPS	<input type="radio"/> Enable	<input type="radio"/> Disable

Note: Sometimes you need to Restart or Log off in order to activate a feature

System			
Network Security	Pen Drive	<input type="radio"/> Enable	<input type="radio"/> Disable
Hardware Security			
Accessories	CD ROM	<input type="radio"/> Enable	<input type="radio"/> Disable
Software			
	USB Port	<input type="radio"/> Enable	<input type="radio"/> Disable
	Camera	<input type="radio"/> Enable	<input type="radio"/> Disable
	Bluetooth	<input type="radio"/> Enable	<input type="radio"/> Disable

Note: Sometimes you need to Restart or Log off in order to activate a feature

System			
Network Security	Task Manager	<input type="radio"/> Enable	<input type="radio"/> Disable
Hardware Security			
Accessories			
Software	CMD	<input type="radio"/> Enable	<input type="radio"/> Disable
	Windows Installer	<input type="radio"/> Enable	<input type="radio"/> Disable
	Registry Editor	<input type="radio"/> Enable	<input type="radio"/> Disable
	CMD Color	<input type="text" value="Black"/> ▼	

References

Websites used:-

- http://en.wikipedia.org/wiki/Windows_Registry
- <http://www.pctools.com/guides/registry/>

Thank You