IS664 Database Programming
Fall 2021

Imperial Defense Database

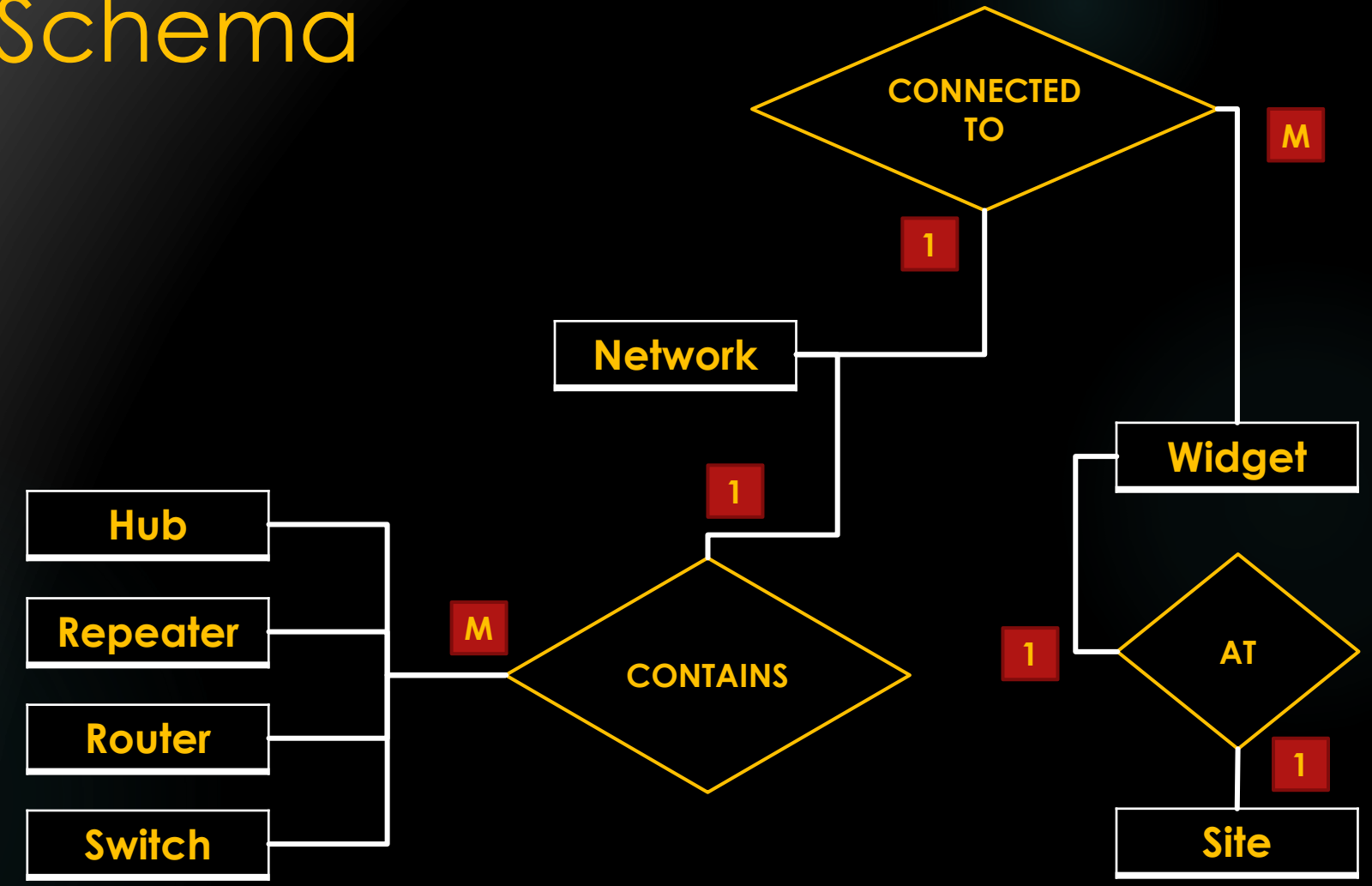
DATABASE SCHEMA

Imperial Defense Network

- The Imperial Defense Network is an interconnected collection of **autonomous widgets**.
- These interconnections are made up of digital communication network technologies, based on optical and wireless radio-frequency methods that may be arranged in a variety of network topologies.
- The widgets use common communication standards over digital interconnections to communicate with each other. Widgets are identified by network addresses.
- Network addresses serves as a method for locating and identifying the widgets by communication patterns such as the **Imperial Protocol**.
- The **Components** of the Imperial Defense Network may include computers, servers, networking hardware, or other specialized or general-purpose components.
- Network Components are:
  - Hubs, Switches, Routers, and Repeaters
- Network Components utilize software applications such as:
  - Firewalls, Intrusion Systems, Antivirus, and Subnet masking.

Database Schema

Data Types
VARCHAR
CHAR
ENUM
INT
BOOLEAN
DECIMAL
JSON
Date



Firewall

AntiVirus

Subnet

IntrusionSystem

General

Firewall		
IDNumber	SystemName	Filter

Subnet			
IDNumber	Bitmask	Protocol	DHCProtocol

IntrusionSystem		
SystemID	SystemType	Detection

Site				
SiteName	SiteID	SiteStatus	XCoord	YCoord

AntiVirus				
SName	Manufacturer	CurrentVersion	PreviousVersion	ReviseDate

Data Types
VARCHAR
CHAR
ENUM
INT
BOOLEAN
DECIMAL
JSON
Date

Relation	Purpose
Firewall	Software barrier designed to prevent unauthorized or unwanted communications between widget networks or hosts
Subnet	A logical subdivision of an IP network.
IntrusionSystem	Software application that monitors a network or systems for malicious activity or policy violations.
Site	A physical location
AntiVirus	Software application used to prevent, detect, and remove malware.

General

Router				
RID	RType	RouteFinding	Connectivity	AssignedTo

Switch					
SID	EntryPort	ExitPort	Stackable	PoE	AssignedTo

Hub				
HID	Ports	EntryPort	ExitPort	AssignedTo

Repeater				
RPID	Ports	EntryPort	ExitPort	AssignedTo

Data Types
VARCHAR
CHAR
ENUM
INT
BOOLEAN
DECIMAL
JSON
Date

Relation	Purpose
Router	A networking device that forwards data packets between widget networks.
Switch	Networking hardware that connects devices on a widget network by using packet switching to receive and forward data to the destination device
Hub	A component of a network with a high-degree of connections.
Repeater	A networking device that receives a signal and retransmits it.

General

Network							
NetName	NetType	Bandwidth	OptimumBW	MaxBW	MinBW	CSwitched	NetStatus
			GC	GC	GC		

Widget						
WID	WType	AssignedTo	Location	AccessCode	Secure	User

Data Types
VARCHAR
CHAR
ENUM
INT
BOOLEAN
DECIMAL
JSON
Date

Relation	Purpose
Network	An interconnected collection of autonomous widgets.
Widget	Either a redistribution point or a communication endpoint.