**Scenario: You are an IT architect tasked with designing a secure and efficient three-tier architecture for an e-commerce platform. The platform consists of a Web Tier for handling customer requests, an Application Tier for processing business logic, and a Database Tier for storing customer and order information. You need to ensure proper firewall configurations to secure the system while maintaining functionality.**

**Question 1: Given that the Web Tier should only accept HTTP/HTTPS traffic, the Application Tier should only accept traffic from the Web Tier on port 8080, and the Database Tier should only accept traffic from the Application Tier on port 3306, list the specific inbound and outbound firewall rules for each tier.**

**Answer-**

We need to specify some inbound and outbound firewall rules to accept the right traffic only by the Application Tier, Web Tier and Database. Which are-

**Web Tier Firewall Rules: -**

(the HTTP/HTTPS traffic and traffic to the Application Tier on port 8080)

**Inbound Rules**

Allow: HTTP (port 80) and HTTPS (port 443) traffic from the Internet to the Web Tier.

Source: Any (Internet)

Destination: Web Tier

Ports: 80 (HTTP), 443 (HTTPS)

**Outbound Rules**

Allow: HTTP (port 80) and HTTPS (port 443) traffic from the Web Tier to the Internet for outgoing responses.

Source: Web Tier

Destination: Any (Internet)

Ports: 80 (HTTP), 443 (HTTPS)

Allow: Traffic to the Application Tier on port 8080.

Source: Web Tier

Destination: Application Tier

Port: 8080

**Application Tier Firewall Rules**

(Traffic from the Web Tier on port 8080 and traffic to the Database Tier on port 3306)

**Inbound Rules**

Allow: Traffic from the Web Tier on port 8080.

Source: Web Tier

Destination: Application Tier

Port: 8080

**Outbound Rules**

Allow: Traffic to the Database Tier on port 3306.

Source: Application Tier

Destination: Database Tier

Port: 3306

**Database Tier Firewall Rules**

(traffic from the Application Tier on port 3306 and deny the all traffic)

**Inbound Rules**

Allow: Traffic from the Application Tier on port 3306.

Source: Application Tier

Destination: Database Tier

Port: 3306

**Outbound Rules**

Deny: All outbound traffic (default deny unless specific exceptions are required for management purposes).