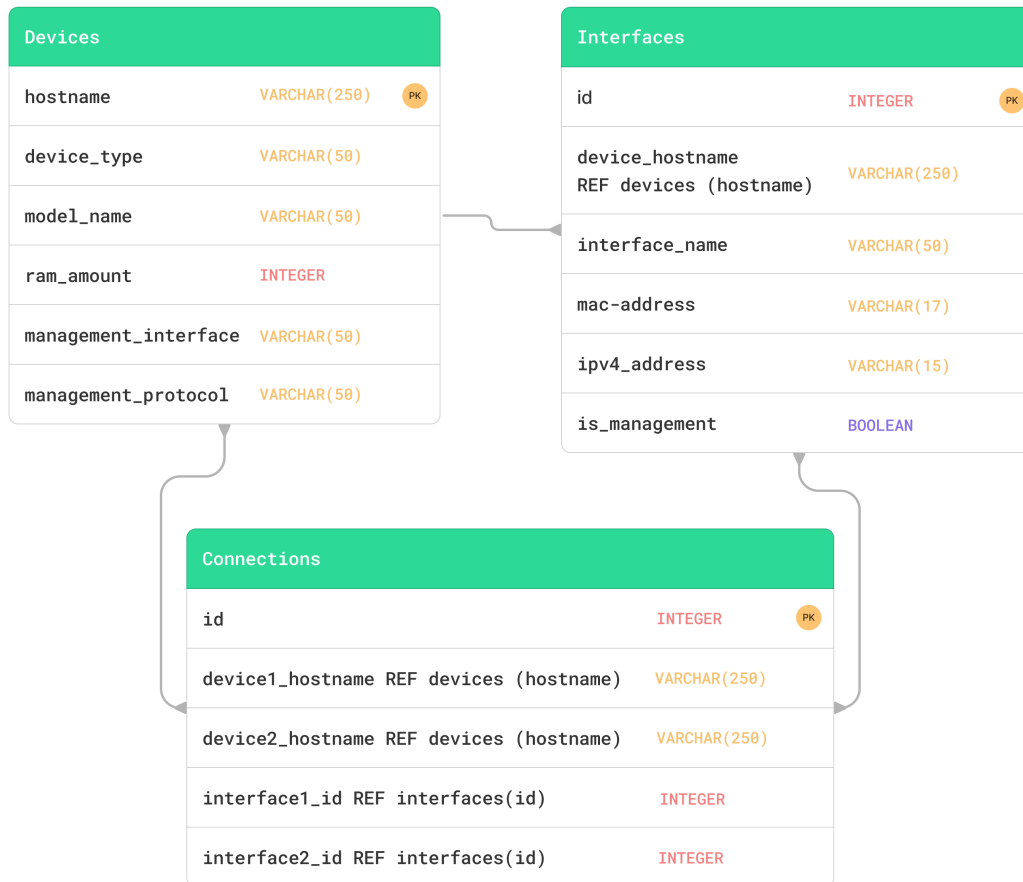


# Database Design



# Devices Table

- ▶ *The Devices table stores information about different devices in a network.*
- ▶ *It includes the following attributes:*
  - *hostname: The unique identifier for the device.*
  - *device\_type: Describes the type of device (e.g., switch, server).*
  - *os\_type: Specifies the operating system type running on the device.*
  - *model\_name: The name or model of the device.*
  - *ram\_amount: The amount of RAM (random access memory) installed on the device.*
  - *management\_interface: Indicates the interface used for management purposes.*
  - *management\_protocol: Specifies the protocol used for device management (e.g., SSH, Telnet).*

# Interfaces Table

- ▶ *The Interfaces table stores information about network interfaces of devices.*
- ▶ *It contains the following attributes:*
  - *id: Unique identifier for the interface.*
  - *device\_hostname: Foreign key referencing the hostname of the device to which the interface belongs.*
  - *interface\_name: The name of the interface.*
  - *mac\_address: The MAC (media access control) address of the interface.*
  - *ipv4\_address: The IPv4 address assigned to the interface.*
  - *is\_management: Indicates whether the interface is used for management purposes (Boolean).*
- ▶ *A unique constraint ensures that each combination of device hostname and interface name is unique.*

# Connections Table

- ▶ *The Connections table represents connections between devices.*
- ▶ *It includes the following attributes:*
  - *id: Unique identifier for the connection.*
  - *device1\_hostname: Foreign key referencing the hostname of the first device in the connection.*
  - *device2\_hostname: Foreign key referencing the hostname of the second device in the connection.*
  - *interface1\_id: Foreign key referencing the ID of the interface on the first device.*
  - *interface2\_id: Foreign key referencing the ID of the interface on the second device.*
- ▶ *A unique constraint ensures that each combination of device1\_hostname and device2\_hostname is unique, preventing duplicate connections between the same devices.*