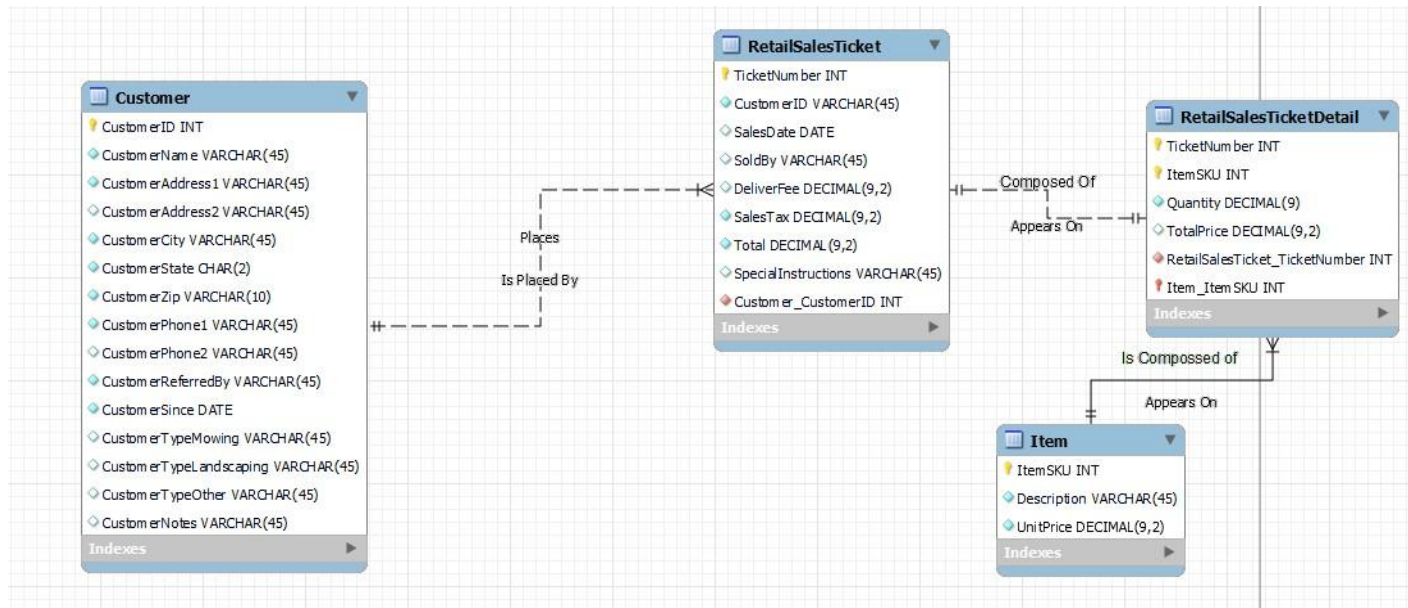


1) Data Model



2) DDL generated by data modeling software

-- MySQL Script generated by MySQL Workbench
-- Sun Sep 18 14:24:18 2022
-- Model: New Model Version: 1.0
-- MySQL Workbench Forward Engineering

```
SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;  
SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,  
FOREIGN_KEY_CHECKS=0;  
SET @OLD_SQL_MODE=@@SQL_MODE,  
SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_  
ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';
```

```
-- -----  
-- Schema mydb  
-- -----
```

```
-- -----  
-- Schema mydb  
-- -----
```

```
CREATE SCHEMA IF NOT EXISTS `mydb` DEFAULT CHARACTER SET utf8 ;  
USE `mydb` ;
```

-- Table `mydb`.`Customer`

DROP TABLE IF EXISTS `mydb`.`Customer` ;

CREATE TABLE IF NOT EXISTS `mydb`.`Customer` (
 `CustomerID` INT NOT NULL AUTO_INCREMENT,
 `CustomerName` VARCHAR(45) NOT NULL,
 `CustomerAddress1` VARCHAR(45) NOT NULL,
 `CustomerAddress2` VARCHAR(45) NULL,
 `CustomerCity` VARCHAR(45) NOT NULL,
 `CustomerState` CHAR(2) NOT NULL,
 `CustomerZip` VARCHAR(10) NOT NULL,
 `CustomerPhone1` VARCHAR(45) NOT NULL,
 `CustomerPhone2` VARCHAR(45) NULL,
 `CustomerReferredBy` VARCHAR(45) NOT NULL,
 `CustomerSince` DATE NOT NULL,
 `CustomerTypeMowing` VARCHAR(45) NULL,
 `CustomerTypeLandscaping` VARCHAR(45) NULL,
 `CustomerTypeOther` VARCHAR(45) NULL,
 `CustomerNotes` VARCHAR(45) NULL,
 PRIMARY KEY (`CustomerID`))
ENGINE = InnoDB;

-- Table `mydb`.`RetailSalesTicket`

DROP TABLE IF EXISTS `mydb`.`RetailSalesTicket` ;

CREATE TABLE IF NOT EXISTS `mydb`.`RetailSalesTicket` (
 `TicketNumber` INT NOT NULL,
 `CustomerID` VARCHAR(45) NOT NULL,
 `SalesDate` DATE NULL,
 `SoldBy` VARCHAR(45) NULL,
 `DeliverFee` DECIMAL(9,2) NULL,
 `SalesTax` DECIMAL(9,2) NOT NULL,
 `Total` DECIMAL(9,2) NOT NULL,
 `SpecialInstructions` VARCHAR(45) NULL,
 `Customer_CustomerID` INT NOT NULL,
 PRIMARY KEY (`TicketNumber`),
 CONSTRAINT `fk_RetailSalesTicket_Customer1`
 FOREIGN KEY (`Customer_CustomerID`)

```
REFERENCES `mydb`.`Customer` (`CustomerID`)
ON DELETE NO ACTION
ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

```
CREATE INDEX `fk_RetailSalesTicket_Customer1_idx` ON `mydb`.`RetailSalesTicket`
(`Customer_CustomerID` ASC) VISIBLE;
```

```
-- -----
-- Table `mydb`.`Item`
-- -----
```

```
DROP TABLE IF EXISTS `mydb`.`Item` ;
```

```
CREATE TABLE IF NOT EXISTS `mydb`.`Item` (
  `ItemSKU` INT NOT NULL,
  `Description` VARCHAR(45) NOT NULL,
  `UnitPrice` DECIMAL(9,2) NOT NULL,
  PRIMARY KEY (`ItemSKU`))
ENGINE = InnoDB;
```

```
-- -----
-- Table `mydb`.`RetailSalesTicketDetail`
-- -----
```

```
DROP TABLE IF EXISTS `mydb`.`RetailSalesTicketDetail` ;
```

```
CREATE TABLE IF NOT EXISTS `mydb`.`RetailSalesTicketDetail` (
  `TicketNumber` INT NOT NULL,
  `ItemSKU` INT NOT NULL,
  `Quantity` DECIMAL(9) NOT NULL,
  `TotalPrice` DECIMAL(9,2) NULL,
  `RetailSalesTicket_TicketNumber` INT NOT NULL,
  `Item_ItemSKU` INT NOT NULL,
  PRIMARY KEY (`TicketNumber`, `ItemSKU`, `Item_ItemSKU`),
  CONSTRAINT `fk_RetailSalesTicketDetail_RetailSalesTicket`
    FOREIGN KEY (`RetailSalesTicket_TicketNumber`)
      REFERENCES `mydb`.`RetailSalesTicket` (`TicketNumber`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_RetailSalesTicketDetail_Item1`
    FOREIGN KEY (`Item_ItemSKU`)
      REFERENCES `mydb`.`Item` (`ItemSKU`)
    ON DELETE NO ACTION
```

```
ON UPDATE NO ACTION)  
ENGINE = InnoDB;
```

```
CREATE INDEX `fk_RetailSalesTicketDetail_RetailSalesTicket_idx` ON  
`mydb`.`RetailSalesTicketDetail` (`RetailSalesTicket_TicketNumber` ASC) VISIBLE;
```

```
CREATE INDEX `fk_RetailSalesTicketDetail_Item1_idx` ON `mydb`.`RetailSalesTicketDetail`  
(`Item_ItemSKU` ASC) VISIBLE;
```

```
SET SQL_MODE=@OLD_SQL_MODE;  
SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;  
SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
```

3)

- Added an auto increment to CustomerID in order to not think about manually creating a new unique int for that primary key.
- The reason why customer address, state, and zip isn't allowed to be NULL is because we need to ensure there is always some where to bill/send receipt.