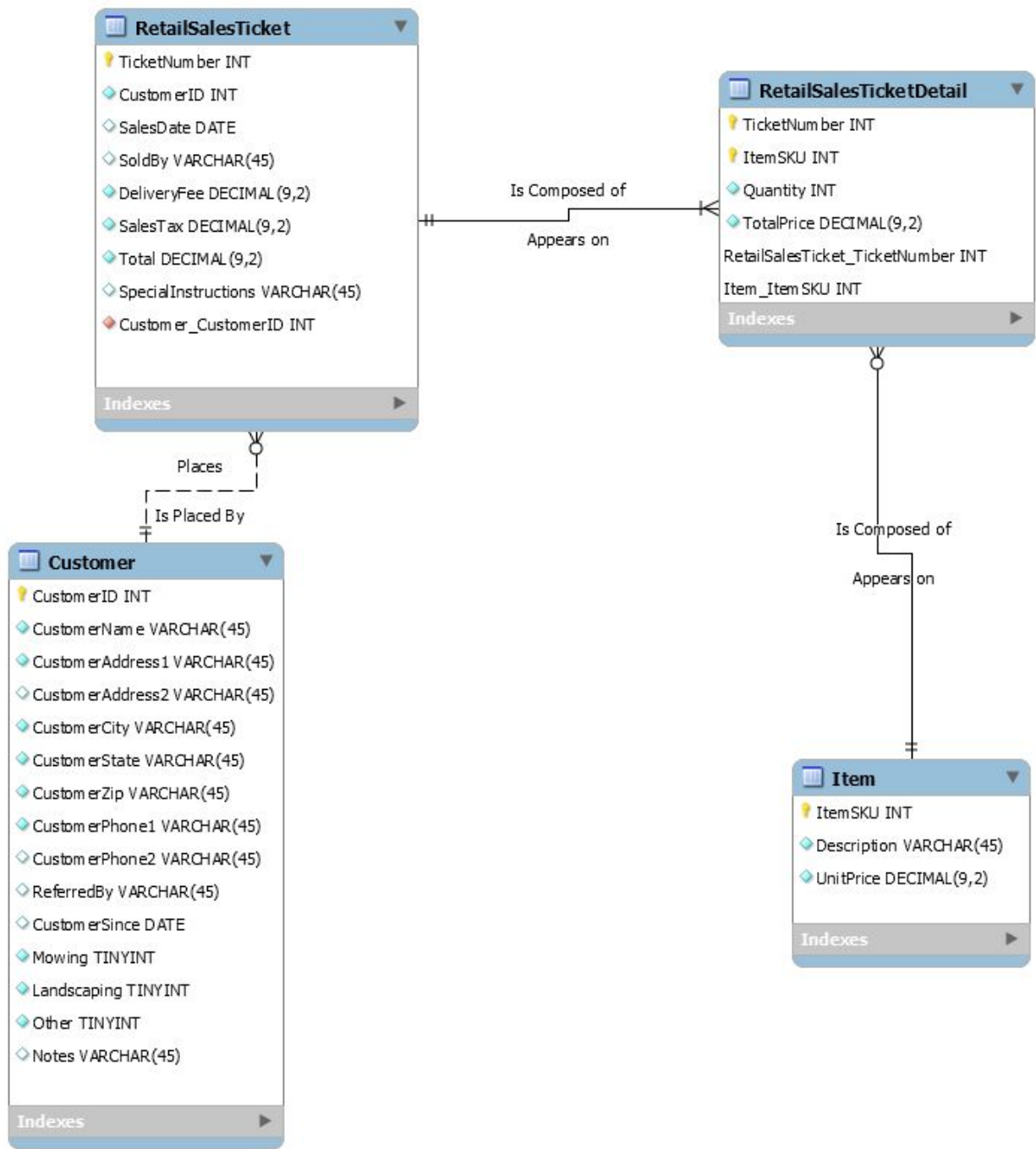


Ross Panning

Homework 2

Database Systems

Please note that for some reason there was a bug with MYSQL Workbench where the red keyhole icon for the RetailSales_TicketNumber and Item_ItemSKU foreign keys did not appear. More information can be found at this link: <https://bugs.mysql.com/bug.php?id=92141>



```
-- 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` VARCHAR(45) NOT NULL,
  `CustomerZip` VARCHAR(45) NOT NULL,
  `CustomerPhone1` VARCHAR(45) NOT NULL,
  `CustomerPhone2` VARCHAR(45) NULL,
  `ReferredBy` VARCHAR(45) NULL,
  `CustomerSince` DATE NULL,
  `Mowing` TINYINT NOT NULL,
  `Landscaping` TINYINT NOT NULL,
  `Other` TINYINT NOT NULL,
  `Notes` VARCHAR(45) NULL,
  PRIMARY KEY (`CustomerID`))
ENGINE = InnoDB;
```

```
CREATE INDEX `1` ON `mydb`.`Customer` (`CustomerID` ASC) VISIBLE;
```

```
-- -----  
-- Table `mydb`.`RetailSalesTicket`  
-- -----
```

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

```
CREATE TABLE IF NOT EXISTS `mydb`.`RetailSalesTicket` (  
  `TicketNumber` INT NOT NULL AUTO_INCREMENT,  
  `CustomerID` INT NOT NULL,  
  `SalesDate` DATE NULL,  
  `SoldBy` VARCHAR(45) NULL,  
  `DeliveryFee` DECIMAL(9,2) NOT 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 UNIQUE INDEX `TicketNumber_UNIQUE` ON `mydb`.`RetailSalesTicket`  
(`TicketNumber` ASC) VISIBLE;
```

```
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 AUTO_INCREMENT,  
  `ItemSKU` INT NOT NULL,  
  `Quantity` INT NOT NULL,  
  `TotalPrice` DECIMAL(9,2) NOT NULL,  
  `RetailSalesTicket_TicketNumber` INT NOT NULL,  
  `Item_ItemSKU` INT NOT NULL,  
  PRIMARY KEY (`TicketNumber`, `ItemSKU`, `RetailSalesTicket_TicketNumber`,  
  `Item_ItemSKU`),  
  CONSTRAINT `fk_RetailSalesTicket_RetailSalesTicket1`  
    FOREIGN KEY (`RetailSalesTicket_TicketNumber`)  
      REFERENCES `mydb`.`RetailSalesTicket` (`TicketNumber`)  
      ON DELETE NO ACTION  
      ON UPDATE NO ACTION,  
  CONSTRAINT `fk_RetailSalesTicket_Item1`  
    FOREIGN KEY (`Item_ItemSKU`)  
      REFERENCES `mydb`.`Item` (`ItemSKU`)  
      ON DELETE NO ACTION  
      ON UPDATE NO ACTION)  
ENGINE = InnoDB;
```

```
CREATE INDEX `fk_RetailSalesTicket_RetailSalesTicket1_idx` ON  
`mydb`.`RetailSalesTicketDetail` (`RetailSalesTicket_TicketNumber` ASC) VISIBLE;
```

```
CREATE INDEX `fk_RetailSalesTicket_Item1_idx` ON `mydb`.`RetailSalesTicketDetail`  
(`Item_ItemSKU` ASC) VISIBLE;
```

```
CREATE UNIQUE INDEX `TicketNumber_UNIQUE` ON `mydb`.`RetailSalesTicketDetail`  
(`TicketNumber` ASC) VISIBLE;
```

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

Assumptions:

- Customers would have to have a name
- Because we would need to have a shipping address for some services, I assumed that customers would need an address, state, zip, and phone number.
- Also that the options of mowing, landscaping, and other was boolean
- That the delivery fee, sales tax, and total where necessary information
- That a retail sales ticket has to have something in it
- Customer ID, ticket number, were incrementing values
- Every item had to have a description and unit price