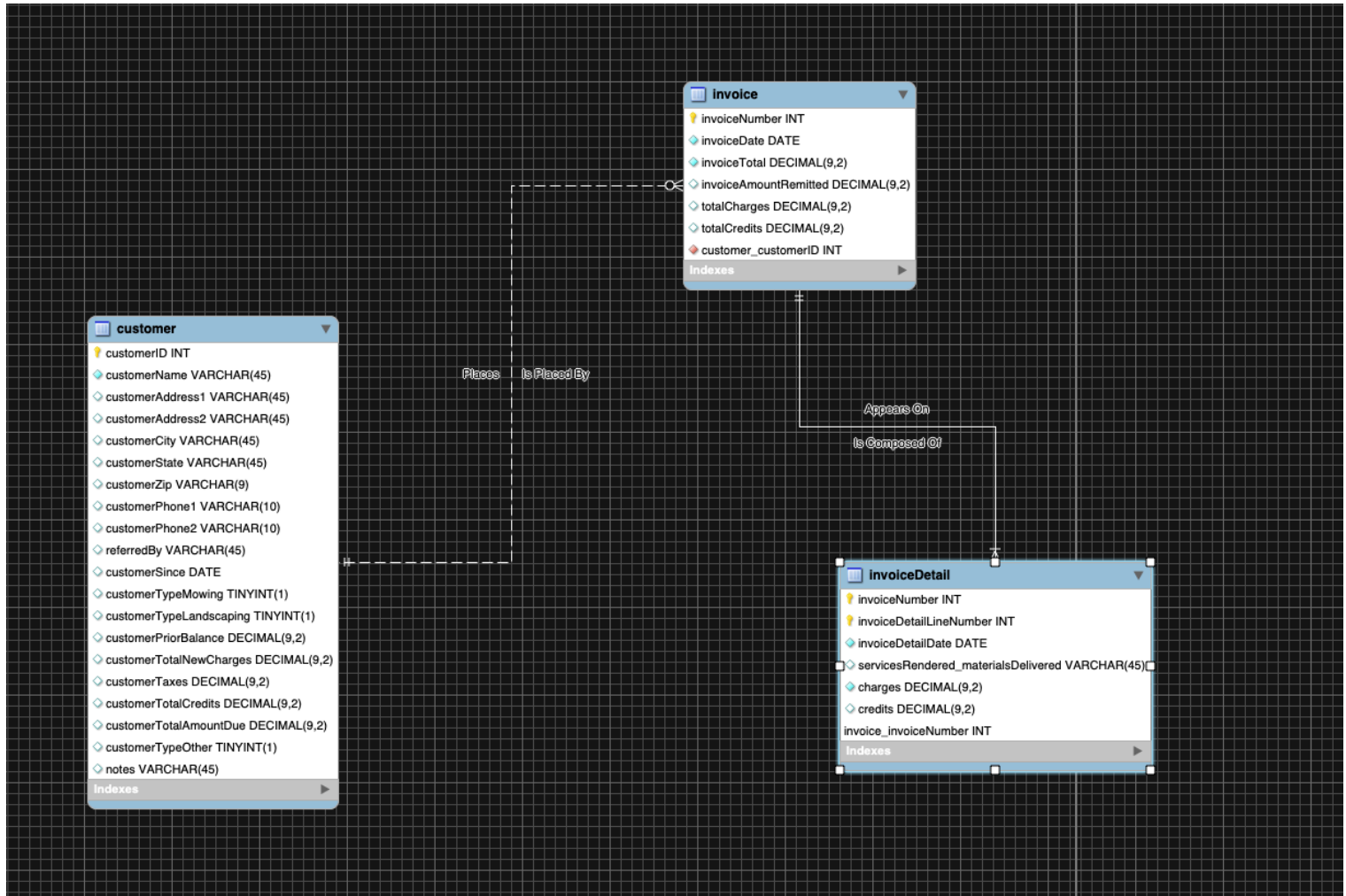


// John Furlong
// Sunday, September 29, 2019
// CSCI 3287
// Homework 2

Part One: Data Model Screenshot



Part Two: DDL Script

```
-- MySQL Script generated by MySQL Workbench
-- Sun Sep 29 21:13:36 2019
-- 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 HW2
-- -----
```

```
-- -----
-- Schema HW2
-- -----
```

```
CREATE SCHEMA IF NOT EXISTS `HW2` DEFAULT CHARACTER SET utf8 ;
USE `HW2` ;
```

```
-- -----
-- Table `HW2`.`customer`
-- -----
```

```
DROP TABLE IF EXISTS `HW2`.`customer` ;
```

```
CREATE TABLE IF NOT EXISTS `HW2`.`customer` (
  `customerID` INT NOT NULL,
  `customerName` VARCHAR(45) NOT NULL,
  `customerAddress1` VARCHAR(45) NULL,
  `customerAddress2` VARCHAR(45) NULL,
  `customerCity` VARCHAR(45) NULL,
  `customerState` VARCHAR(45) NULL,
  `customerZip` VARCHAR(9) NULL,
  `customerPhone1` VARCHAR(10) NULL,
  `customerPhone2` VARCHAR(10) NULL,
  `referredBy` VARCHAR(45) NOT NULL,
  `customerSince` DATE NOT NULL,
  `customerTypeMowing` TINYINT(1) NULL,
  `customerTypeLandscaping` TINYINT(1) NULL,
  `customerPriorBalance` DECIMAL(9,2) NULL,
  `customerTotalNewCharges` DECIMAL(9,2) NULL,
  `customerTaxes` DECIMAL(9,2) NULL,
  `customerTotalCredits` DECIMAL(9,2) NULL,
  `customerTotalAmountDue` DECIMAL(9,2) NULL,
  `customerTypeOther` TINYINT(1) NULL,
```

```
`notes` VARCHAR(45) NULL,  
PRIMARY KEY (`customerID`))  
ENGINE = InnoDB;
```

```
-- -----  
-- Table `HW2`.`invoice`  
-- -----
```

```
DROP TABLE IF EXISTS `HW2`.`invoice` ;
```

```
CREATE TABLE IF NOT EXISTS `HW2`.`invoice` (  
  `invoiceNumber` INT NOT NULL,  
  `invoiceDate` DATE NOT NULL,  
  `invoiceTotal` DECIMAL(9,2) NOT NULL,  
  `invoiceAmountRemitted` DECIMAL(9,2) NULL,  
  `totalCharges` DECIMAL(9,2) NOT NULL,  
  `totalCredits` DECIMAL(9,2) NULL,  
  `customer_customerID` INT NOT NULL,  
  PRIMARY KEY (`invoiceNumber`),  
  CONSTRAINT `fk_invoice_customer`  
    FOREIGN KEY (`customer_customerID`)  
      REFERENCES `HW2`.`customer` (`customerID`)  
      ON DELETE NO ACTION  
      ON UPDATE NO ACTION)  
ENGINE = InnoDB;
```

```
CREATE INDEX `fk_invoice_customer_idx` ON `HW2`.`invoice` (`customer_customerID` ASC)  
VISIBLE;
```

```
-- -----  
-- Table `HW2`.`invoiceDetail`  
-- -----
```

```
DROP TABLE IF EXISTS `HW2`.`invoiceDetail` ;
```

```
CREATE TABLE IF NOT EXISTS `HW2`.`invoiceDetail` (  
  `invoiceNumber` INT NOT NULL,  
  `invoiceDetailLineNumber` INT NOT NULL,  
  `invoiceDetailDate` DATE NOT NULL,  
  `servicesRendered_materialsDelivered` VARCHAR(45) NOT NULL,  
  `charges` DECIMAL(9,2) NOT NULL,  
  `credits` DECIMAL(9,2) NULL,  
  `invoice_invoiceNumber` INT NOT NULL,  
  PRIMARY KEY (`invoiceNumber`, `invoiceDetailLineNumber`, `invoice_invoiceNumber`),  
  CONSTRAINT `fk_invoiceDetail_invoice1`  
    FOREIGN KEY (`invoice_invoiceNumber`)  
      REFERENCES `HW2`.`invoice` (`invoiceNumber`)  
      ON DELETE NO ACTION  
      ON UPDATE NO ACTION)
```

```
ENGINE = InnoDB;
```

```
CREATE INDEX `fk_invoiceDetail_invoice1_idx` ON `HW2`.`invoiceDetail`  
(`invoice_invoiceNumber` ASC) VISIBLE;
```

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

Part Three: Notes

- For the rows “customerTypeMowing”, “customerTypeLandscaping” and “customerTypeOther”, found in the “customer” table, they are assigned to be of type tinyint(1) which is synonymous with a boolean data type (0 = False and 1 = True).
- For the rows “customerSince” and “referredBy”, I constrained them as NOT NULL, assuming that when a new customer is added to the database, this info is as well.