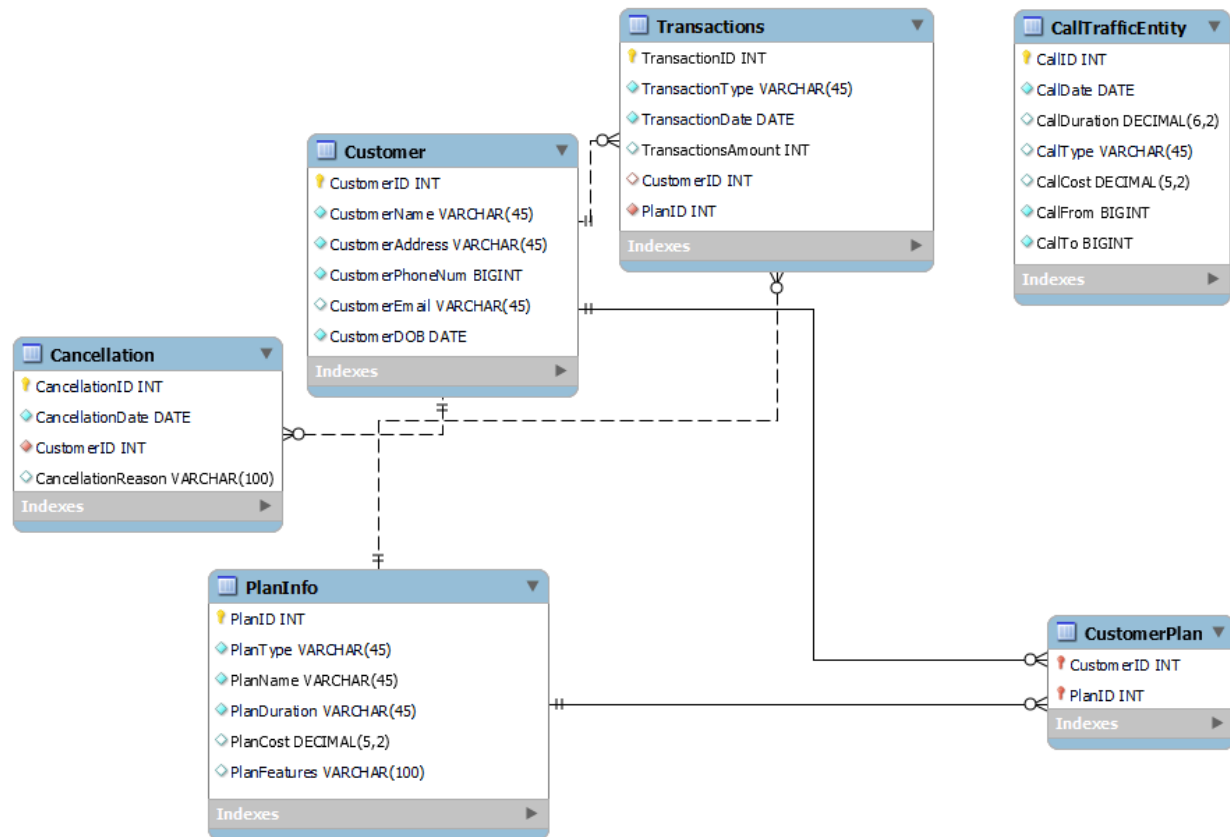# Section 1:

Section 2:

-- MySQL Script generated by MySQL Workbench
-- Sat May 4 17:02:58 2024
-- 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';

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

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

-- -----------------------------------------------------
-- Table `mydb`.`CallTrafficEntity`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`CallTrafficEntity` ;

CREATE TABLE IF NOT EXISTS `mydb`.`CallTrafficEntity` (
  `CallID` INT NOT NULL AUTO_INCREMENT,
  `CallDate` DATE NOT NULL,
  `CallDuration` DECIMAL(6,2) NULL,
  `CallType` VARCHAR(45) NULL,
  `CallCost` DECIMAL(5,2) NULL,
  `CallFrom` BIGINT UNSIGNED NOT NULL,
  `CallTo` BIGINT UNSIGNED NOT NULL,
  PRIMARY KEY (`CallID`))
ENGINE = InnoDB;

-- -----------------------------------------------------
-- Table `mydb`.`Cancellation`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`Cancellation` ;

CREATE TABLE IF NOT EXISTS `mydb`.`Cancellation` (
  `CancellationID` INT NOT NULL AUTO_INCREMENT,
  `CancellationDate` DATE NOT NULL,
  `CustomerID` INT NOT NULL,
  `CancellationReason` VARCHAR(100) NULL,
  PRIMARY KEY (`CancellationID`),
  INDEX `CustomerID_idx` (`CustomerID` ASC) VISIBLE,
  CONSTRAINT `CustomerID`
      FOREIGN KEY (`CustomerID`)
      REFERENCES `mydb`.`Customer` (`CustomerID`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
```

```sql
ENGINE = InnoDB;


-- -----------------------------------------------------
-- 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,
  `CustomerAddress` VARCHAR(45) NOT NULL,
  `CustomerPhoneNum` BIGINT UNSIGNED NOT NULL,
  `CustomerEmail` VARCHAR(45) NULL,
  `CustomerDOB` DATE NOT NULL,
  PRIMARY KEY (`CustomerID`),
  UNIQUE INDEX `CustomerID_UNIQUE` (`CustomerID` ASC) VISIBLE)
ENGINE = InnoDB;


-- -----------------------------------------------------
-- Table `mydb`.`CustomerPlan`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`CustomerPlan` ;

CREATE TABLE IF NOT EXISTS `mydb`.`CustomerPlan` (
  `CustomerID` INT NOT NULL,
  `PlanID` INT NOT NULL,
  PRIMARY KEY (`CustomerID`, `PlanID`),
  INDEX `PlanID_idx` (`PlanID` ASC) VISIBLE,
  CONSTRAINT `CustomerID`
        FOREIGN KEY (`CustomerID`)
        REFERENCES `mydb`.`Customer` (`CustomerID`)
        ON DELETE NO ACTION
        ON UPDATE NO ACTION,
  CONSTRAINT `PlanID`
        FOREIGN KEY (`PlanID`)
        REFERENCES `mydb`.`PlanInfo` (`PlanID`)
        ON DELETE NO ACTION
        ON UPDATE NO ACTION)
ENGINE = InnoDB;


-- -----------------------------------------------------
```

```sql
-- Table `mydb`.`PlanInfo`
-- -------------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`PlanInfo` ;

CREATE TABLE IF NOT EXISTS `mydb`.`PlanInfo` (
  `PlanID` INT NOT NULL AUTO_INCREMENT,
  `PlanType` VARCHAR(45) NOT NULL,
  `PlanName` VARCHAR(45) NOT NULL,
  `PlanDuration` VARCHAR(45) NOT NULL,
  `PlanCost` DECIMAL(5,2) NULL,
  `PlanFeatures` VARCHAR(100) NULL,
  PRIMARY KEY (`PlanID`),
  UNIQUE INDEX `PlanID_UNIQUE` (`PlanID` ASC) VISIBLE)
ENGINE = InnoDB;


-- -------------------------------------------------------
-- Table `mydb`.`Transactions`
-- -------------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`Transactions` ;

CREATE TABLE IF NOT EXISTS `mydb`.`Transactions` (
  `TransactionID` INT NOT NULL AUTO_INCREMENT,
  `TransactionType` VARCHAR(45) NOT NULL,
  `TransactionDate` DATE NOT NULL,
  `TransactionsAmount` INT NULL,
  `CustomerID` INT NULL,
  `PlanID` INT NOT NULL,
  PRIMARY KEY (`TransactionID`),
  INDEX `CustomerID_idx` (`CustomerID` ASC) VISIBLE,
  INDEX `PlanID_idx` (`PlanID` ASC) VISIBLE,
  CONSTRAINT `CustomerID`
      FOREIGN KEY (`CustomerID`)
      REFERENCES `mydb`.`Customer` (`CustomerID`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION,
  CONSTRAINT `PlanID`
      FOREIGN KEY (`PlanID`)
      REFERENCES `mydb`.`PlanInfo` (`PlanID`)
      ON DELETE NO ACTION
      ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

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

Section 3:

INSERT INTO customer (CustomerName, CustomerAddress,CustomerPhoneNum, CustomerEmail, CustomerDOB)
VALUES("Nathan MacKinnon", "3456 Cherry Tree Lane", 3038675309, NMacKinnon@gmail.com, '1995-09-01');

INSERT INTO customer (CustomerName, CustomerAddress,CustomerPhoneNum, CustomerEmail, CustomerDOB)
VALUES("Mikko Rantanen", "1946 Park Ave", 9702457896, MRantanen@gmail.com, '1996-10-29');

INSERT INTO customer (CustomerName, CustomerAddress,CustomerPhoneNum, CustomerEmail, CustomerDOB)
VALUES("Alexandar Geogiev", "3962 Spruce Way", 7208519271, Georgie@gmail.com, '1996-02-10');

INSERT INTO customer (CustomerName, CustomerAddress,CustomerPhoneNum, CustomerEmail, CustomerDOB)
VALUES("Cale Makar", "3456 Colorado Ave", 3037658347, CaleM@gmail.com, '1998-10-30');

INSERT INTO customer (CustomerName, CustomerAddress,CustomerPhoneNum, CustomerEmail, CustomerDOB)
VALUES("Gabriel Landeskog", "8683 Mountain Drive", 7206069252, Landy@gmail.com, '1992-11-23');

INSERT INTO cancellation (CancellationDate, CustomerID, CancellationReason)
VALUES('2024-05-04', 5, "Broken Phone");

INSERT INTO customerplan(CustomerID, PlanID)
VALUES
(14,1),
(15,1),
(16,1),
(12,2),
(13,3);

INSERT INTO planinfo(PlanType, PlanName, PlanDuration, PlanCost, PlanFeatures)
VALUES
("single", "basic", "year-long", 100.99, "basic phone and texting"),
("prepaid", "premium upfront", "year-long", 180.99, "unlimited phone and texting"),
("postpaid", "DataNow, Pay Later", "year-long", 112.99, basic phone and texting),
("data only", "pay for what you use", "monthly", 16.99, "basic phone and texting");

```sql
INSERT INTO transactions (TransactionType, TransactionDate, TransactionsAmount,
CustomerID, PlanID)
VALUES
("plan activation", '2022-05-04', 181, 12, 2);
("payment", '2023-05-04', 181, 12, 2);
("payment", '2024-05-04', 181, 12, 2);

("plan activation", '2022-05-04', 0, 13, 3);
("payment", '2023-05-04', 113, 13, 3);
("payment", '2024-05-04', 113, 13, 3);

("plan activation", '2023-04-04', 17, 14, 4);
("plan change", '2023-05-04', 101, 14, 1);
("payment", '2024-05-04', 101, 14, 1);

("plan activation", '2022-05-04', 101, 15, 1);
("payment", '2023-05-04', 101, 15, 1);
("payment", '2024-05-04', 101, 15, 1);

("plan activation", '2022-05-04', 101, 16, 1);
("payment", '2023-05-04', 101, 16, 1);
("cancellation", '2024-05-03', 0, 16, 1);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-04-27', 9.7, "local", 2.5, 9702457896, 3038675309);


INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-03-03', 15.9, "local", 5.5, 9702457896, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-11', 120.5, "local", 50.5, 3038675309, 9702457896);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-05-03', 17.8, "local", 4.0, 9702457896, 3037658347);


INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2023-11-02', 14.3, "local", 3.5, 7208519271, 7203495730);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-21', 15.9, "local", 5.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
```

VALUES('2024-02-14', 20.0, "local", 10.5, 3038665309, 7208519271);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-07', 10.1, "local", 1.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-01', 12.9, "local", 2.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2023-12-25', 5.0, "local", 15.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-21', 15.9, "local", 5.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-14', 20.0, "local", 10.5, 3038665309, 7208519271);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-07', 10.1, "local", 1.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-01', 12.9, "local", 2.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2023-12-25', 5.0, "local", 15.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-21', 15.9, "local", 5.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-14', 20.0, "local", 10.5, 3038665309, 7208519271);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-07', 10.1, "local", 1.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-01', 12.9, "local", 2.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2023-12-25', 5.0, "local", 15.5, 3038675309, 7204859347);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-21', 15.9, "local", 5.5, 7208519271, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-02-14', 20.0, "local", 10.5, 3038665309, 7208519271);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-03-31', 12.1, "local", 2.1, 7206069252, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2024-01-17', 14.9, "local", 4.5, 3038675309, 7206069252);

INSERT INTO calltrafficentity (CallDate, CallDuration, CallType, CallCost, CallFrom, CallTo)
VALUES('2023-12-27', 6.0, "local", 1.7, 7206069252, 7204859347);

Section 4:

SELECT customer.CustomerID, customer.CustomerName, planinfo.PlanID, planinfo.planType,
planinfo.PlanName
FROM
customer
INNER JOIN customerplan, planinfo
WHERE
customer.CustomerID = customerplan.CustomerID
AND
planinfo.PlanID = customerplan.PlanID;

	CustomerID	CustomerName	PlanID	planType	PlanName
▶	14	Alexandar Geogiev	1	single	basic
	15	Cale Makar	1	single	basic
	16	Gabriel Landeskog	1	single	basic
	12	Nathan MacKinnon	2	prepaid	premium upfront
	13	Mikko Rantanen	3	postpaid	DataNow, Pay Later

SELECT * FROM calltrafficentity;

CallID	CallDate	CallDuration	CallType	CallCost	CallFrom	CallTo
1	2024-04-03	10.30	local	3.50	3038675309	3037658347
2	2024-04-03	10.30	local	3.50	3038675309	7204859347
3	2024-04-27	9.70	local	2.50	9702457896	3038675309
4	2024-03-03	15.90	local	5.50	9702457896	7206069252
5	2024-02-11	120.50	local	50.50	3038675309	9702457896
6	2024-05-03	17.80	local	4.00	9702457896	3037658347
7	2023-11-02	14.30	local	3.50	7208519271	7203495730
8	2024-01-21	15.90	local	5.50	7208519271	7206069252
9	2024-02-14	20.00	local	10.50	3038665309	7208519271
10	2024-02-07	10.10	local	1.50	7208519271	7206069252
11	2024-01-01	12.90	local	2.50	3038675309	7204859347
12	2023-12-25	5.00	local	15.50	3038675309	7204859347
13	2024-01-21	15.90	local	5.50	7208519271	7206069252
14	2024-02-14	20.00	local	10.50	3038665309	7208519271
15	2024-02-07	10.10	local	1.50	7208519271	7206069252
16	2024-01-01	12.90	local	2.50	3038675309	7204859347
17	2023-12-25	5.00	local	15.50	3038675309	7204859347
18	2024-01-21	15.90	local	5.50	7208519271	7206069252
19	2024-02-14	20.00	local	10.50	3038665309	7208519271
20	2024-02-07	10.10	local	1.50	7208519271	7206069252
21	2024-01-01	12.90	local	2.50	3038675309	7204859347
22	2023-12-25	5.00	local	15.50	3038675309	7204859347

SELECT PlanName, SUM(Transactionsamount) AS "Total revenue from transaction"
FROM transactions
INNER JOIN
planinfo
WHERE transactions.PlanID = planinfo.PlanID
Group BY transactions.PlanID;

PlanName	Total revenue from transaction
basic	707
premium upfront	543
DataNow, Pay Later	226
pay for what you use	17