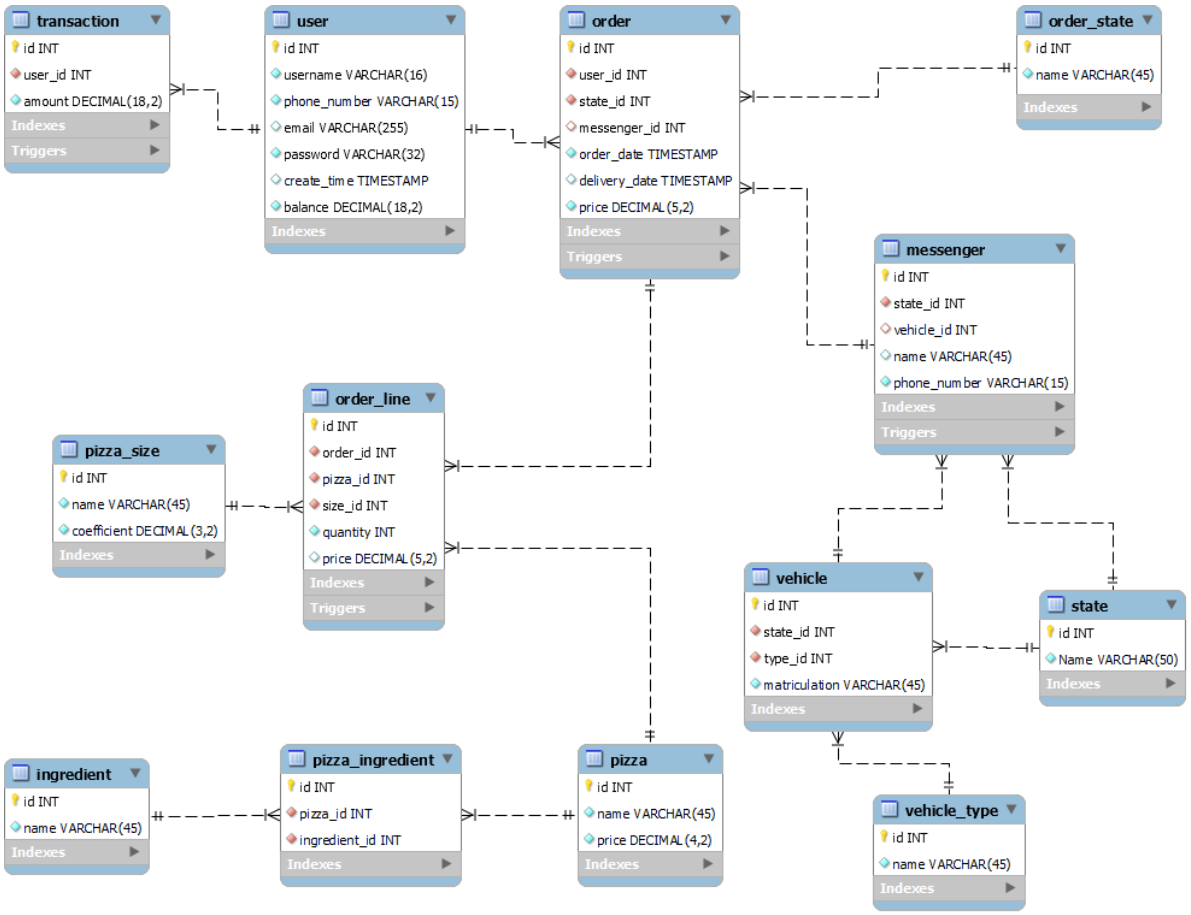
Rapport du projet de gestion de l'entreprise de pizzas à domicile : FlashPizza.

I. Conception de la base de données

A. Modèle entité-association



B. Modèle relationnel

USER(id, firstname, lastname, balance, phone_number, email, password)
- id : clé primaire

TRANSACTION(id, user_id, amount)
- id : clé primaire
- user_id : clé étrangère ref à id dans USER

STATE(id, name)
- id : clé primaire

VEHICLE_TYPE(id, name)
- id : clé primaire

VEHICLE(id, state_id, type_id, matriculation)
- id : clé primaire
- state_id : clé étrangère ref à id dans STATE
- type_id : clé étrangère ref à id dans VEHICLE_TYPE

MESSENGER(id, state_id ,name, phone_number, vehicle_id)
- id : clé primaire
- state_id : clé étrangère ref à id dans STATE

ORDER_STATE(id, name)
- id : clé primaire

ORDER(id, user_id, state_id, messenger_id, vehicle_id, oder_date, delivery_date, price, late)
- id : clé primaire
- user_id : clé étrangère ref à id dans USER
- state_id : clé étrangère ref à id dans ORDER_STATE
- messenger_id : clé étrangère ref à id dans MESSENGER
- vehicle_id : clé étrangère ref à id dans VEHICLE

PIZZA(id, name, price)
- id : clé primaire

PIZZA_SIZE(id, name, coefficient)
- id : clé primaire

ORDER_LINE(id, order_id, pizza_id, size_id, quantity, price)
- id : clé primaire
- order_id : clé étrangère ref à id dans ORDER
- pizza_id : clé étrangère ref à id dans PIZZA
- size_id : clé étrangère ref à id dans PIZZA_SIZE

INGREDIENT(id, name)
- id : clé primaire

PIZZA_INGREDIENT(pizza_id, ingredient_id)
- pizza_id, ingredient_id : clé primaire
- pizza_id : clé étrangère ref à id dans PIZZA
- ingredient_id : clé étrangère ref à id dans INGREDIENT

C. Script de la création des tables

```
-- MySQL Script generated by MySQL Workbench
-- Sat Jun 18 23:26:41 2022
-- Model: flashpizza    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 flashpizza
-- -----------------------------------------------------

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

-- -----------------------------------------------------
-- Table `flashpizza`.`ingredient`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`ingredient` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;


-- -----------------------------------------------------
-- Table `flashpizza`.`state`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`state` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `Name` VARCHAR(50) CHARACTER SET 'utf8mb3' NOT NULL,
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;


-- -----------------------------------------------------
-- Table `flashpizza`.`vehicle_type`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`vehicle_type` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;


-- -----------------------------------------------------
-- Table `flashpizza`.`vehicle`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`vehicle` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `state_id` INT NOT NULL DEFAULT 1,
 `type_id` INT NOT NULL,
 `matriculation` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_vehicle_state1`
```

```
   FOREIGN KEY (`state_id`)
   REFERENCES `flashpizza`.`state` (`id`),
 CONSTRAINT `fk_vehicle_vehicle_type1`
   FOREIGN KEY (`type_id`)
   REFERENCES `flashpizza`.`vehicle_type` (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;

CREATE INDEX `fk_vehicle_state1_idx` ON `flashpizza`.`vehicle` (`state_id` ASC) VISIBLE;

CREATE INDEX `fk_vehicle_vehicle_type1_idx` ON `flashpizza`.`vehicle` (`type_id` ASC)
VISIBLE;


-- -----------------------------------------------------
-- Table `flashpizza`.`messenger`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`messenger` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `state_id` INT NOT NULL DEFAULT '1',
 `vehicle_id` INT NULL DEFAULT NULL,
 `name` VARCHAR(45) NULL DEFAULT NULL,
 `phone_number` VARCHAR(15) NOT NULL,
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_messenger_state1`
   FOREIGN KEY (`state_id`)
   REFERENCES `flashpizza`.`state` (`id`),
 CONSTRAINT `fk_vehicle_id1`
   FOREIGN KEY (`vehicle_id`)
   REFERENCES `flashpizza`.`vehicle` (`id`)
   ON DELETE RESTRICT
   ON UPDATE RESTRICT)
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;

CREATE INDEX `fk_messenger_state1_idx` ON `flashpizza`.`messenger` (`state_id` ASC)
VISIBLE;

CREATE INDEX `fk_vehicle_id_idx` ON `flashpizza`.`messenger` (`vehicle_id` ASC) VISIBLE;




-- -----------------------------------------------------
-- Table `flashpizza`.`order_state`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`order_state` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;


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

```sql
-- Table `flashpizza`.`user`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`user` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `username` VARCHAR(16) CHARACTER SET 'utf8mb3' NOT NULL,
 `phone_number` VARCHAR(15) NOT NULL,
 `email` VARCHAR(255) NULL DEFAULT NULL,
 `password` VARCHAR(32) NOT NULL,
 `create_time` TIMESTAMP NULL DEFAULT CURRENT_TIMESTAMP,
 `balance` DECIMAL(18,2) NOT NULL DEFAULT '0.00',
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;
```

```sql
-- -----------------------------------------------------
-- Table `flashpizza`.`order`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`order` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `user_id` INT NOT NULL,
 `state_id` INT NOT NULL DEFAULT '1',
 `messenger_id` INT NULL DEFAULT NULL,
 `order_date` TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
 `delivery_date` TIMESTAMP NULL DEFAULT NULL,
 `price` DECIMAL(5,2) NOT NULL DEFAULT '0.00',
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_order_messenger1`
   FOREIGN KEY (`messenger_id`)
   REFERENCES `flashpizza`.`messenger` (`id`),
 CONSTRAINT `fk_order_order_state1`
   FOREIGN KEY (`state_id`)
   REFERENCES `flashpizza`.`order_state` (`id`),
 CONSTRAINT `fk_order_user`
   FOREIGN KEY (`user_id`)
   REFERENCES `flashpizza`.`user` (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;

CREATE INDEX `fk_order_user_idx` ON `flashpizza`.`order` (`user_id` ASC) VISIBLE;

CREATE INDEX `fk_order_order_state1_idx` ON `flashpizza`.`order` (`state_id` ASC)
VISIBLE;

CREATE INDEX `fk_order_messenger1_idx` ON `flashpizza`.`order` (`messenger_id` ASC)
VISIBLE;


-- -----------------------------------------------------
-- Table `flashpizza`.`pizza`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`pizza` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 `price` DECIMAL(4,2) NOT NULL,
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;


-- -----------------------------------------------------
-- Table `flashpizza`.`pizza_size`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`pizza_size` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 `coefficient` DECIMAL(3,2) NOT NULL DEFAULT '1.00',
 PRIMARY KEY (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;
```

```sql
-- -----------------------------------------------------
-- Table `flashpizza`.`order_line`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`order_line` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `order_id` INT NOT NULL,
 `pizza_id` INT NOT NULL,
 `size_id` INT NOT NULL,
 `quantity` INT NOT NULL DEFAULT '1',
 `price` DECIMAL(5,2) NULL DEFAULT NULL,
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_order_line_order1`
   FOREIGN KEY (`order_id`)
   REFERENCES `flashpizza`.`order` (`id`),
 CONSTRAINT `fk_order_line_pizza1`
   FOREIGN KEY (`pizza_id`)
   REFERENCES `flashpizza`.`pizza` (`id`),
 CONSTRAINT `fk_order_line_pizza_size1`
   FOREIGN KEY (`size_id`)
   REFERENCES `flashpizza`.`pizza_size` (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;

CREATE INDEX `fk_order_line_order1_idx` ON `flashpizza`.`order_line` (`order_id` ASC)
VISIBLE;

CREATE INDEX `fk_order_line_pizza1_idx` ON `flashpizza`.`order_line` (`pizza_id` ASC)
VISIBLE;

CREATE INDEX `fk_order_line_pizza_size1_idx` ON `flashpizza`.`order_line` (`size_id`
ASC) VISIBLE;


-- -----------------------------------------------------
-- Table `flashpizza`.`pizza_ingredient`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`pizza_ingredient` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `pizza_id` INT NOT NULL,
 `ingredient_id` INT NOT NULL,
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_pizza_ingredient_ingredient1`
   FOREIGN KEY (`ingredient_id`)
   REFERENCES `flashpizza`.`ingredient` (`id`),
 CONSTRAINT `fk_pizza_ingredient_pizza1`
   FOREIGN KEY (`pizza_id`)
   REFERENCES `flashpizza`.`pizza` (`id`))
ENGINE = InnoDB
DEFAULT CHARACTER SET = utf8mb3;

CREATE INDEX `fk_pizza_ingredient_pizza1_idx` ON `flashpizza`.`pizza_ingredient`
(`pizza_id` ASC) VISIBLE;

CREATE INDEX `fk_pizza_ingredient_ingredient1_idx` ON `flashpizza`.`pizza_ingredient`
(`ingredient_id` ASC) VISIBLE;
```

```sql
-- -----------------------------------------------------
-- Table `flashpizza`.`transaction`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`transaction` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `user_id` INT NOT NULL,
 `amount` DECIMAL(18,2) NOT NULL,
 PRIMARY KEY (`id`),
 CONSTRAINT `fk_transaction_user1`
   FOREIGN KEY (`user_id`)
   REFERENCES `flashpizza`.`user` (`id`)
   ON DELETE NO ACTION
   ON UPDATE NO ACTION)
ENGINE = InnoDB;

CREATE INDEX `fk_transaction_user1_idx` ON `flashpizza`.`transaction` (`user_id` ASC)
VISIBLE;

USE `flashpizza` ;

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`available_messenger`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`available_messenger` (`Nom` INT, `Status` INT,
`Téléphone` INT, `Vehicule` INT, `Type vehicule` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`menu`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`menu` (`id` INT, `Pizza` INT, `Ingredient` INT,
`Price` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`messenger_status`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`messenger_status` (`Nom` INT, `Status` INT,
`Téléphone` INT, `Vehicule` INT, `Type vehicule` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`pizza_price`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`pizza_price` (`pizza_id` INT, `Pizza` INT,
`size_id` INT, `Taille` INT, `Price` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`revenue`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`revenue` (`"revenue"` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`customer_expanses`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`customer_expanses` (`username` INT,
`"expanses"` INT);
```

```
-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`best_customer`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`best_customer` (`id` INT);

-- -----------------------------------------------------
-- Placeholder table for view `flashpizza`.`available_vehicle`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `flashpizza`.`available_vehicle` (`matriculation` INT,
`"type"` INT, `"state"` INT);

-- -----------------------------------------------------
-- View `flashpizza`.`available_messenger`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`available_messenger`;
USE `flashpizza`;
CREATE  OR REPLACE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER
VIEW `available_messenger`  AS SELECT `messenger_status`.`Nom` AS `Nom`,
`messenger_status`.`Status` AS `Status`, `messenger_status`.`Téléphone` AS `Téléphone`,
`messenger_status`.`Vehicule` AS `Vehicule`, `messenger_status`.`Type vehicule` AS `Type
vehicule` FROM `messenger_status` WHERE (`messenger_status`.`Status` = 'Disponible');

-- -----------------------------------------------------
-- View `flashpizza`.`menu`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`menu`;
USE `flashpizza`;
CREATE  OR REPLACE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER
VIEW `menu`  AS SELECT DISTINCT `p`.`id` AS `id`, `p`.`name` AS `Pizza`, `i`.`name` AS
`Ingredient`, `p`.`price` AS `Price` FROM ((`pizza` `p` join `pizza_ingredient` `pi`
on((`pi`.`pizza_id` = `p`.`id`))) join `ingredient` `i` on((`pi`.`ingredient_id` =
`i`.`id`)));

-- -----------------------------------------------------
-- View `flashpizza`.`messenger_status`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`messenger_status`;
USE `flashpizza`;
CREATE  OR REPLACE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER
VIEW `messenger_status`  AS SELECT `m`.`name` AS `Nom`, `s`.`Name` AS `Status`,
`m`.`phone_number` AS `Téléphone`, `v`.`matriculation` AS `Vehicule`, `vt`.`name` AS
`Type vehicule` FROM (((`messenger` `m` join `state` `s` on((`s`.`id` =
`m`.`state_id`))) left join `vehicle` `v` on((`v`.`id` = `m`.`vehicle_id`))) left join
`vehicle_type` `vt` on((`vt`.`id` = `v`.`type_id`)));

-- -----------------------------------------------------
-- View `flashpizza`.`pizza_price`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`pizza_price`;
USE `flashpizza`;
CREATE  OR REPLACE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER
VIEW `pizza_price`  AS SELECT `p`.`id` AS `pizza_id`, `p`.`name` AS `Pizza`, `s`.`id` AS
`size_id`, `s`.`name` AS `Taille`, (`s`.`coefficient` * `p`.`price`) AS `Price` FROM
(`pizza` `p` join `pizza_size` `s`) ORDER BY `p`.`id` ASC, (`s`.`coefficient` *
`p`.`price`) ASC;
```

```sql
-- -----------------------------------------------------
-- View `flashpizza`.`revenue`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`revenue`;
USE `flashpizza`;
CREATE  OR REPLACE VIEW revenue as
     SELECT SUM(price) as "revenue"
     FROM `order`
     WHERE state_id > 0;

-- -----------------------------------------------------
-- View `flashpizza`.`customer_expanses`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`customer_expanses`;
USE `flashpizza`;
CREATE  OR REPLACE VIEW customer_expanses as
     SELECT u.username, SUM(o.price) as "expanses"
     FROM `order` o
     JOIN user u on u.id = o.user_id
     GROUP BY user_id;

-- -----------------------------------------------------
-- View `flashpizza`.`best_customer`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`best_customer`;
USE `flashpizza`;
CREATE  OR REPLACE VIEW best_customer as
     SELECT *
     FROM customer_expanses as c
     WHERE c.expanses = (SELECT Max(expanses) FROM customer_expanses);

-- -----------------------------------------------------
-- View `flashpizza`.`available_vehicle`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `flashpizza`.`available_vehicle`;
USE `flashpizza`;
CREATE  OR REPLACE VIEW `available_vehicle` AS
select v.matriculation, t.Name "type", s.Name "state"
From vehicle v
JOIN state s on s.id = v.state_id
JOIN vehicle_type t on t.id = v.type_id
where state_id = 2;
USE `flashpizza`;

DELIMITER $$
USE `flashpizza`$$
CREATE DEFINER = CURRENT_USER TRIGGER `flashpizza`.`messenger_AFTER_UPDATE` AFTER UPDATE
ON `messenger` FOR EACH ROW
BEGIN
if not new.vehicle_id <=> old.vehicle_id
  then
     if new.vehicle_id is not NULL
        then
           update vehicle
           set state_id = 1
           where id = new.vehicle_id;
```

```
        end if;

     if old.vehicle_id is not NULL
        then
           update vehicle
           set state_id = 2
           where id = old.vehicle_id;
        end if;
  end if;
END$$

USE `flashpizza`$$
CREATE TRIGGER `before_update_order` BEFORE UPDATE ON `order` FOR EACH ROW BEGIN
if (SELECT user.balance FROM user WHERE user.id = NEW.user_id)< NEW.price AND
NEW.state_id = 2
   then
     SIGNAL sqlstate '45001' set message_text = "Not enough money";
   end if;

   if NEW.messenger_id is NULL AND NEW.state_id = 5 then
     SIGNAL sqlstate '45001' set message_text = "Assign messenger before delivery";
   end if;
END$$

USE `flashpizza`$$
CREATE TRIGGER `after_update_order` AFTER UPDATE ON `order` FOR EACH ROW BEGIN
if NEW.state_id = 2    THEN
  INSERT INTO `transaction` (user_id, amount) VALUES (NEW.user_id, -NEW.price);
   end if;

if NEW.state_id = 5    THEN
   UPDATE messenger set messenger.state_id = 1 WHERE messenger.id = NEW.messenger_id;
   end if;

if NEW.state_id = 6    THEN
   UPDATE messenger set messenger.state_id = 2 WHERE messenger.id = NEW.messenger_id;
   end if;
END$$

USE `flashpizza`$$
CREATE TRIGGER `before_insert_order_line` BEFORE INSERT ON `order_line` FOR EACH ROW SET
NEW.price =
(SELECT p.price from `pizza_price` as p
WHERE pizza_id = NEW.pizza_id AND size_id = NEW.size_id) * NEW.quantity$$

USE `flashpizza`$$
CREATE TRIGGER `after_insert_order_line` AFTER INSERT ON `order_line` FOR EACH ROW
UPDATE `order` as o
SET o.price = o.price + NEW.price
WHERE o.id = NEW.order_id$$

USE `flashpizza`$$
CREATE DEFINER = CURRENT_USER TRIGGER `flashpizza`.`transaction_AFTER_INSERT` AFTER
INSERT ON `transaction` FOR EACH ROW
BEGIN
  UPDATE `flashpizza`.`user`
```

```
   set balance = balance + NEW.amount
   WHERE id = NEW.user_id;
END$$


DELIMITER ;

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

D. Script d'insertion des données

```
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';

USE `flashpizza` ;

--
-- Déchargement des données de la table `ingredient`
--

INSERT INTO `ingredient` (`id`, `name`) VALUES
(1, 'Tomate'),
(2, 'Mozzarella'),
(3, 'Champignon'),
(4, 'Jambon'),
(5, 'Oignon'),
(6, 'Poivron'),
(7, 'Olive'),
(8, 'Roquette');

--
-- Déchargement des données de la table `state`
--

INSERT INTO `state` (`id`, `Name`) VALUES
(1, 'Non disponible'),
(2, 'Disponible');

--
-- Déchargement des données de la table `pizza_size`
--

INSERT INTO `pizza_size` (`id`, `name`, `coefficient`) VALUES
(1, 'Humaine', '1.00'),
(2, 'Naine', '0.75'),
(3, 'Ogresse', '1.25');

--
-- Déchargement des données de la table `user`
--
```

```sql
INSERT INTO `user` (`id`, `username`, `phone_number`, `email`, `password`,
`create_time`, `balance`) VALUES
(1, 'Antonin', '+33641941449', 'anto@gmail.com', 'pwd', '2022-06-10 12:43:08', '48.00');

--
-- Déchargement des données de la table `vehicle_type`
--

INSERT INTO `vehicle_type` (`id`, `name`) VALUES
(1, 'Car'),
(2, 'Motorcycle');

--
-- Déchargement des données de la table `pizza`
--

INSERT INTO `pizza` (`id`, `name`, `price`) VALUES
(1, 'Reine', '13.00'),
(2, 'Végétarienne', '15.00'),
(3, 'Regina', '10.00');

--
-- Déchargement des données de la table `pizza_ingredient`
--

INSERT INTO `pizza_ingredient` (`id`, `pizza_id`, `ingredient_id`) VALUES
(1, 1, 1),
(2, 1, 2),
(3, 1, 3),
(4, 1, 4),
(5, 2, 1),
(6, 2, 2),
(7, 2, 3),
(8, 2, 5),
(9, 2, 6),
(10, 3, 1),
(11, 3, 2),
(12, 3, 3),
(13, 3, 4),
(14, 3, 5),
(15, 3, 7),
(16, 3, 8);

--
-- Déchargement des données de la table `messenger`
--

INSERT INTO `messenger` (`id`, `state_id`, `vehicle_id`, `name`, `phone_number`) VALUES
(1, 2, NULL, 'Boubakar', '+99mabite');
```

```sql
--
-- Déchargement des données de la table `order_state`
--

INSERT INTO `order_state` (`id`, `name`) VALUES
(1, 'Basket'),
(2, 'Ordered'),
(3, 'Cooking'),
(4, 'Ready'),
(5, 'Delivering'),
(6, 'Delivered');

--
-- Déchargement des données de la table `order`
--

INSERT INTO `order` (`id`, `user_id`, `state_id`, `messenger_id`, `order_date`,
`delivery_date`, `price`) VALUES
(2, 1, 6, 1, '2022-06-13 07:23:57', NULL, '52.00');

--
-- Déchargement des données de la table `order_line`
--

INSERT INTO `order_line` (`id`, `order_id`, `pizza_id`, `size_id`, `quantity`, `price`)
VALUES
(1, 2, 1, 1, 4, '52.00');
```

II. Interrogation de la base de données

A. Menu

```sql
SELECT p.name as "Pizza", p.price as "Prix", i.name as "Ingredient"
FROM flashpizza.pizza p
JOIN flashpizza.pizza_ingredient pi on pi.pizza_id = p.id
JOIN flashpizza.ingredient i on i.id = pi.ingredient_id
```

B. Fiche de livraison

```sql
SELECT m.name as "Livreur", vt.name as "Type vehicule", u.username as "Nom
client", o.order_date as "Date de commande", p.name as "Pizza", ol.quantity as
"Quantité", ol.price as "Prix", o.price as "Prix total"
FROM flashpizza.order o
LEFT JOIN flashpizza.messenger m on m.id = o.messenger_id
LEFT JOIN flashpizza.user u on u.id = o.user_id
LEFT JOIN flashpizza.vehicle v on v.id = m.vehicle_id
LEFT JOIN flashpizza.vehicle_type vt on vt.id = v.type_id
LEFT JOIN flashpizza.order_line ol on ol.order_id = o.id
LEFT JOIN flashpizza.pizza p on p.id = ol.pizza_id
```

C. Question diverses

- Quels sont les véhicules n’ayant jamais servi ?
- Calcul du nombre de commandes par client ?

```
SELECT u.username as "Nom client", COUNT(*) as "Nombre de commandes",
SUM(o.price) as "Total dépensé"
FROM flashpizza.order o
JOIN flashpizza.user u on u.id = o.user_id
GROUP BY o.user_id;
```

- Calcul de la moyenne des commandes ?

```
SELECT AVG(o.price) as "Moyenne des commandes"
FROM flashpizza.order o
```

- Extraction des clients ayant commandé plus que la moyenne ?

```
SELECT u.username as "Nom client", COUNT(*) as "Nombre de commandes",
SUM(o.price) as "Total dépensé"
FROM flashpizza.order o
JOIN flashpizza.user u on u.id = o.user_id
GROUP BY o.user_id
HAVING SUM(o.price) >
(SELECT AVG(o.price) as "Moyenne des commandes"
FROM flashpizza.order o);
```