# Requirement Specification

## Data Requirements

### Order

Each order contains order number, date and time of order, customer information, staff information, items ordered, quantity of each item, price of each item, total amount due, payment method (credit card/debit card/cash), order taken (phone/walk-in), type of order (pick-up/ delivery) and order status. Payment approval number is recorded for card payment. The customer's phone number will be recorded once staff receive call from the customer. For each phone order, the duration of the phone call is recorded. For pick-up order, pickup time is recorded while delivery time, address and the driver who delivers will be recorded for delivery order. For a walk-in order, only pick-up option is available, and the time customer walks in will be recorded.

### Customer

The data stored for customer includes customer ID, customer name (first and last name), home address (street, city, postcode), phone number, customer status, and what has been previously ordered. For existing customer, their name and address will appear on the screen. If there is no customer record, a new customer record will be created. A verification process is needed for new customer where staff will call the customer's phone number to confirm.

### Staff

Employees at the store are divided into two types: in-store workers and delivery drivers. For each employee, there is an employee number, employee name (first and last name), postal address (street, city, postcode), contact number, tax file number, bank details (bank code, bank name, account number), status and description. For drivers, the driver's licence is required and recorded.

### Staff Payment

In store workers are paid hourly while delivery drivers are paid based on the number of deliveries. Staff payment details include payment record ID, gross payment, tax withheld, total amount paid, payment date, payment period starts date, payment period end date, and bank details (bank code, bank name and account number) of the employee.

**Shift**

Each employee must record their shift in the database. The data recorded include start date, start time, end date, end time, shift type. For delivery drivers, orders being delivered are recorded including delivery address and time for each delivery. For instore worker shift, payment is calculated based on the number of hours worked every day. This can be determined by the difference between Start Time and End Time.

**Menu Items**

Each item in the menu has in item code, name, size, description, and a current selling price. An item in the menu is made up of several ingredients. Different ingredients of different quantities are required to made up the Menu Item. The menu items are used when order is made which is represented by the item code.

**Ingredients**

Each ingredient has a code, name, type, description, stock level at current stock take period, date last stock take was taken, suggested current stock level, reorder level. Reorder level is set below the suggested current stock level indicating that the ingredient to be ordered when the level of stock falls below suggested current stock level. The ingredient Order to be ordered is set based on the reorder level.

**Ingredient Orders**

The actual levels of ingredients in the store, together with suggested current stock levels and reorder levels are used to order ingredients for the following week. Information about ingredient orders need to be maintained in the database, including order number, date of order, date received order, total amount, order status, description, quantity and price of all ingredients, and ingredient code. The ingredient orders are made based on the price and quantity of the ingredient to be ordered.

## Transaction Requirements

**Data entry**

- Enter details of types of order (phone/walk-in and pick-up or delivery)
- Enter customer's phone number and ID of staff.
- Enter the details for new customer (such as name and address).
- Enter customer's payment method (card or cash).
- Enter card approval number system for payment if payment is made by card.
- Enter time for pickup for pickup order.
- Enter delivery details (such as delivery time, address, and time for drivers to deliver) for delivery order.
- Enter duration of phone call for phone order.
- Enter time for customer walk-in for walk-in order.
- Enter employee status type (in-store or delivery drivers).
- Enter time for shift (start date, start time, end date, end time).
- Enter order details of delivery driver (order no, time and address).
- Enter details of payment (total amount, payment date, payment period start date and end date, bank details of employee).
- Order ingredients if the stock level below reorder level.
- Enter results of weekly stock take.

**Data update/deletion**

- Update details of a customer as a hoax if unverified.
- Remove hoax if customer calls back in.
- Update amount of ingredients used.

**Data queries**

- Search a payment based on an employee number, on a particular pay date.
- Search a delivery based on a customer order number.
- List ingredients and quantity used for menu items.
- Report of ingredient levels for current period, suggested stock levels and reorder levels.
- Search customer details (name and address) based on phone number.
- Display sales transaction based on order types.
- Report the menu items sold for defined period.
- Display bank details based on bank name.
- List time taken to order via phone and order through walk-in.
- Search driver's detail based on licence number.
- Report employee shift hour based on start date, start time, end date and end time.
- Report number of daily orders in a day.

## Business Rules

**Ordering process**

1. Customer makes orders from the pizza restaurant.
2. Orders can only be taken either via:
   a. Phone.
   b. Walk-in customers.
3. An order's type can only be either:
   a. Pick-up
   b. Delivery
4. An order is taken by in-store worker.
5. The order delivery must be delivered by driver.
6. Phone number is recorded for phone order along with ID of staff taking the order.
7. The phone number is cross check with the database, name and address will appear if the customer has previously ordered.
8. Employee must ask their name and address for verification before taking order.
9. New customer record must be created if the customer's name and address do not correspond with what is recorded in the computer.

10. For new customer, a verification process occurs whereby the staff dials the number given and confirms the order with the new customer.

11. A new customer must be marked as un-verified until the verification process is successfully completed

12. An orders payment method can be either card or cash.

13. If an order is paid for using a card, the approval number must be stored in the system.

14. For pickup order, the pickup time must be recorded.

15. For delivery order, the delivery time, address, and the driver who delivered the order must be recorded.

16. For walk in, the time customer spent in the shop must be recorded.

17. Only pickup option is available for walk-in customers.

## Employees

- An employee can only be either an in-store worker or a delivery driver.
- Employees must record each shift they work in the database.
- Employees are only allowed to record one address in the database.
- Employees cannot delete data from the database.
- All staff will receive their salaries.
- Staff payment rate varies depending on:
    a. The number of hours recorded determined from their shift (for in-store worker)
    b. The number of deliveries (for driver)

## Menu and Ingredients

1. An order can be made for multiple menus.
2. Menu is made up of several ingredients.
3. The amount of each ingredient remaining must be updated every time some is used.
4. The results of the weekly stock take must be input into the database.
5. Ingredient must be ordered when an ingredients stock level falls below reorder level.