# In-House Bakery Management System for Dessert Factory

## Criterion A – Planning

**Defining the Problem: (refer to Appendix I)**

Dessert Factory is an in-house bakery run by two sisters, Ruquia and Arshia Ahmed. They take orders through WhatsApp and phone calls and have a staff which prepares these orders for either delivery to the customers or pick-up by the customers. Everything for the business is managed through WhatsApp groups, notepads, or Microsoft Excel. However, this system is proving to be a problem as it is not all stored in one place and so is not maintained properly.

The clients manage their business manually in different books and records which leads to basic errors such as misplacing the records, forgetting to update, entering incorrect data or incorrect calculations. For example, they must remember to check for ingredients and materials days before they the order is due. If they forget, they don't have the requirements to make the desserts. This issue is also pertinent to other areas of their system like orders, accounts, managing the staff and keeping track of dishes that customers need to return.

The clients want to be able to store and manage everything relating to their business in one place. It should be accessible by the owners and the staff to update accounts, inventory and orders as well as help manage staff details and record staff attendance. It should also help keep track of dishes and store customer information.

**Word Count: 222**

## Rationale for the Proposed Solution

The main problem for my client is lack of organization which is essential for the business to grow and become more professional. Before we started discussing an application, I asked my client if they have tried using software such as Microsoft Excel and they said it was difficult to maintain as it is not personalized for their use. They use WhatsApp groups to communicate. This is not ideal as these messages get lost very easily in the sea of messages. Hence, I have concluded that the clients need specific functions for their situation and so a custom-built application will be most suitable.

My proposed solution is a central software application that monitors all aspects of their business mentioned above. It should have different pages for admin and staff with specific functions and all the information will be stored in tables in a database.

I have decided to use Java Programming language to develop my application. Java makes use of Object-Oriented Programming which will make my task easier while still producing a useful and sophisticated application by allowing me to reuse code and to make my application in modules. Java also provides open-source libraries which will make the development process much easier and faster. For the database, I will be using MySQL to create the tables and database and store it on the phpMyAdmin server. MySQL is easy to learn and understand and will help me write appropriate queries to manage the data.

**Words: 242**

The following success criteria were decided based on the first interview conducted (Appendix I) and were finalized after having a second meeting with the client.

**Success Criteria**

1. User-friendly, intuitive Graphical User Interface.
2. Different profiles for managers and staff with different options.
3. One profile per person (checked through phone number).
4. Login page with username and password.
5. Link to database to store and manipulate data.
6. Table showing orders for a searched date.
7. Table showing customers' information for ones who haven't returned dish to the admin.
8. Table showing attendance for a searched date for the admin.
9. Manage inventory by inputting product name, type, store, quantity bought, price per unit and date bought.
10. Keep track of inventory for each product by entering product name.
11. Keep track of orders search by month.
12. Manage orders by inputting customer name, contact, item, amount, delivery date and time, whether a dish is also given and status.
13. Adding other expenses
14. Chart displaying popular orders – order statistics.
15. Calculating expenses for inventory and staff by month.
16. Calculating revenue for orders and kulfis separately.
17. Manage staff details.
18. Manage staff attendance with start time and end time.
19. Calculate overtime so that admin can decide how to compensate them.
20. Validation checks (presence, length, type) for date, number, time fields.