

# SOFTWARE CONSTRUCTION

ASSIGNMENT 3

ANAM BALOCH | ASAD SALMAN | DUA ANJUM  
BESE 5-B 111825 | 111612 | 111001

# INTRODUCTION

For this assignment, we are required to develop a POS system that incorporates major functionalities required by a chain of cafes that is employing a web-based application.

The point of sale (POS) is the time and place where a retail transaction is completed. The merchant calculates the amount owed by the customer, indicates the amount, and may prepare an invoice for the customer (which may be a cash register printout), and finally indicate the options for the customer to make payment. It is also the point at which a customer makes a payment to the merchant in exchange for goods or after provision of a service. After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed, but is increasingly being dispensed with or sent electronically. The point of sale is often referred to as the point of service because it is not just a point of sale but also a point of return or customer order. Additionally, current POS terminal software may include additional features to cater for different functionality, such as inventory management, CRM, financials, or warehousing.

## APPROACH

The system design is approached in such a way that there are different pages, seamlessly linked for each feature require i.e. Inventory Management, Customer Order Placement, Employee Directory, Sales Reporting. There is an additional home screen that provides a starting point and a link to the crudest form of the database maintained itself.

We took a two-tiered database approach where we had an instance of PouchDB running inside our browser. This PouchDB synchronized with the CouchDB running on our server.

We perform all of our database transactions/queries on our local PouchDB instance exclusively. Since this local database syncs with the remote CouchDB instance (with eventual consistency), we have all necessary data available in the local DBS.

## NOVELTY

This system is built to manage data for different branches/franchises of the same café in such a way that they come together to provide one platform.

## CONCLUSION

Some additional features that could be added given more time would be authentication to create different levels of privilege, options to update/delete items from menu or employees in real time and/or some way to keep records of employee scheduling.

## GITHUB LINK

[HTTPS://GITHUB.COM/14BESEASALMAN/SC-Assign-3](https://github.com/14BESEASALMAN/SC-Assign-3)