1.0 INTRODUCTION

Stylo is a shoe retail company, located at Liberty, Lahore. The company is very popular for selling different types of shoe all over the Pakistan. For its quality products it has become one of the loyal shoe retail companies in Chittagong. It also provides shoe repairing services to its consumers on demand. Recently they are facing some difficulties for keeping the records of their sales, stocks as well as customer services. They need to write down all the records in a record book manually. Hence they have decided to change the present recording system and develop a **POS SYSTEM** which will help them to overcome their short falls. According to their requirements it has to be developed offline. This system should have two panels (Admin & Staff).

2.0 REQUIREMENT ANALYSIS

2.1 Functional Requirement

1. The system supports customers purchased receipt.
2. System can search the product from the stock according to customers demand.
3. System can add stock.
4. System can update stock.
5. System can delete stock.
6. System can show the stock report.
7. System can show the sales report.
8. System can register new staff.
9. System can add customer service.
10. System can update customer service.
11. System can view all the service records according to product specific ID.
12. System can update password (Admin & Staff).

2.1 Non-Functional Requirement

1. The system can save stock into the database safely.

2. The system can support the entire PC (Personal Computer).

3. The system can create a backup database file after every transaction (sales, stock, service, update of authentication details).

4. Stock should be added after end of sales per day.

5. For security issues only admin can change the password on behalf of staffs.

6. Staffs can only access this system for sales, service and checking reports.

3.0 DATA FLOW DIAGRAM

3.1 Context Diagram

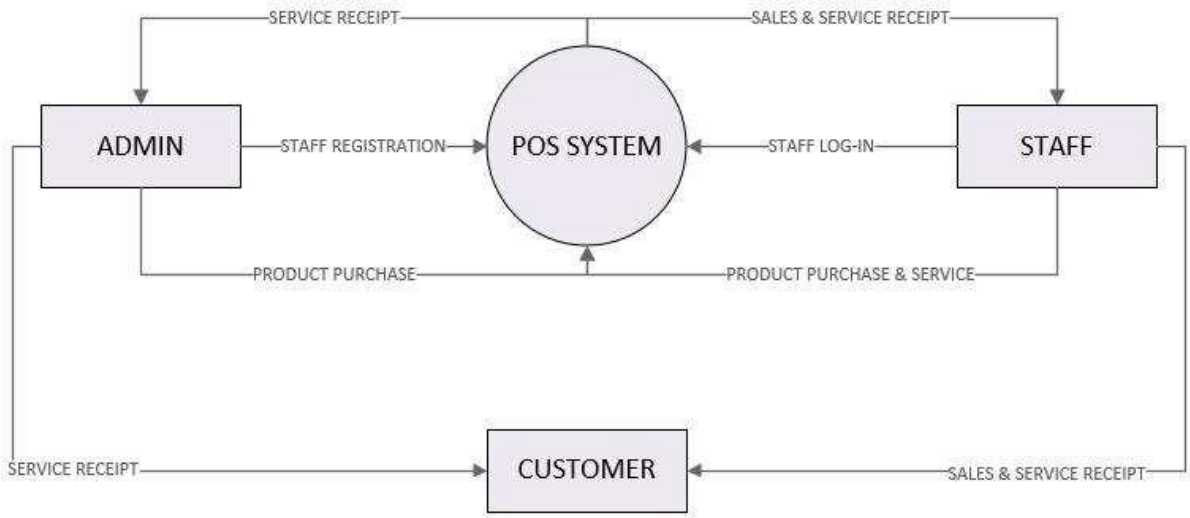


Figure 2 Context Diagram

Above is our context diagram of the overall function of the system. From the diagram we can see the major entities are the staff and the system. Admin can register the staff through the system by entering individual's username and password. Admin can access the customer service panel. After successful completion, Admin need to send the customer service receipt to the customers.

Beside that staff needs to log in with their respective username and password to access the system. Then they can proceed to new product sales and service accordingly. After successful completion they will send a copy of sales receipt as well as service receipt (if any) to the customers. Again, staffs can also update the customer service records on demand. We will discuss more about system (POS) functionality on below diagram.

4.0 Level 0 DIAGRAM

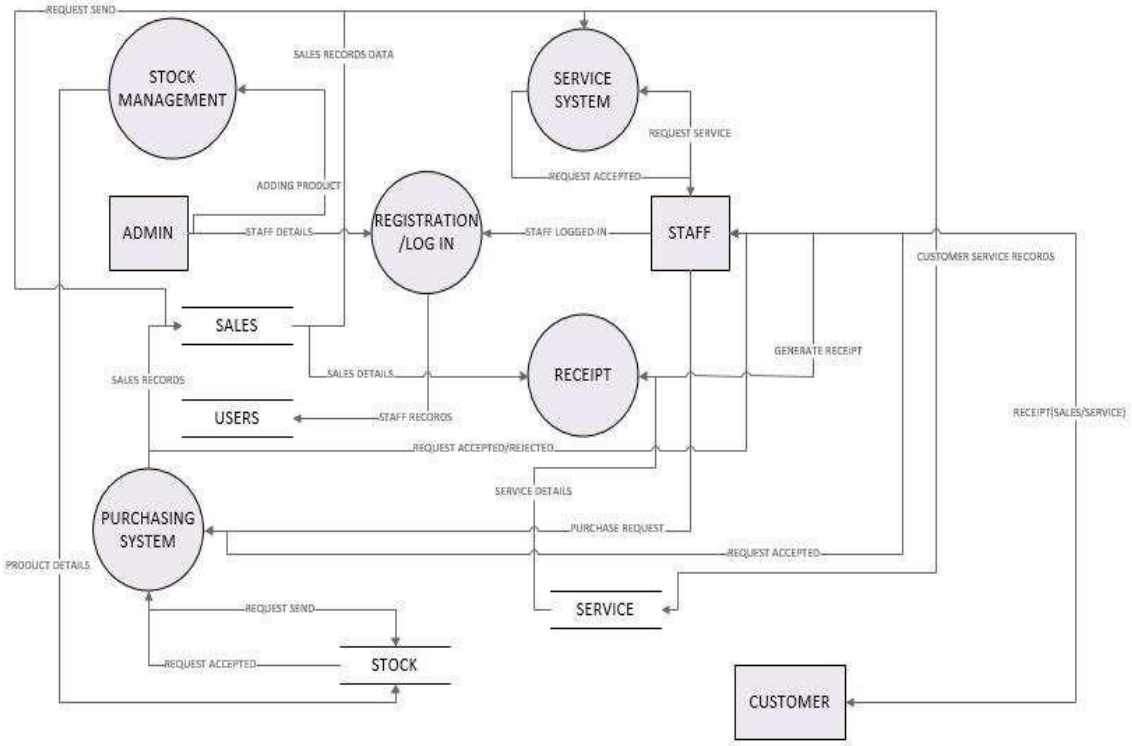


Figure 3 Level 0 Diagram

Above is our level 0 diagram of POS System. Here we can see Admin need to enter staff details (username & password) so that staff can access the system. After entering the system will save the staff details directly into the database **USERS TABLE.** Then staff can log in to the system with their individuals credentials (username & password). After that they can proceed for new sale and new service according to customer's demands. After the successful transactions a receipt (sales & service) will be given to the customers directly. Admin can also access the system for customer service (emergency purpose). We didn't show it on diagram. Later we will discuss about it on **UI** (User Interface) part.

5.0 USER INTERFACE (UI)

User interface is one of the most important parts of any system. It shows how the users will interact with the system smoothly. Below are the details of user interface. It will go from Admin Panel to Staff Panel accordingly.

Log In Interface

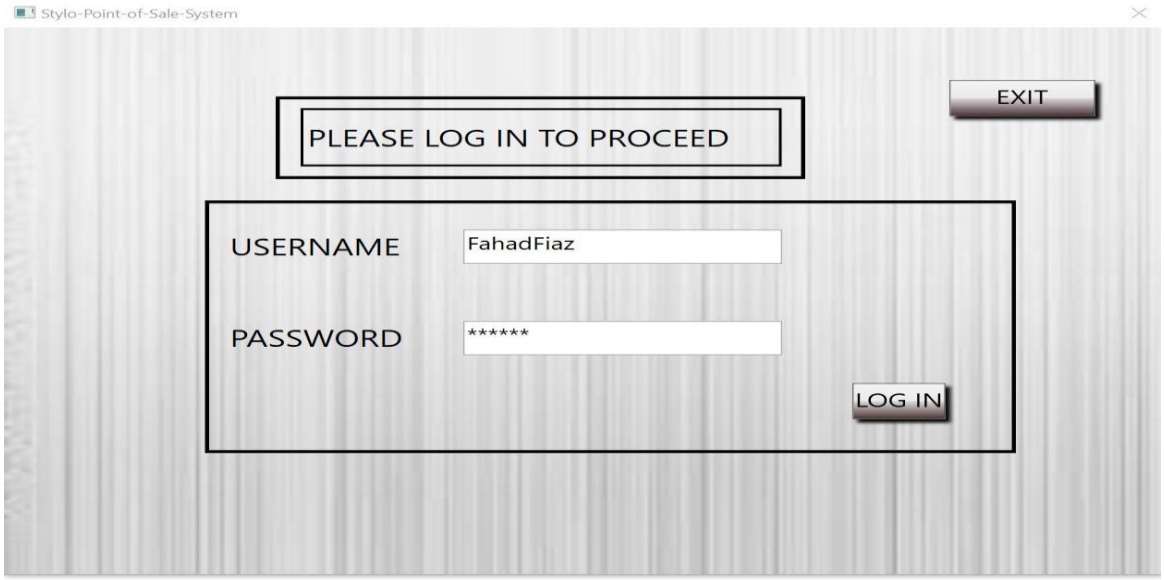
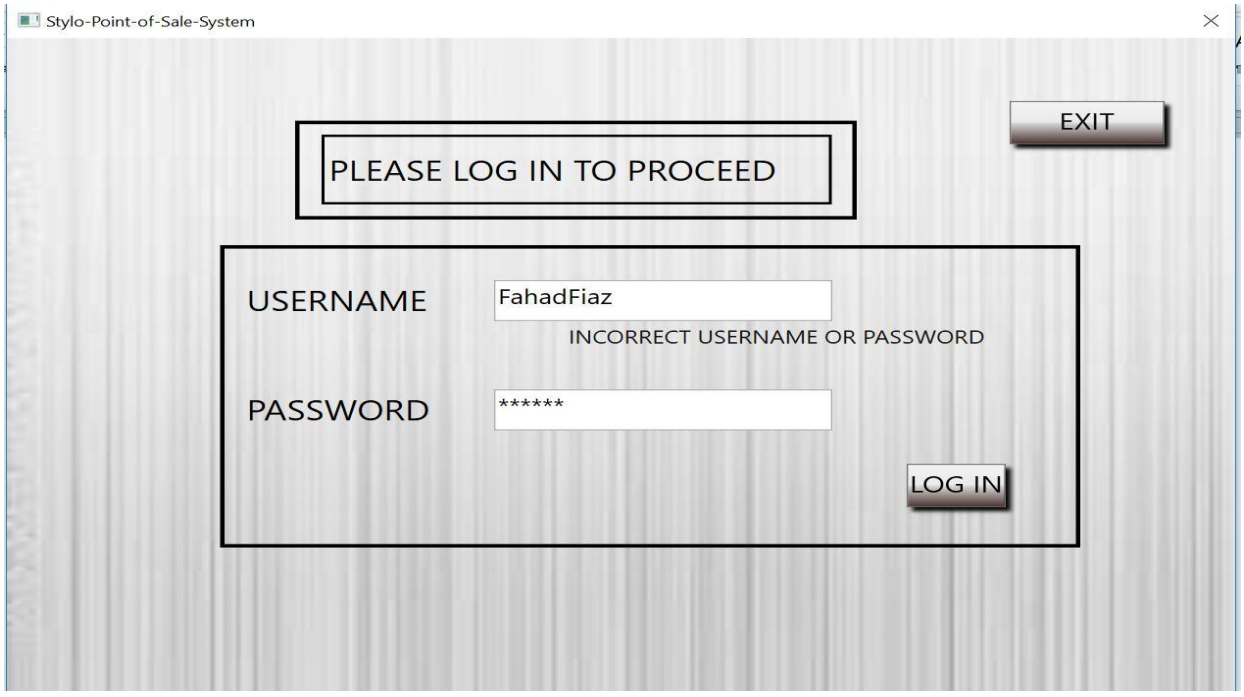


Figure 5 User Log-In

Above is the startup interface for POS System. Here user needs to enter their credentials (username and password) to access as Admin or Staff. If user press Login button with incorrect or empty credentials then proper error messages are displayed. If credentials are correct then system will show the user panel (admin or staff) following their roles from the database.



Admin Panel

Figure 6 Admin Panel

This is the Admin Panel where Admin can see all the operation buttons. From this panel admin can manage the stock, check the sales report, access the customer service, update password as well as register a new staff. Below is the description of each operation.

Manage Stock

Add Stock

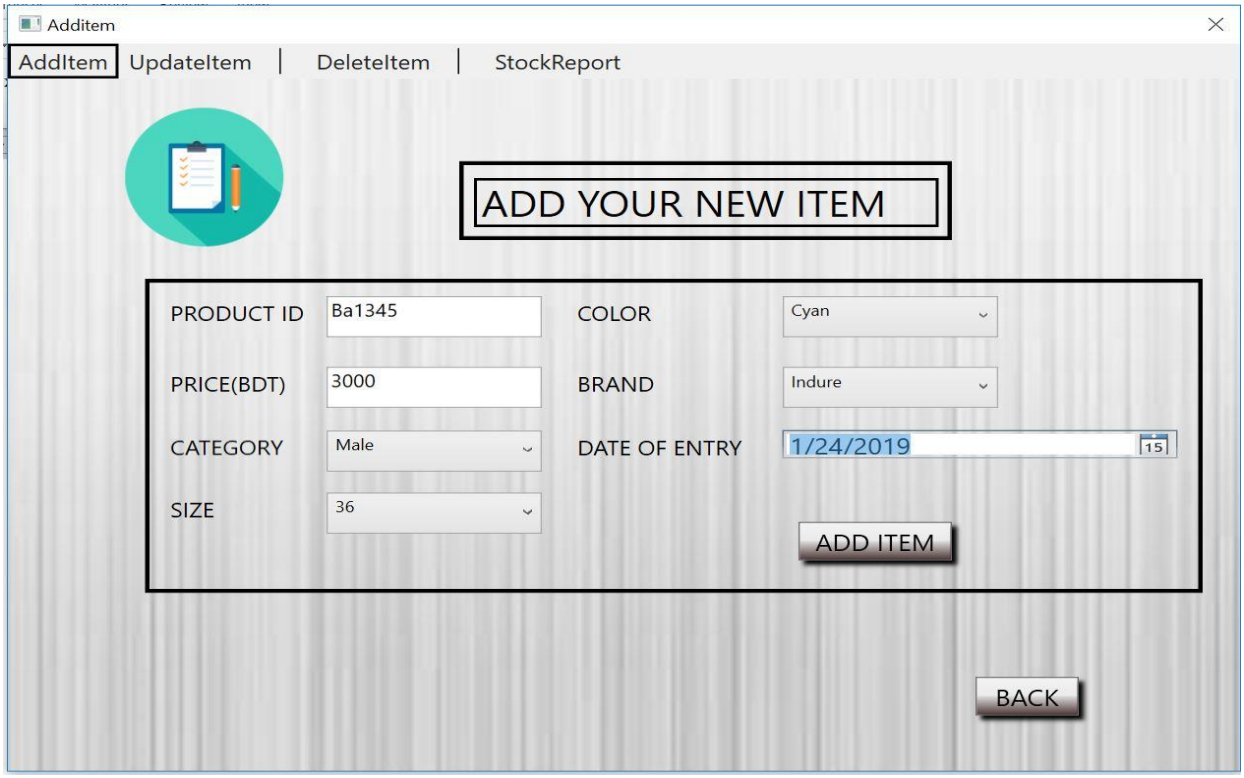


Figure 7 Stock Add Item

Above is the stock management panel where admin can add stock according to their supplies. To add a new stock Admin need to enter the ***PRODUCT ID*** with details like ***PRICE***, ***CATEGORY***, ***SIZE***, ***COLOR***, ***BRAND***. The entry date of the product will show automatically based on system settings. For easy access we added some drop down box so that every information needs not to enter by Admin.

Update Stock

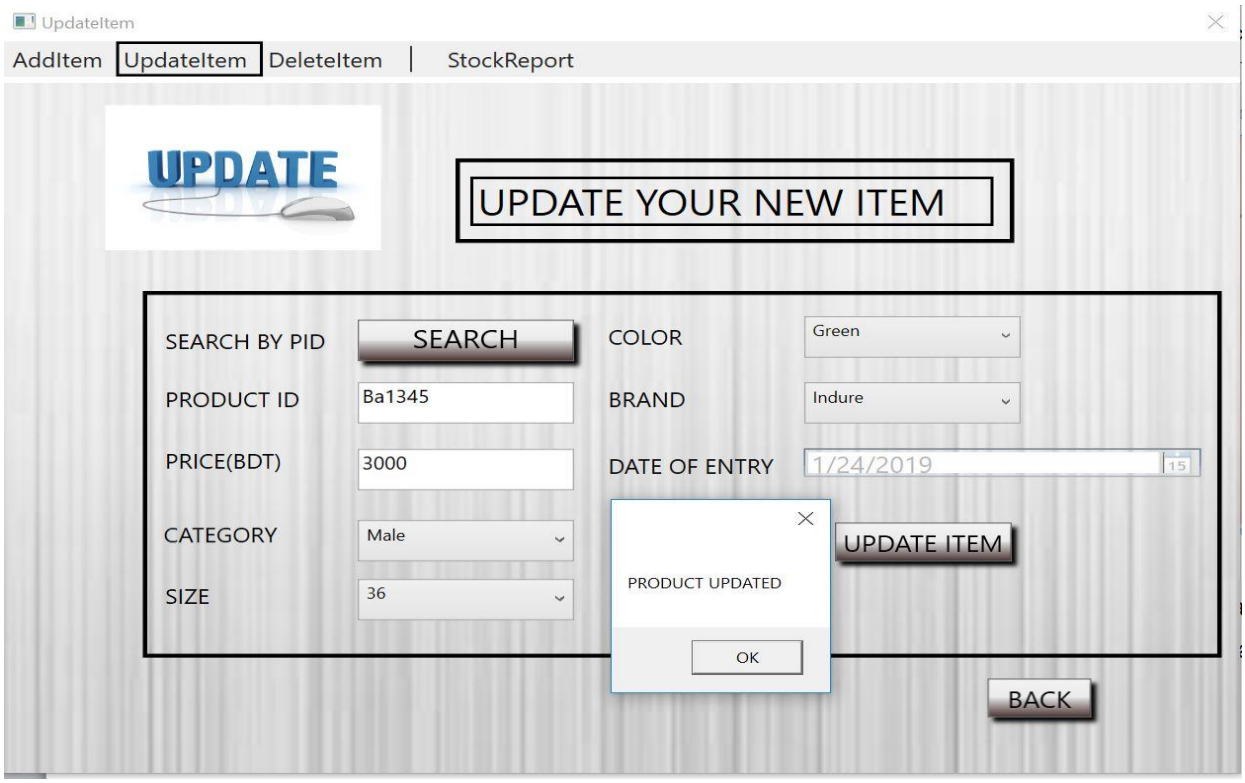


Figure 8 Stock Update

From this panel Admin can update the stock. Suppose Admin entered the wrong information about the product. So this panel will help Admin to update the details and save it to database. Here, only the ***DATE OF ENTRY*** cannot be changed as the stock is already added.

Stock Report

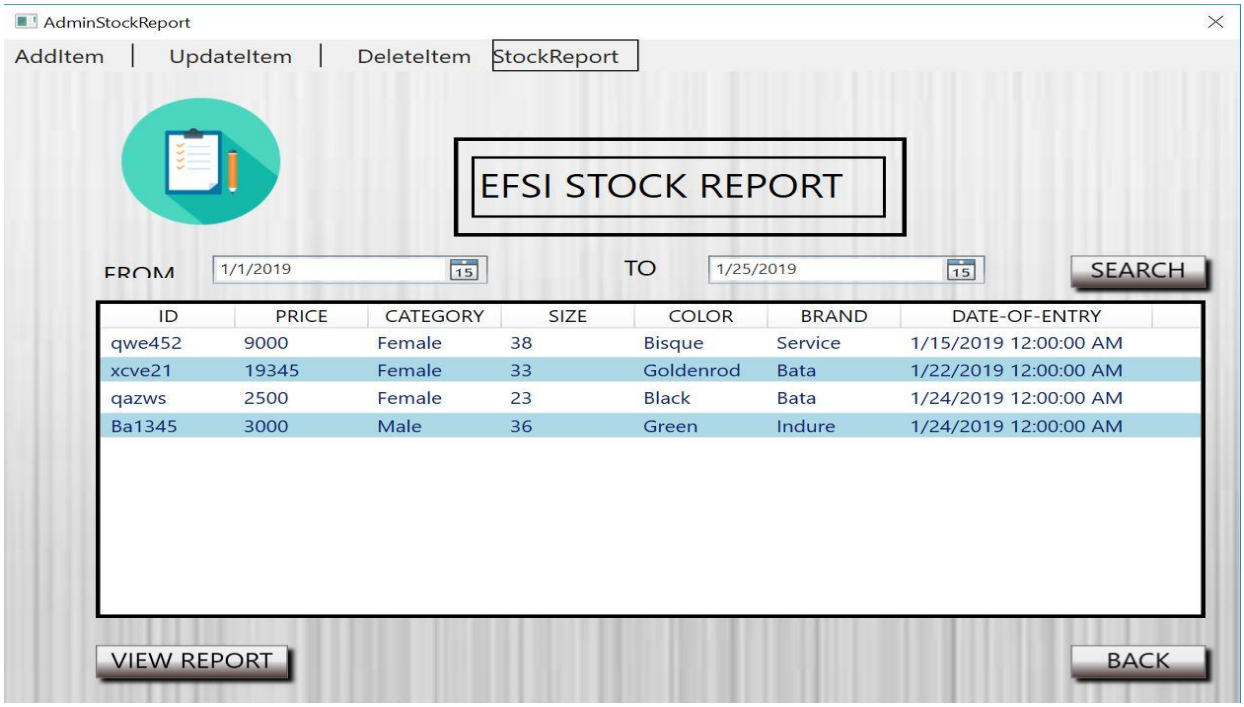


Figure 9 Stock Report

Above is the stock report of Admin panel. Admin can check how many products are added so far. For easier access we added ***SEARCH*** button along with two ***DATE TIME PICKER CONTROL***. If Admin want to see the stock report according to dates then he can select a date from ***DATE TIME PICKER CONTROL*** and the system will show the report according to dates.

Delete Stock

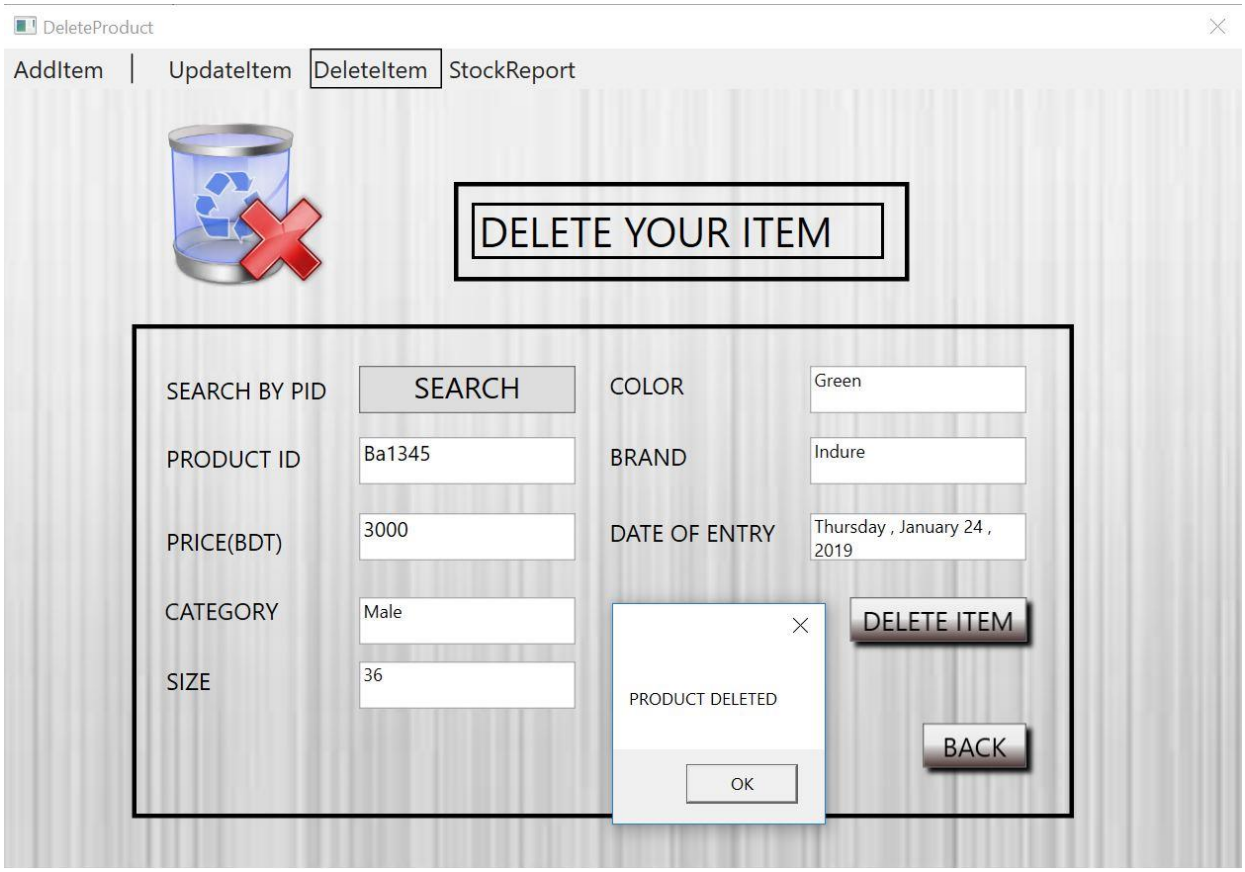


Figure 10 Delete Stock

From this panel Admin can delete any stock according to given ***PRODUCT ID***. Admin need to enter the ***PRODUCT ID*** and the system will show all information of specific product. This will delete the product from the stock.

Sales Report

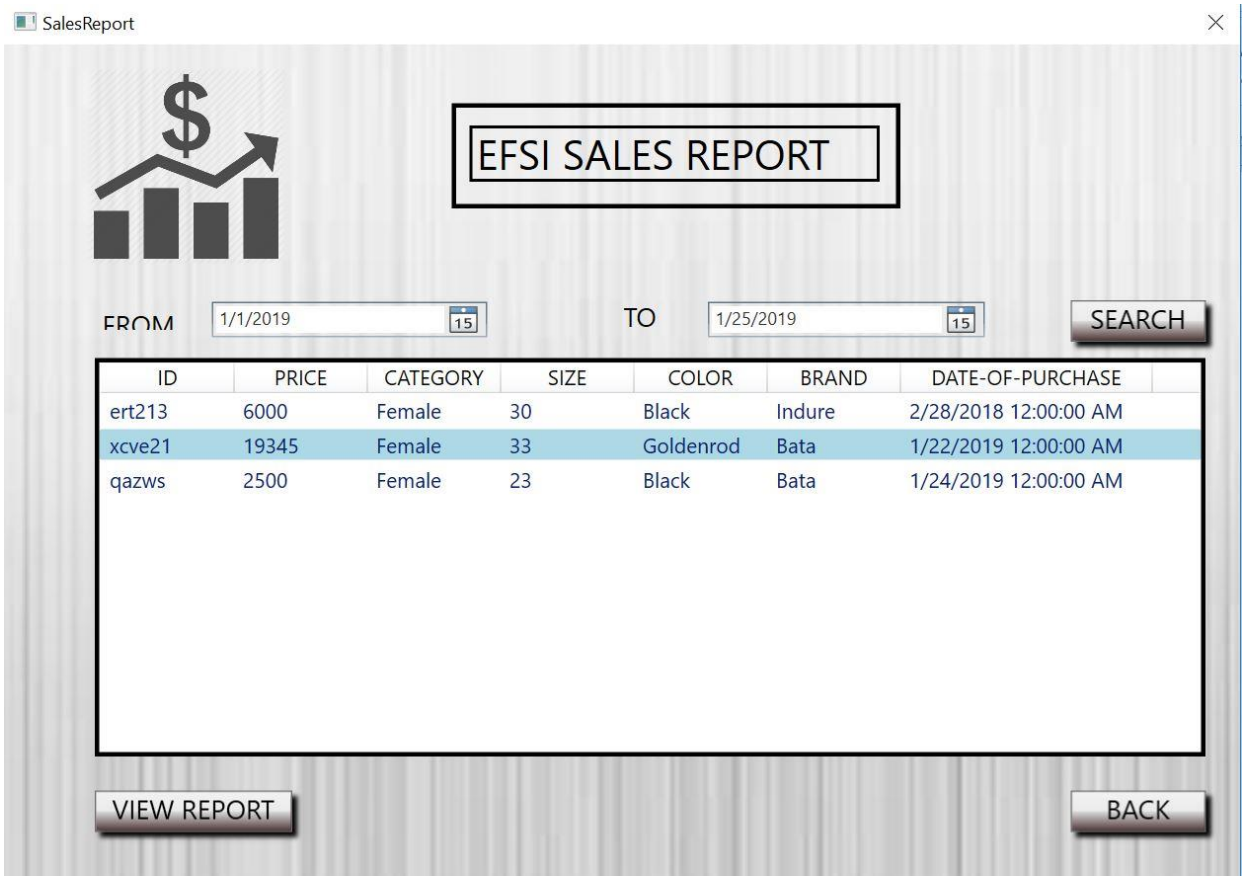


Figure 11 Sales Report

Above is the ***Sales Report*** for Admin. From this panel Admin can see the products that are already sold. Here we also added ***DATE TIME PICKER CONTROL***.

Service

Admin can also provide service to existing customers. The service we added on Admin panel is only for emergency purposes. We will discuss more on ***STAFF PANEL***.

Update Password

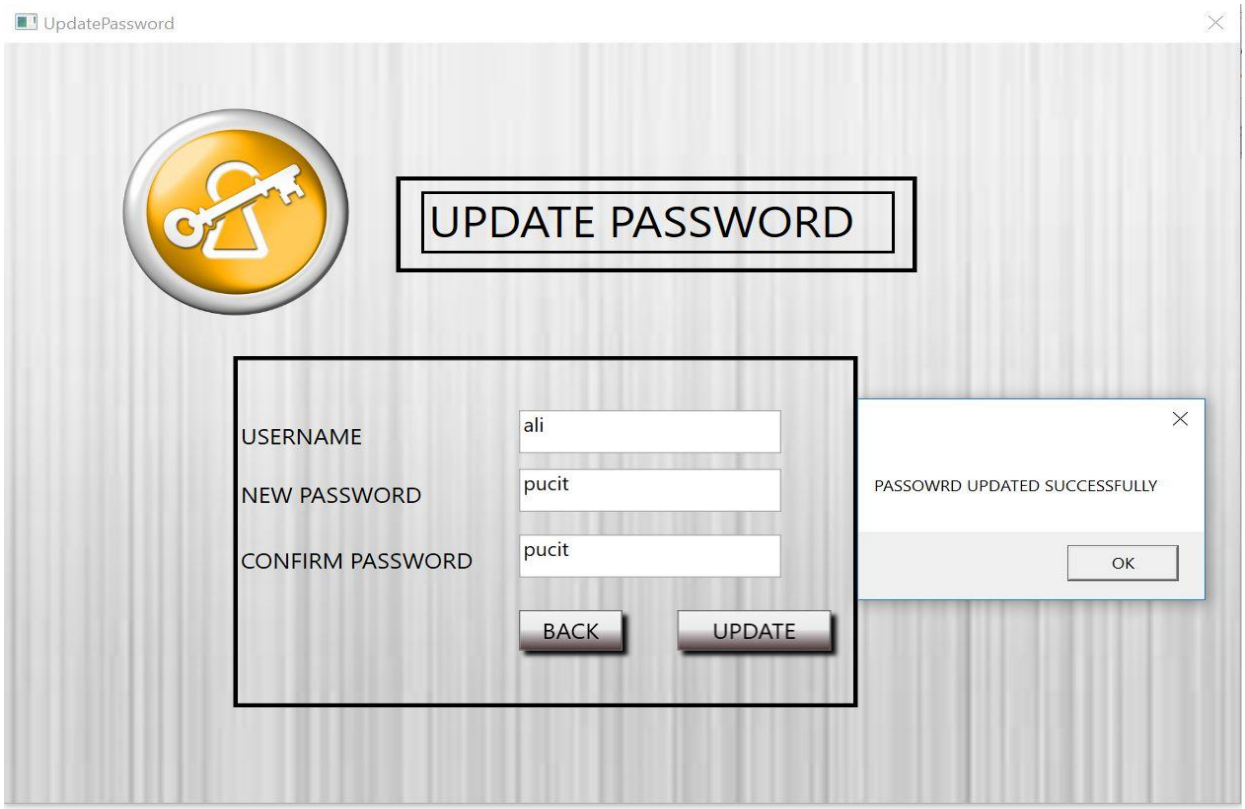


Figure 12 Update Password

This is one of the important functions of this POS System. From this panel Admin can update staffs login details (password). As for example if any staff forget his or her password then he or she can request to Admin then Admin can update the password. At first we added the ***FORGET PASSWORD*** on ***LOGIN PANEL***. But for security issue and also based on requirements we added this function on Admin panel.

Staff Registration

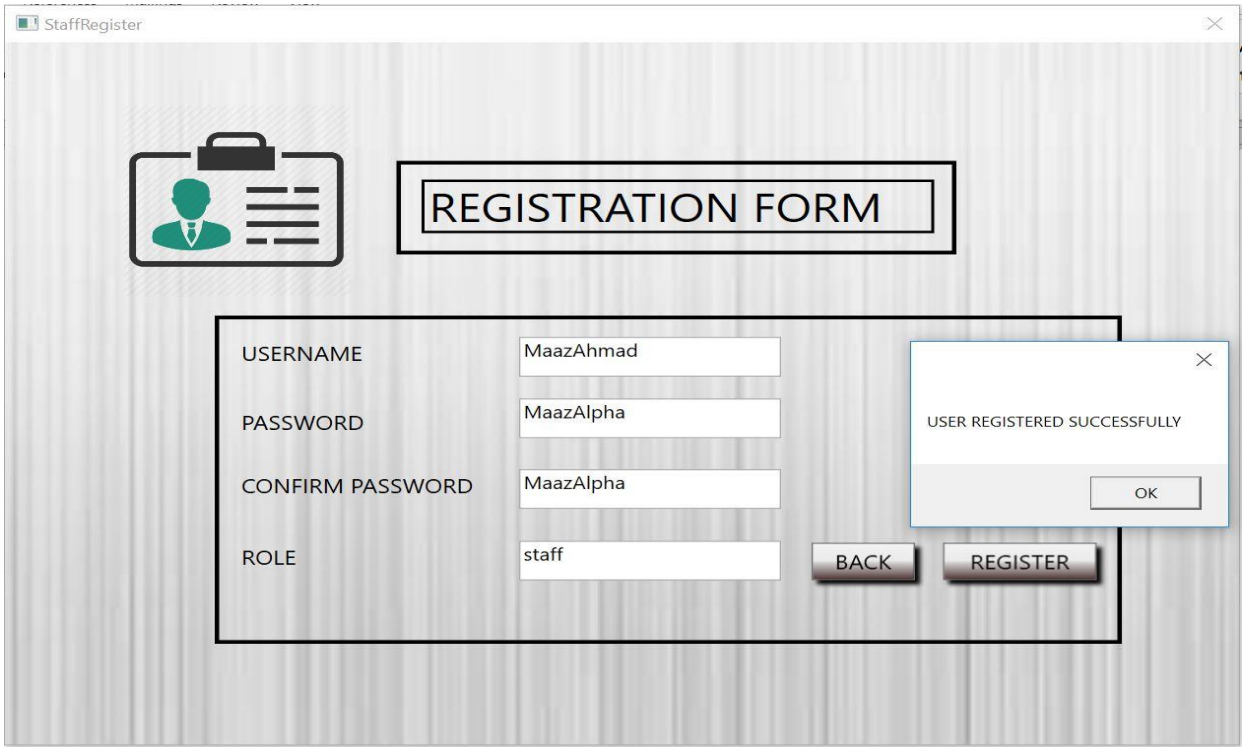


Figure 13 Staff Registration

Above is the ***STAFF REGISTRATION*** panel. From this panel Admin can register new staff with their specific ***USERNAME*** and ***PASSWORD***.

Staff Panel

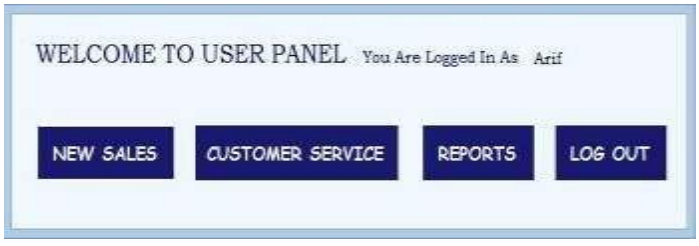


Figure 14 Staff Panel

Above is the staff panel of POS SYSTEM. This are the operations staffs having on their panel based on systemrequirements.

New Sales

Figure 15 Staff Sales

Above is the panel for staff where staff can proceed for new product sales. First they need to enter the ***PRODUCT ID***. After they click ***SEARCH*** button the system will show all the information based on ***PRODUCTID***. Before they proceed for purchasing the product they need to click ***SHOW SALES*** button where a sales receipt will generate based of product information. Staff can also clear the sales receipt by clicking the button ***NEW SALES***. For purchasing they need to click ***PURCHASE***. We also added a button name ***SAVE*** which will save the receipt on the system for future reference and also can print for customer. Below is the sample of sales receipt.

```
                    EFSI PURCHASING RECEIPT
                  15/12, NEW MARKET, KISHOREGANJ
              Cell: +880-1711-360899 / +880-1919-360899

PRODUCT ID        BT1456
PRICE (BDT)       2000
COLOR             BLACK
SIZE              08
CATEGORY          FEMALE
BRAND             BATA
PURCHASED         Saturday, November 14, 2015
-------------------------------------------------------
THANK YOU FOR PURCHASING !!!
FOR FUTURE REFERENCE KINDLY PROVIDE THE RECEIPT
REPAIRMENT WARRANTY PERIOD : 6 MONTHS (EFSI PRODUCT)
```

Figure 16 Sales Receipt

Service (Staff)

Figure 17 Staff Service Panel

This is the service panel for staffs. From here they can provide new service, update service and can view the existing pending or completed services of the products.

New Service

Figure 18 Staff Customer Service

Above is the panel for customer service. Here staff needs to enter the ***PRODUCT ID*** on customer demand. Then the system will show the information of the purchased product. Before providing the service they need to click the button ***SHOW SERVICE*** where all the details will come out on the ***LIST BOX CONTROL***. Then as usual like sales receipt the system will generate the service receipt after adding service. Below is our service receipt sample.

```
                    EFSI SERVICE RECEIPT
                15/12, NEW MARKET, KISHOREGANJ
            Cell: +880-1711-360899 / +880-1919-360899
PRODUCT ID          BT1345
PRICE (BDT)         3000
COLOR               YELLOW
SIZE                40
CATEGORY            MALE
BRAND               BATA
CUSTOMER NAME       Syed Hasan
ADDRESS             Taman Cempaka, Jalan Cempaka, Ampang, Selangor, Malaysia
PHONE               01127620162
PURCHASED           Saturday, November 14, 2015
SERVICE             Saturday, November 14, 2015
RETURN              Saturday, November 14, 2015
CHARGE (BDT)        102
--------------------------------------------------------------------------------
WE ARE GLAD TO SERVICE YOU !!!
FOR FUTURE REFERENCE KINDLY PROVIDE THE RECEIPT
```

Figure 19 Customer Service Receipt

Update Service

Figure 20 Update Customer Service

This panel is for updating the customer service on demand. From here staff can update customer contact and product return date if they (customer) wish.

View Service

This panel helps staff to view the specific product which is under service or already finished. Again if any customer wants to know the progress of the service, staff can also use this panel to inform them.

Reports

Figure 22 Reports Menu

This is the ***REPORTS MENU*** of staff panel. From here staff can check the ***SALES REPORT***, ***SERVICE REPORT*** as well as ***STOCK REPORT***.

Sales Report

Figure 23 Staff Sales Report

Above is the sales report of staff panel. From here staffs can check all the sales records. They can also check records according to dates.

Service Report

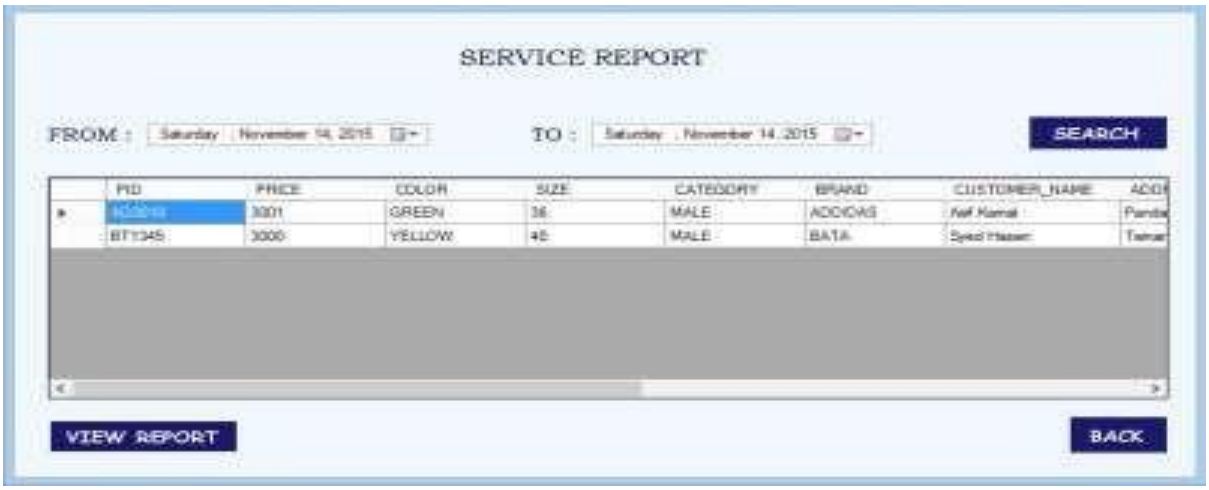


Figure 24 Staff Service Report

From this report staffs can check all the completed and pending customer services.

Stock Report

Figure 25 Staff Stock Report

Above is the stock report for staffs to check the full stock record.