# FabFeet Designer Footwear

## 1. Business Scenario

FabFeet footwear is a small company which deals in lady footwear. FabFeetfootwear shop is a place where you can get the latest designs with high quality at very reasonable price.

The FabFeet is famous for its latest and unique designs. This company is introducing reliable products in the market. Now they have a good collection for kids and in future they are planning to introduce some designs for men.

FabFeet has a team of skilled designers although it doesn't have any production unit. They have association with different manufacturers who converts their designs into tangible products. Apart from shoes FabFeet also deals with the variety of products like hand bags, jackets and travel bags, again for ladies.

This company has 6 shops in New Delhi known as FabFeet Bazaar. It is a 2 years old Company in market in this footwear business. All FabFeet's shops are situated in very crowded markets of New Delhi and they are getting good response from the customers. If I would discuss about the FabFeet shops' size then I must say that all shops have very limited area however they all covers people those are interested in purchase of good products. All shops have 2 floors; divided into sections.

In all shops ground floors are dedicated to kids, first floors are dedicated to lady footwear and at last but not the least second floors are for bags and other accessories. In these shops they have good employee strength to attend their customers in a very professional way.

FabFeet doesn't have any advertising unit and for the advertising purpose they took part in exhibitions organized in 5 or 4 star hotels. They invest good amount to reach to the people and introduce their work and product.

In FabFeet shops everything is running manually. If I'd say about the stock management and billing, company is very much dependent on its employees. Sandeep and Raman, they are salesman in FabFeet's main branch for last two years i.e. from the beginning of the company. They both are taking care of stock and billing. If they take leave then store manager has to think a lot of everything. Sumit, he is store manager of main branch of FabFeet and taking care of approximately all transactions. Sometimes he faces challenges while answering customers about any particular design or size. It is very difficult here to answer the customer in a short period of time.

As we discussed earlier, billing is also a manual process in FabFeet and there is very limited space in shops. Sometimes billing counters take huge time to complete their transactions. To solve this problem Sumit (store manager) shifts some of his employees on counter for billing purpose because it becomes very difficult to handle the customer flood. For this shifting, Company has to compromise in other areas of business. All the entries and data are being maintained in registers and notebooks and to calculate amount. One has to check entries and calculate everything manually. So in the end of month it takes too much time to place everything on time.

It will be fantastic if a customer can see the product online and purchase that by paying the

amount from different options. It will reduce the footfall in the shop and customer access will be increased. Company is ready to hire more people for the home delivery because it is going to save a lot of time for the customer and for the Company's prospective it is good to maintain the customer satisfaction.

There are few other challenges before the owner of FabFeet. Mr. Gupta, he is the owner of this brand and his son Rajan also the part of this business but the problem is they can't visit all 6 branches in a day.

They also want to make their business visible for them to track everything like what goes in and what goes out. Time is also very precious element for every business man therefore they always take status of all other 4 branches over the phone which is not satisfactory all the time. Calculating all gains and expenses and analyzing performance of each branch is very difficult for both of them.

Therefore business is running on estimations and assumptions. They are looking for a business tool which can provide them an interface through which they can understand the ins and outs of their branches and they are seeking presentations representing data of all the transactions in all branches so that they can take some important decisions about their business.

Your team is retained to

Create a User Interface for internal users

Create a database design

Create solutions for all discussed solutions

Please go ahead and read the problem statement below.

# 2. Problem Statement

## 2.1 Assumption

- Total six shops or branches are there

- Transactions are being recorded manually
- Not able to handle inventory
- Customer can't reach online
- Dependability on staff is very high
- Seeking regular data for more understandability to take decisions

## 2.2 Points to focus

The database design should help automate the following

Customer's Order & Billing Process (Walk in as well online)

Stock management

Automation for approximately all transactions

### 2.3 ENTITIES

The database design will focus on the following…

- Products
- Customers
- Orders
- Employees
- Expenses

## 2.3 Business process in the Application:

Application is going to help for registering new item(s) where user has two choices. He can register single pair and a complete set. Application is also giving service to maintain the inventory. It is reducing the dependability over staff. Application is also providing help while placing orders and generating bills. Application is providing web user interface to the customer for online shopping. To perform these tasks application is connected to different database tables. To provide clear history, this application is also maintaining the customer details in database and managers are using this information to inform their customers about day to day events and offers which are active in the store. Salesmen are also using this application to place orders, removing and updating them.

## Sample Business process for FabFeet Designer footwear Case Study

1. Manager wants to register a pair of shoe or shoes.
2. Employee wants to check the design 1001 with size 38.
3. Company needs to check all the stock available in the shop.

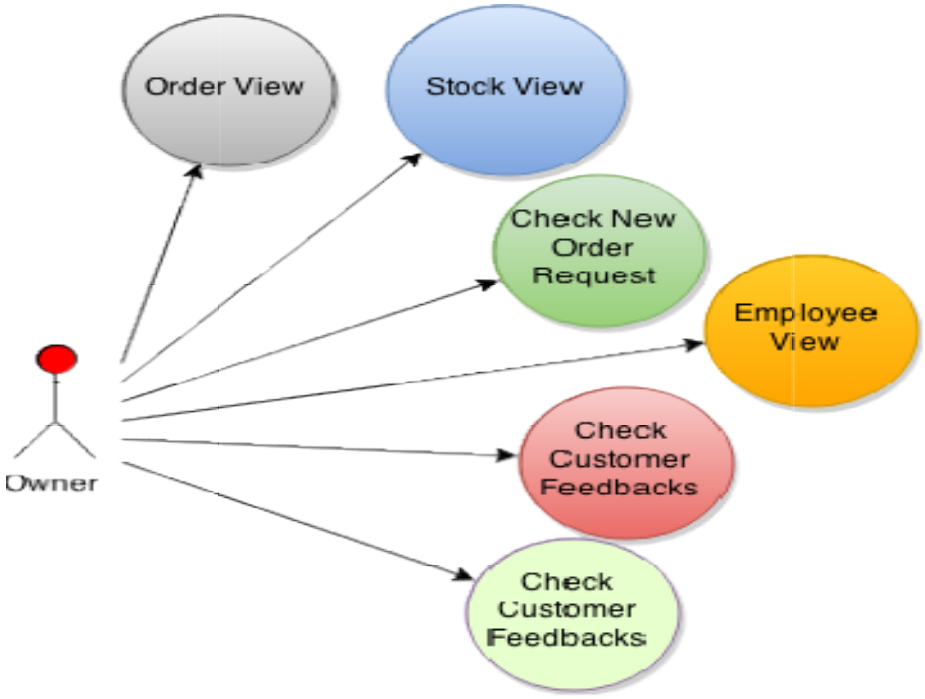
4. Store manager wants to get the information about those customers who purchased shoes on last Sunday.
5. The Company wants to inform about the fresh arrivals in the store to its customers.
6. Mr. Gupta, who is the owner of the company, wants to get information about all employees including managers of all six branches.
7. There is customer who is asking for size 34 in design 1002, so Sandeep has to collect information about that particular pair; whether it is available or not.
8. By mistake Raman added a pair two times in the customer bill, now he wants to remove the duplicate entry from the order list.
9. Customer is very happy and excited about the design. She has purchased 6 pairs and got her bill. Suddenly she changed her mind and ready to buy three more pairs and Sandeep wants to create a single order for all nine pairs.
10. Mrs. Singh is the customer and she wants to purchase product online. She logs in to the website and selects a pair and ready for payment.
11. She can find all available details about the product without wasting her valuable time. Apart from that she get information about current offers and schemes valid for that product.
12. She can pay online or she can pay cash on delivery.
13. She can pay online using Credit Card, Debit Card and through internet banking if she choose online payment option and if she go with cash on delivery then she can pay after receiving her product at her door step
14. Customers can also return their product online and walk in, if they find any defect in that.

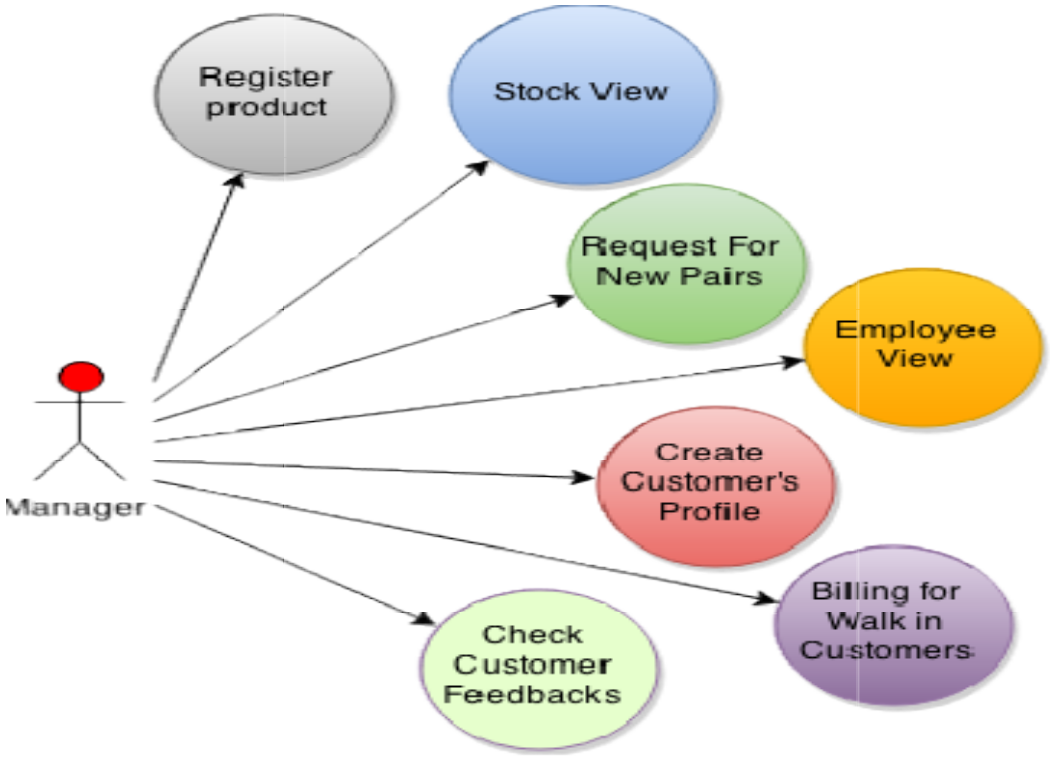
## Tools to be used:

3. Oracle Database / any other alternative database
4. JDK 1.7 or later
5. Eclipse IDE or any other alternative IDE
6. Spring and Hibernate / any other alternative technology
7. JSP or any other view technology

## Activities to be done by the students

# USE CASE DIAGRAM




## Owner

1. **Viewing Orders** – Application must provide the complete order details to the owner of all branches. Owner can view all orders of 6 branches at a time, one particular branch or a particular customer.

2. **Stock Details** – Application will also provide the stock details to Owner where he can review stock of all 6 branches or of a particular branch.

3. **New Order Request** – Owner can see the requests of all managers for more pairs as per the demand. After checking their requests Owner can request manufacturers for more pairs and they can deliver to those branches directly. Managers can request for out of stock pair or for some new designs as per the demand of the customers.

4. **Employee View** – Application should also provide details of all employees branch wise. Owner must have details of employees like salary, leaves and total working days in month. Using these details Owner can calculate their salaries and take appropriate decisions about his employees.

5. **Customer Feedback** – Application will provide the interface to the owner where he can check the customers' feedback to know exactly what they think about FabFeet. He can check the details and answer their queries.

## Manager

1. **Product Registration** – Manager of all stores can register their products. Managers can register single pair or a complete set at a time. Because every set has 6 to 8 sizes and registering single pair at a time will be time consuming. Registration will update the database but information should reach the database after applying a good validation algorithm.

2. **Stock View** – Application will provide details of stock to the manager as well. A manager can check the stock of his own branch not of others. This feature of this application will enable managers and other employees to answer their customer in short duration about any particular pair.

3. **New Pair Request** – Here application is providing interface by which a manager is requesting Owner for those items which are out of stock in the branch. If customer is not satisfied with the present designs and have some idea of new design then manager can also entertain that customer and request for that particular design as well. If it is possible to produce that product then after getting acknowledgement from the owner he can inform hic customer.

4. **Employee View** – Like Owner, manager can also check the employee details. He can check the employee data and update his profile. But a manager cannot hire or fire an employee. For that purpose he has to request owner.

5. **Create Customer Profile** – Manager has a privilege to create profile of walk in customers. Application is web based so customer can easily deal or interact with it. They can perform different tasks and application can easily recognize them by their profile but what about those walk in customers.

6. **Placing Orders** – For walk in customers manager can place their order and complete the billing process. Here manager place orders, cancel orders or add and remove items from existing orders. The performance of this module must be fast.

7. **System** must be quick as well as good enough to calculate the price with all current offers applied on that item.

8. **Customer Feedback** – Like Owner manager must have the same interface to check the feedback of the customers. Manager can see the feedback of customers of his own branch only. He can also revert them.

**Customer**

1. **Product Search** – Application is giving a very user friendly interface to the customer. Customer can visit the home page of FabFeet and search for a particular item. For searching purpose customer can use the product code, product name in the search box. She can also check the category list of all products which is visible on the homepage of the application.
2. **Placing Order** –After searching product she can select that and go through all details available on the interface like name of the product, product id, price, available sizes etc. She can also view the feedback of other customers who have purchased that same product. It will help her to clear all her doubts about the product.
3. Apart from above mentioned information, application will also educate customer about canceling and returning product process and its policies.
4. **Cancel Order** – Canceling an order is another option where customer can cancel her order. Customer can enter the order number and cancel that order after entering the reason of the same. If everything is alright and customer is under the guidelines of this process then Company will cancel her product and refund details will be delivered to her.
5. **Return Order** – If customer finds any problem with the product then she can easily return the product. Again she has to provide the order number and a valid reason of returning the product.
6. **Feedback** – Customer can mark his valuable feedback to the company. As application is providing the interface to both owners as well as to the manager of the branch to check this feedback. After submitting the feedback an immediate email or SMS has to reach to the customer's email address or mobile phone respectively as the acknowledgement of receiving the information.

**Note** – if programmer finds extra time during this development then he/she can add more features to this application.

# Guidelines to the instructors:

## Step 1

Make student understand about the Java SE 7 platform and all its concepts. The knowledge of UML models will help them to understand the basic structure of the system.

It is mandatory to go through the given case study. Make sure each student should have his/her own documentation and plan of this system before writing the code.

## Step 2

If students have achieved Step 1 then guide them to divide this system in spate modules. Also guide them to create use cases, dataflow diagram and flow charts to understand the

modules in a better way.

### **Step 3** – Role Play

Let the team present their design.

Note Down comments/ideas by other team and facilitator

Keeping these ideas as base, team has to list down the operations that can facilitate the Company.

Write algorithm to solve all above problems

### **Step 4** – Validate

All modules must be validated with different input values to introspect the reliability of each module.

### **Step 5** - Extension of Project work

- Algorithm to avoid the concurrency in this system
- System must support internationalization

### **Step 6** – Pre Assessment and Post Assessment during the workshop

The trainer has to ensure pre assessment exam must be completed on the first day of the workshop. On the 5th and 10th day post assessment exam is to be conducted without fail, for Java SE 7.

## **Reference Material:**

Case study writers please add reference links to

https://docs.oracle.com/javase/tutorial/java/index.html

http://www.tutorialspoint.com/java/

https://docs.oracle.com/javase/tutorial/collections/index.html

This will help the students to get a better understanding about the websites from where they can gather more information for the work