

Graduate Diploma in Systems Analysis

GetFreshFood

GetFreshFood is supermarket which sells a large variety of products, ranging from fresh foods such as milk, cheese and bread to household items such as detergents, pots and pans. It has been operating in a very traditional way, which requires its' employees to take stock, order goods, label the price tags manually. The owner of the supermarket has hired a branch manager, Edward, who looks after the overall operation of the store. There are 6 cashiers, 20 promoters and 4 store men and they work in shifts. There are two shifts, 7am to 3pm and 3pm to 10pm. There are 3 cashier, 10 promoters and 2 store men for each shift. Each promoter is placed in-charge of a set of products and their designated shelves.

Jennifer is one of the promoters. Her job includes checking the goods on display. When the goods are running low, she is supposed to go to the store and bring out more and display them on the shelf. She will also remove goods which were damaged or expired and replenish fresh ones. She is required to label each product with a price tag and the shelf with the appropriate product name and price. As an example, she needs to write the price on each price tag and stick them on the detergents. She also has to write the price on a shelf label and stick the label on the side of the shelf. She would find out the pricing of each product from a product form issued by Edward. In the form, she will also find instructions on how to display the goods. Edward would typically classify the goods into fast selling, moderate selling and slow selling. The fast selling goods are to be displayed at shelf positioned at the eye level of the customers. The moderate selling goods are to be displayed at the shelf above or below the eye level. The slow selling goods can be displayed anywhere else for example, the lowest or highest shelf. As compared to Jennifer, Ann who is the cashier has an easier job. All she needs to do is to go through the shopping baskets of each customer and enter the price of the selected products into a cash register. The cash register will print out two copies of the receipt which consists of the list of items bought and the total amount payable. Ann will collect the money from the customers and keep the receipts. At the end of her shift, Ann will tally the money and collate all the items sold. She will list of the number of each product sold and pass it to Tom who is the store man and Edward. This list is known as the end-of-day sales record.

Tom's main duty is to maintain a set of inventory record of all goods. He will update the inventory based on Ann's **end-of-day sales record**. He is also responsible of returning any damaged or expired goods to their supplier, and updates the inventory record accordingly. Tom will also place order from the supplier when the stock is running low. He will decide on the quantity to order based on the classification of goods recorded on the product form issued by Edward. For example, he will order more stocks for goods in the fast selling category and less stock for goods in the slow selling category. Tom is unhappy because he has to manually maintain the inventory of all the goods which is very tedious. During each monthly inventory check, he will very often find that the numbers recorded in the inventory do not tally with the actual goods. Tom did consider that it could be due to mistake made by the cashiers when they record their sales or by the promoters when they withdraw goods from the store.

At the end of each shift, Edward will check the end-of-day sales records. He will always reprimand the cashier whenever, the cash collected does not tally with the sales records. Ann is also very unhappy and would blame the promoters for labelling the prices wrongly. When such cases happen, Edward will have to write a special report, loss of sales report, to inform the owner of the discrepancy. Edward is also required to review the weekly sales result of all products. If the store sold more than 30 of that product in a week, he would consider it as fast selling goods. If the store sold 10 to 30 of that product in a week, he would consider it as moderate selling goods. Any product sold below 10 in a week, it will be considered as a slow selling product. He will record this classification in a product form for each product and pass the form to the promoters and store men. Edward will also need to change the pricing of products as and when he receives instruction from the supermarket owner, for example, 5% increase in price for all products. The pricing is also recorded in the product form.

The supermarket owner felt to an urgent need to remove the occurrence of such discrepancies in the sales and the inventory record, so to avoid making losses. They decided that they should implement IT solution to help automate the operation of the supermarket. The owner would also like to keep up with the competition by providing online order and deliver service so as to increase the sales.

Your company who is IT consulting firm, are invited to help GetFreshFood with their digital transformation. This transformation process would provide end-to-end customer services as well as a digitised shop floor that is linked to the backroom store.

Part I: User requirement gathering

You are required to interview the users of GetFreshFood. Based on the information gathered from the interviews and case study provided, you are to document your findings.

The class would be able to view the interviews conducted by the respective teams. Information gathered through the interviews can be used by all teams for the purpose of their assignment. Each team is required to submit interview minutes of the interview conducted by them.

With your findings, you are to prepare a 20-minute presentation for the CEO of GetFreshFood. In your presentation, you are to convince the CEO to award the project to your consulting firm. The presentation should comprise of the following:

- Challenges faced by the current system used by GetFreshFood
- Technologies introduced to resolve these problems
- Identify one of the users and present his/her persona and customer journey map to show that you have a good understanding of their users.

All members in the team should participate in the presentation. The presentation should be recorded and be submitted (refer to the submission section).

Part II: User Requirement Specification

The CEO of GetFreshFood has decided to award the project to your consulting firm. You are to complete the design and submit a user requirement specification document (URS). Your specification should contain the following:

- Background information about the system to be build
- Overview of what is in the scope and what is out of scope
- **Two important Personas** for the system and **their customer journey maps**
- **User stories derived from the two Personas**
- System use case model (full automation)
- Functional Requirement,
 - **Activity diagram for use case (one activity diagram per team member excluding login/out and report generating screens)**
 - **Screen/Print out design (screens for two important use cases per team, excluding login/out and report generating screens)**
- Non-Functional Requirement
 - System Performance Requirements
 - Security Requirements
- Test cases and Test data (**one test case and one set of test data per team**)

Submission of Part 1 & 2

The interview minutes (by team for the role that you have interviewed) should be submitted as PDF. Both the report & presentation powerpoint slides should be submitted. You may refer to the class schedule for the deadline of submission. Only PDF softcopies are acceptable and should be upload to CANVAS folder: Analysis and Design student submission folder \ GetFreshFood folder

Hint: Smart IT solution with consideration of IOT, analytic would be good. A dashboard for each group of users would be great! You may assume that the business owner is willing to invest as long as he is convinced that the solution is feasible and realistic.