

A SYSTEM AND METHOD FOR PROPOSING A SALES ORDER

TECHNICAL FIELD

[0001] The present application relates generally to inventory management. More
5 particularly, the present application relates to proposing a sales order.

BACKGROUND

[0002] Conventionally, various types of platforms have been developed to facilitate
communication between a plurality of user groups in an organization such as a retail
10 organization having one or more retail outlets and for assisting operation involved in
retail business. For example, sales order can be generated and submitted by the
marketing team and/or team of merchandise promoters via the platform. However,
generating a sales order may prove to be a challenging task as it is difficult for the
merchandise promoters to predict an optimal amount of the products to be ordered. At
15 one hand, an overstocked inventory ties up valuable resources, takes up storage
space, and results in wasted resources and lost profits. An understocked inventory, on
the other hand, can lead to stockouts, dissatisfied customers, and missed
opportunities.

[0003] In certain situations, merchandise promoters stationed in the retail outlet for
20 in-store marketing events may not have full access to records of previous sales, current
stock counts, or supplier information, making it difficult for them to accurately determine
the merchandise quantities needed for a sales order. Consequently, additional efforts
may be required to communicate with other personnel or departments of the outlets
and the vendor or supplier before a sales order can be initiated.

25 [0004] Further, the retail operations are often performed via separate platforms or
systems, often requiring manual cross-checking on various data sources. This renders
the retail and sales operation inefficient, and the sales order submission and
processing may be difficult to be streamlined.

[0005] United States Patent No. US9792545 disclosed a vendor-based inventory
30 management system which analyses and filters point of sales (POS) data and suggests
inventory provisioning for each storefront from the vendor warehouse. The system
involves a communication module for receiving POS data from a plurality of retailers
and an analysis module for suggesting the provisioning of products among the

retailer shops. However, the system is not integrated with sales order or purchase order generation and does not facilitate inventory management from the perspective of retail outlet.

[0006] United States Patent No. US8239244 disclosed a data modelling method utilizing transactional log recorded in a retail outlet. The information in the transactional log includes the current price, promotion and merchandising information, and units purchased. The method includes determining out-of-sales status of a product by comparing the probable number of sales and actual number of sales.

[0007] United States Patent No. US10430756 disclosed an inventory management system for tracking aggregate inventory level of products in warehouses. The system takes into account sales order from a sales channel or purchase order made to the warehouse, which are utilized for updating availability of the inventory level in the warehouses. While the above patents are primarily directed to tracing and predicting the stock level of vendor warehouse, the patents are silent on the tracing and management at the level of retail outlet which would play an important role in strategizing and marketing products at the retail level.

[0008] The present disclosure contemplates that there is therefore a need for a solution which addresses, at least in part, one or more of the forgoing problems.

SUMMARY

[0009] According to an aspect of the present disclosure, there is provided a computer-implemented system for facilitating generation of sales order in a retail outlet, the system is implemented on a host device and one or more computing devices in data communication with a network, the system comprising an interface module for providing a platform interface on a computing device to allow user interaction with the system through the platform interface, an inventory database for storing a list of merchandise items in the host device, each of the items is identified by a Stock Keeping Unit, SKU; a task module configured for creating a task data for merchandising the merchandise items, the task data is created by specifying a merchandiser and visiting schedule of the merchandiser to the retail outlet, a sales record module for storing sales historical data of the merchandise items coupled to the associated SKU in the retail outlet, a stock aging module connected to the task module for retrieving the merchandises items requiring stock aging input, the stock aging module is configured

for displaying outlet stock quantity of the merchandise items at the retail outlet and receiving input on the outlet stock quantity of the merchandise items by the merchandiser, wherein the input on the outlet stock quantity forms a dated stock aging data, a sales ordering module for creating a sales order of the merchandise items, wherein the sales ordering module is configured for generating and displaying a page with the merchandise items for the sales order based on the task data, and providing a proposed number to be ordered for each of the merchandise items in the sales order, wherein the proposed number to be ordered is calculated based on the outlet stock quantity (OS) of the stock aging data, the sales historical data, and the visiting schedule of the merchandiser in the task data, submitting the sales order in the system (100) upon confirmation by the user.

[0010] According to an embodiment of the invention, there is provided a system for providing a proposed number of the merchandise items to be ordered, the proposed number is obtained by retrieving the outlet stock quantity (OS) of the merchandise items from the stock aging module, calculating an average daily sales (ADS) in the retail outlet based on the sales historical data retrieved from the sales record module, determining number of days (NOD) to next visit of the merchandiser according to the visiting schedule in the task module, receiving input of a buffer percentage (BP) by the user, calculating the proposed number to be ordered by multiplying the average daily sales (ADS) of the merchandise items with the number of days (NOD) to next visit, increasing the number by a buffer percentage (BP), and subtracting the outlet stock quantity from the number, to obtain a value for the proposed number to be ordered.

[0011] According to another aspect of the present disclosure, there is provided a computer-implemented method for facilitating generation of sales order of merchandise items in a retail outlet, the method comprising: receiving a task for merchandising the merchandise items and updating outlet stock quantity, generating a draft sales order based on the task, in which a list of merchandise items and a proposed number to be ordered for each of the merchandise items are provided, wherein the proposed number to be ordered is obtained by retrieving an outlet stock quantity from a stock aging module, calculating an average daily sales (ADS) of the merchandise item based on a sales historical data retrieved from a sales record module, retrieving a warehouse stock quantity of the merchandise items from a warehouse stock module, determining number of days (NOD) to next visit of the merchandiser promoter according to a visiting

schedule set in the task, multiplying the average daily sales of the merchandise items with the number of days (NOD) to next visit, increasing the number by a buffer percentage, and subtracting outlet stock quantity from the number, to obtain a value for the proposed number to be ordered.

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BRIEF DESCRIPTION OF DRAWINGS

[0012] The invention will be better understood with reference to the drawings, in which:

10 Figure 1 shows a schematic block diagram of interconnected devices for implementing a system for facilitating generation of a sales order, according to an embodiment of the disclosure;

Figure 2 shows a system for facilitating generation of a sales order, according to an embodiment of the disclosure;

15 Figure 3 shows an example of an interface for creating a task in a task module, according to an embodiment of the disclosure;

Figure 4 shows an example of an interface of a task, according to an embodiment of the disclosure;

Figures 5A & 5B show an example of an interface for updating stock aging in a stock aging module, according to an embodiment of the disclosure;

20 Figure 6 shows an example of an interface of reviewing entries of sales order, according to an embodiment of the disclosure;

Figure 7 shows an example of an interface of a sales order, according to an embodiment of the disclosure;

25 Figure 8 shows an example of an interface for reviewing a merchandise item in the sales order for submission, according to an embodiment of the disclosure.

Figure 9 is flow chart showing a method for proposing a sales order, according to an embodiment of the disclosure.

DETAILED DESCRIPTION OF THE EMBODIMENTS

30 **[0013]** Throughout this document, unless otherwise indicated to the contrary, the terms “comprising”, “consisting of”, “having” and the like, are to be construed as non-exhaustive, or in other words, as meaning “including, but not limited to.”

[0014] Furthermore, throughout the specification, unless the context requires otherwise, the word “include” or variations such as “includes” or “including” will be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

5 **[0015]** Throughout the specification, unless the context requires otherwise, the term “module” should be understood to imply a group or collection of executable instructions for carrying out a functionality of the system on a device.

[0016] Throughout the specification, the terms “supplier” and “vendor” should be understood as the entities who supply the merchandise items to the retail outlet. The
10 terms may be used interchangeably to represent the source of provisioning the merchandise items to the retail outlet.

[0017] Throughout the specification, the term “sales order” should be construed in a generic sense as an ordering request generated via the electronic platform for the requested merchandise items to be provided to the retail outlet.

15 **[0018]** Unless defined otherwise, all technical and scientific terms used herein have the same meaning as is commonly understood by a skilled person to which the subject matter herein belongs.

[0019] The present invention relates to a computer-implemented system 100 and method for facilitating creation and processing of sales order of merchandise items in
20 a retail outlet. The system is embodied as a platform accessible to users and allowing interactions of the platform with the users.

[0020] Figure 1 shows the interconnection of the computing devices for implementing the system 100, according to an embodiment of the invention. The system 100 can be implemented with one or more computing devices 102 (e.g.,
25 laptops, desktop computers and/or electronic mobile devices having computing capabilities such as smartphones and electronic tablets), with at least one host device 104 (e.g., a server). The computing device(s) 102 and the host device 104 can be coupled to the communication network 108, by manner of one or both of wired connection and wireless connection.

30 **[0021]** In one embodiment, the computing device(s) 102 can include a first computing device 102a (first user), a second computing device 102b (second user) and a third computing device 102c (third user). Each of the first, second and third computing devices can include a display screen and/or other peripherals for receiving input and

providing output of information. For example, the devices may include interactive screen, a keyboard, a mouse, an audio receiving device, a location detection device for receiving instructions or information. The computing device may also include output devices such as a screen and a speaker for providing content and information to the users. The first computing device 102a, the second computer 102b, and the third computing device 102c and the host device 104 can be configured to communicate with each other via the communication network 108.

[0022] In one embodiment, the users may be categorized in different user groups which have varying clearance level and accessibility to the platform. For example, a first user group corresponds to administrative personnels, second user group corresponds to merchandiser promoters, and third user group corresponds to supervisors and managers. Each of the user groups can have designated accessibility to the platform and may only view certain interface screens of the system based on the clearance level of the user group.

[0023] In this regard, it is appreciable that platform 200 as provided by the system 100, according to an embodiment of the disclosure, can be hosted/carried by the host device 104. The integrated retail and merchandising platform 200 can preferably be implemented by manner of software programming. For example, the host device 104 can include a processor (not shown) and the platform 200 can be implemented by manner of a software code which can reside in, and which can be executed by, the processor. The software code, when executed, causes the integrated retail and merchandising platform 200, which can include one or more interface screens, to be presented in a manner so as to be visually perceivable by the aforementioned user(s) via the display screen(s) of the computing device(s) 102.

[0024] With reference to Figure 2, the system 100 for facilitating generation of sales order in a retail outlet is shown which comprises an interface module 210, a task module 220, a sales record module 230, a stock aging module 240, a warehouse stock module 250, and a sales ordering module 250. An interface module 210 is provided in the system for displaying a platform interface to the users with the computing device(s) 102. The interface module 210 displays one or more interface screens to the users and allows users to provide input and feedback through the platform interface into the system 100 via the platform interface. The interface module 210 is adapted to display the interface screens according to the clearance level of the user. The interface module

210 is connected to the other modules for displaying a set of interface screens according to the modules. A task module 220 is provided in the system for management and creation of the task for merchandising items in a retail outlet. A stock aging module 240 is connected to the task module 220 so that a stock aging task can be automatically generated and the necessary items requiring stock aging input can be populated into the stock aging module 240. The sales ordering module 260 is connected to and retrieves information from the task module 220, the sales record module 230, the stock aging module 240, and the warehouse stock module 250.

[0025] An inventory database is established in the system 100 for storing a list of merchandise items. Each of the items is identified by a Stock Keeping Unit (SKU) as an identifier of the item. The inventory database enables identification of the merchandise items across multiple outlets, with the use of universal identifiers. In an embodiment, the system 100 provides an interface (not shown) to allow insertion of details of new items into the system or amend the details of the existing items to update the inventory database. The details of the items in the inventory database may include but not limited to a barcode, an SKU, picture of the item, name of the item, and description of the item. It will be appreciated that throughout the specification, the merchandise items are associated with SKU for performing any action according to the present invention. In an embodiment, the inventory database is kept as a centralized database and retained in the host device.

[0026] The system of the present invention further comprises the task module 220 for creating and managing a task by the users for merchandising the merchandise items. A task data will be formed upon creation of the task which comprising a merchandiser and visiting schedule of the merchandiser to the retail outlet. An example of an interface for creating task is shown in Figure 3, in which the user may specify the retail outlet 320, time period 330, and a visiting schedule 310 of a merchandiser. In an embodiment, a list of selectable merchandise items may be provided as retrieved from the inventory database for creating a task. In an embodiment, the creation and management of the task may be performed by the administrative personnel of the organization, which is the first user group. In a further embodiment, the task module 220 allows for further updating of the task and monitoring overall status of the tasks.

[0027] Figure 4 shows an exemplary interface for updating compliance of a task which is accessible and utilized by merchandiser, after a task has been created. A

merchandiser is specified upon creation of the task, and the task interface is viewable and accessible from the computing device of the particular merchandiser assigned to the task. It is understood that a plurality of merchandisers will be using and accessing the system 100. Only the task assigned to the merchandiser will be shown on the device of the merchandiser. It is understood the merchandiser is associated with an ID such that the system is configured to generate task interface based on the merchandiser ID in task data created. The task section 340 provides several options for executing and updating compliance of the task. One of the options include a sales order 350 which enables the merchandiser to initiate the sales ordering process, which will be described in detail in the sales ordering module. In an embodiment, the merchandiser includes any of the outlet employees, promoters, or shopkeepers stationed in the retail outlet.

[0028] Further, a sales record module 230 is provided in the system for obtaining and storing sales historical data of the merchandise items coupled to the associated SKU in the retail outlet. In this regard, the sales historical data refers to the date of transaction of the items, the number of items purchased in a time period. The sales historical data may be derived from the ordering history between the retail outlet and the supplier. In an embodiment, the sales record module 230 provides an interface for the input of sales historical data into the system by the users. In one of the embodiments, the sales historical data may be obtained from warehouse supply portal from the vendor or supplier, or B-2-B system of the vendor or supplier. In a further embodiment, the warehouse system or B-2-B system may be connected to the sales record module 230 for obtaining the sales historical data. In an alternative embodiment, the sales record module 230 may be integrated with or connected to the accounting system of the retail outlet for retrieving the sales historical data in an autonomous manner. The sales record module 230 may keep the sales data for at least three months.

[0029] A stock aging module 240 is provided in the system 100 for storing and displaying outlet stock quantity, the stock aging module 240 is further configured for receiving input on number of the merchandise items by the merchandiser assigned for the task. The input on the outlet stock quantity forms a dated stock aging data. An example of the interface for updating stock aging is shown in Figures 5A and 5B. In the stock aging interface in Figure 5A, the list of merchandise items will be shown according

to the task data created, with the previous outlet stock quantity 410 recorded and the date. The stock aging module is connected to the task module 220 for retrieving the list of merchandise items requiring stock aging input. In an embodiment, the merchandiser may be prompted to update the stock aging of the merchandise items at a specific date
5 based on the requirement set in the task. A new entry button 420 can be pressed for inserting a new outlet stock quantity of the item as shown in Figure 5B. By way of non-limiting example, the information which can be inserted includes the expiry date 440, previous quantity 450, new quantity 460, and batch number 470. A picture of the item 480 may be shown in the stock aging module interface which can be retrieved from the
10 inventory database. Alternatively, a new picture may be uploaded into the module. Pressing the save button 390 creates a record of the outlet stock quantity 410.

[0030] A warehouse stock module 250 is provided in the system, in an embodiment, for storing warehouse stock quantity of the merchandise items at a warehouse for supplying to the retail outlet. It will be understood that the warehouse stock quantity
15 should be construed as the available number of items which may be supplied to the retail outlet, and the warehouse stock quantity can be an aggregate number of the available stock from the suppliers across multiple warehouses. In an embodiment, the warehouse stock module 250 is connected to the warehouse inventory system of the supplier or vendor to obtain the warehouse stock quantity of an item identified by SKU,
20 in an autonomous manner. In yet another embodiment, the warehouse stock quantity may be input into the system by the vendor or supplier by accessing the system. Alternatively, the information on the warehouse stock quantity may be obtained separately via any means of communication (such as via email) for inputting into the warehouse stock module of the system. In further embodiment, the stock quantity may
25 be updated at regular intervals, and stored in the warehouse stock module for retrieval for calculation of proposed number to be ordered. Alternatively, the stock quantity may be updated upon request by the users or when sales order is being generated.

[0031] A sales ordering module 260 is provided in the system 100 for allowing creation of a sales order of the merchandise items and proposing the number of the
30 merchandise items to be ordered. The sales ordering module 260 is configured for generating and displaying a page with the merchandise items for the sales order based on the task data, and providing a proposed number to be ordered for each of the merchandise items in the sales order, wherein the proposed number to be ordered is

calculated based on the outlet stock quantity (OS) of the stock aging data, the sales historical data, and the visiting schedule of the merchandiser in the task data. The sales order can be submitted upon confirmation by the user. Examples of interface for making the sales order are shown in Figures 6 to 8.

5 **[0032]** With reference to Figure 6, the sales order interface may be brought up by pressing the “sales order” button 350 in the task interface (Figure 4). The sales order interface shows the list of previous sales order 510 made, along with the total amount 530 of the sales order and the status 520 of the sales order. In an embodiment, a proposed draft sales order is automatically generated upon completing the stock aging
10 input by the merchandiser as necessitated in the task. The draft sales order may be further accessed in a subsequent interface screen as shown in Figure 7 for modifying the sales order before submission. Alternatively, a new sales order can be created by pressing the ADD button 540.

[0033] Figure 7 shows an exemplary interface of a draft sales order, along with the
15 various components within the interface. The displayed interface provides a view of essential details, including the Purchase Order (PO) number, retail outlet, PO expiry date, order status, remarks, and the responsible salesperson. The merchandise items, identified by its unique SKU, are provided and listed according to the task data created beforehand. Each of the proposed merchandise items is accompanied by a proposed
20 number to be ordered. It is possible to manually add a new item to the list of items by pressing the “+SKU” button 630. In addition, a summary section 620 offers views on the total cost of the sales order and the quantity of items involved. Furthermore, the interface permits users to attach their signature to the sales order, for enhancing its authenticity and accountability if necessary. Each listed merchandise item 610 is
25 interactive, allowing users to modify the quantity as needed in the subsequent interface screen.

[0034] Figure 8 shows an example of an interface of one of the merchandise items to be ordered in the sales order, identified by the specific SKU. The interface shows various information on the selected merchandise item, including the item name, picture
30 701 of the merchandise item, a barcode 702 and a serial number associated with the merchandise item and the unit price. The information may be retrieved from the inventory database. Sales historical data 703 of the merchandise item is displayed, for example, including the average monthly sales, previous order history of the item in the

outlet. Sales historical data may be retrieved from the sales record module 230. The warehouse balance 707 as shown in the interface refers to the warehouse stock quantity, which is retrieved from the warehouse stock module 250. The current stock 709 refers to the outlet stock quantity available at the retail outlet, which is retrieved from the stock aging module 240. A threshold value 706 corresponds to the maximum storage quantity allowed for the retail outlet, which is predefined by the users. The threshold value is specific to the retail outlet and can be provided or set into the system by the users. Additionally, a toggle 704 between calculation mode by piece or by carton is provided. A proposed number 708 of the item to be ordered is provided automatically. However, the quantity can be manually adjusted with the adjustment buttons 705.

[0035] In operation, the method of creating a sales order on the system of the present invention will now be described according to Figure 9. Firstly, a task is created for merchandising the items via task module 220. The task created includes updating the stock aging which will be carried out by the merchandiser via the stock aging module 240. Upon completion of the update and input of the stock aging, a draft sales order is automatically generated in the sales ordering module in which the proposed items and number of the merchandise items would have been provided in the draft sales order. While the generation of draft sales order occurs instantly upon updating of stock aging, the steps of calculating the proposed number for sales order is described herewith for understanding of the data flow.

[0036] For calculation of proposed number in the sales order, the outlet stock quantity (OS) is first obtained 1001 from the stock aging module.

[0037] The sales ordering module 260 retrieves the outlet stock quantity of the merchandise items from the stock aging module 240. The sales ordering module 260 then retrieves the sales historical data and calculate the average monthly sale (AMS) for the last three months 1002, which is then translated into average daily sales (ADS) 1003. The sales ordering module 260 then obtains the warehouse stock quantity (WS) of the item 1004 from the warehouse stock module 250. Further, the user-defined buffer percentage (BP) which has been entered into the system will be retrieved 1005 for generation of sales order. For example, the buffer percentage can be entered into the system at earlier stages such as when creating the task. Alternatively, buffer percentage may be suggested by the system based on the historical sales data. For example, the buffer percentage can be in the range of 0 to 15%. The buffer percentage

may be determined based on variation in sales of the item in three months. The number of days to subsequent visit (NOD) by the merchandiser is calculated 1006 based on the visiting schedule from the task module 220.

[0038] The proposed number of items to be ordered is calculated 1007 by multiplying the average daily sales (ADS) of the merchandise item with the number of days (NOD) to next visit, follows by increasing the number by the buffer percentage (BP), and subtracting the number by the outlet stock quantity (OS), to obtain a value for the proposed number of the merchandise items to be ordered.

[0039] In particular, the calculation is based on the equation I below.

$$\text{Proposed number} = (ADS \times NOD) + (ADS \times NOD \times BP) - OS \quad (\text{Equation I})$$

[0040] In an embodiment, if the proposed number calculated is more than the warehouse stock quantity (WS), the proposed number will be replaced 1008 with the warehouse stock quantity. Alternatively, an alert message will be displayed if the proposed number is more than warehouse stock, while the calculated proposed number is retained.

[0041] Further, the Maximum Storage quantity is obtained 1009 for further adjusting the proposed number. If the sum of the calculated proposed number and outlet stock quantity exceeds the Maximum Storage quantity (MSQ), the proposed number is adjusted 1010 to the number of MSQ deducted by outlet stock quantity (OS). The Maximum Storage Quantity (MSQ) is a user defined value inserted by the users into the system for ensuring the quantity ordered does not exceed the storage capacity of the outlet. The MSQ value is specific to the merchandise items and the outlet and may be entered into the system by the user in earlier stages.

[0042] The proposed number is displayed 1011 for each of the items in the sales order interface. While the proposed number of items to be ordered has been calculated and displayed to the user, the number of merchandise items to be ordered may be manually adjusted 1012.

[0043] The user may review the draft sales order before submission 1013 of the sales order in the system.

[0044] Once the sales order is submitted, it will form a sales order in pending status. The sales order may be further actioned by other personnels of the organization, for example, by the administrative or finance personnel for approving the sales order and thereafter forwarded to the vendor or supplier. The status of the sales order may be

updated accordingly upon approval. Alternatively, the sales order module may be connected to a portal of the vendor or supplier for sending the sales order.

[0045] Various examples of calculations of the proposed number of items to be ordered are shown below.

[0046] Example 1

Parameter	Value	Source of data
Outlet stock quantity (OS)	15	Retrieved from stock aging module
Average Monthly Sales (AMS)	300	Retrieved from sales record module
Warehouse stock quantity (WS)	182	Retrieved from warehouse stock module
Buffer Percentage (BP)	5%	User input
Number of Days next visit (NOD)	5	Retrieved from task module
Maximum Storage Quantity (MSQ)	60	User input

Calculation

- 10 The average daily sales (ADS) = $300 / 30 \text{ days} = 10$
Proposed number = $(\text{ADS} \times \text{NOD}) + (\text{ADS} \times \text{NOD} \times \text{BP}) - \text{OS}$
 $= (10 \times 5) + (10 \times 5 \times 5\%) - 15 = 37.5$

New storage quantity = proposed number + OS = 52

- 15 The new storage quantity of 52 is less than MSQ, the proposed number is not required to be adjusted to accommodate MSQ. The final proposed number shown by the system is 37

[0047] Example 2

Parameter	Value	Source of data
Outlet stock quantity (OS)	25	Retrieved from stock aging module
Average Monthly Sales (AMS)	140	Retrieved from sales record module
Warehouse stock quantity (WS)	100	Retrieved from warehouse stock module
Buffer Percentage (BP)	3%	User input
Number of Days next visit (NOD)	7	Retrieved from task module
Maximum Storage Quantity (MSQ)	40	User input

Calculation

The average daily sales (ADS) = $140 / 30 \text{ days} = 4.67$

$$\begin{aligned}\text{Proposed number} &= (\text{ADS} \times \text{NOD}) + (\text{ADS} \times \text{NOD} \times \text{BP}) - \text{OS} \\ &= (4.67 \times 7) + (4.67 \times 7 \times 3\%) - 25 = 8.67\end{aligned}$$

$$\text{New storage quantity} = \text{proposed number} + \text{OS} = 33$$

- 5 The storage quantity of 25 is less than maximum storage quantity, the proposed number is not required to be adjusted to accommodate MSQ. The final proposed number is therefore 8 after round down.

[0048] Example 3

Parameter	Value	Source of data
Outlet stock quantity (OS)	18	Retrieved from stock aging module
Average Monthly Sales (AMS)	315	Retrieved from sales record module
Warehouse stock quantity (WS)	80	Retrieved from warehouse stock module
Buffer Percentage (BP)	10%	User input
Number of Days next visit (NOD)	10	Retrieved from task module
Maximum Storage Quantity (MSQ)	80	User input

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Calculation

$$\text{The average daily sales (ADS)} = 315 / 30 \text{ days} = 10.5$$

$$\begin{aligned}\text{Proposed number} &= (\text{ADS} \times \text{NOD}) + (\text{ADS} \times \text{NOD} \times \text{BP}) - \text{OS} \\ &= (10.5 \times 10) + (10.5 \times 10 \times 10\%) - 18 = 97.5\end{aligned}$$

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$$\text{New storage quantity} = \text{proposed number} + \text{OS} = 115$$

Further, the storage quantity of 115 is more than maximum storage quantity (MSQ), the proposed number is then adjusted accordingly so that the new storage quantity does not exceed the MSQ.

$$\begin{aligned}20 \quad \text{New proposed number} &= \text{MSQ} - \text{OS} \\ &= 80 - 18 \\ &= 62\end{aligned}$$

The final proposed number of the number is therefore shown as 62.

- 25 **[0049]** It should be further appreciated by the person skilled in the art that one or more of the above modifications or improvements, not being mutually exclusive, may be further combined to form yet further embodiments of the present invention.

CLAIMS

1. A computer-implemented system (100) for facilitating generation of sales order in a retail outlet, the system (100) is implemented on a host device and one or more
5 computing devices in data communication with a network, the system comprising:

an interface module (210) for providing a platform interface on a computing device to allow user interaction with the system (100) through the platform interface;

an inventory database for storing a list of merchandise items in the host device, each of the items is identified by a Stock Keeping Unit, SKU;

10 a task module (220) configured for creating a task data for merchandising the merchandise items, the task data is created by specifying a merchandiser and visiting schedule of the merchandiser to the retail outlet;

a sales record module (230) for storing sales historical data of the merchandise items coupled to the associated SKU in the retail outlet;

15 a stock aging module (240) connected to the task module for retrieving the merchandise items requiring stock aging input, the stock aging module (240) is configured for displaying outlet stock quantity (OS) of the merchandise items at the retail outlet and receiving input on the outlet stock quantity (OS) of the merchandise items by the merchandiser, wherein the input on the outlet stock quantity forms a dated stock
20 aging data;

a sales ordering module (260) for creating a sales order of the merchandise items, wherein the sales ordering module (260) is configured for

generating and displaying a page with the merchandise items for the sales order based on the task data, and providing a proposed number to be ordered
25 for each of the merchandise items in the sales order, wherein the proposed number to be ordered is calculated based on the outlet stock quantity (OS) of the stock aging data, the sales historical data, and the visiting schedule of the merchandiser in the task data,

submitting the sales order in the system (100) upon confirmation by the user.

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2. The system according to claim 1, wherein the proposed number to be ordered is obtained by

retrieving the outlet stock quantity (OS) of the merchandise items from the stock aging module (240),

calculating an average daily sales (ADS) in the retail outlet based on the sales historical data retrieved from the sales record module (230),

5 determining number of days (NOD) to next visit of the merchandiser according to the visiting schedule in the task data from the task module (220),

receiving input of a buffer percentage (BP) by the user,

calculating the proposed number to be ordered by

- 10 i. multiplying the average daily sales (ADS) of the merchandise items with the number of days (NOD) to next visit,
- ii. increasing the number by the buffer percentage (BP), and
- iii. subtracting the outlet stock quantity from the number, to obtain a value for the proposed number to be ordered.

15 3. The system (100) according to claim 2, wherein the system further comprises a warehouse stock module (250) for storing warehouse stock quantity (WS) of the merchandise items at a warehouse for supplying to the retail outlet.

20 4. The system (100) according to claim 3, wherein the warehouse stock module (250) is configured to receive an input of the warehouse stock quantity (WS) of the merchandise items from a vendor or supplier for supplying the merchandise items.

25 5. The system (100) according to claim 1, wherein the sales record module (230) is configured to receive an input on the sales historical data of the merchandise items.

6. The system (100) according to claim 1, wherein the sales record module (230) is configured to calculate average monthly sales data for up to three months based on sales historical data of the merchandised items, and the average daily sales data (ADS) is calculated from the average monthly sales data (AMS).

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7. The system (100) according to claim 1, wherein the buffer percentage (BP) is in the range of from 0 to 15%.

8. The system (100) according to claim 1, wherein the proposed number of the merchandise items to be ordered calculated is further adjusted so that the proposed number of merchandise items to be ordered together with the outlet stock quantity (OS) does not exceed a maximum storage quantity (MSQ).

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9. The system (100) according to claim 1, wherein the maximum storage quantity (MSQ) is input into the system (100) by the user.

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10. The system (100) according to claim 1, wherein the sales order submitted in the system is subjected to further processing before sending to the vendor or supplier.

11. A computer-implemented method for facilitating generation of sales order of merchandise items in a retail outlet, the method comprising:

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receiving a task via a computing device for merchandising the merchandise items and creating a task data in a task module, the task data comprising visiting schedule of a merchandiser,

prompting and receiving input of outlet stock quantity for forming a stock aging data for the merchandise items,

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generating a draft sales order based on the task data, the draft sales order comprising the merchandise items, and a proposed number to be ordered for each of the merchandise items,

wherein the proposed number to be ordered is obtained by

retrieving the outlet stock quantity of the stock aging data,

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calculating an average daily sales (ADS) of the merchandise item based on a sales historical data retrieved from a sales record module (230),

determining number of days (NOD) to next visit of the merchandiser promoter according to a visiting schedule in the task data, and

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multiplying the average daily sales (ADS) of the merchandise items with the number of days (NOD) to next visit, increasing the number by a buffer percentage, and subtracting outlet stock quantity from the number, to obtain a value for the proposed number to be ordered.