



P15 Cash Register Vs POS System

E352- Retail Logistics

SCHOOL OF **ENGINEERING**

















What is Point of Sale (POS)



- POS is the physical location at which goods are sold to customers
- ▶ A POS software terminal is a computer replacement for a simple cash register in retail
 - Ability to track customer orders
 - Process credit/debit/NETs cards payment
 - Manage inventory



POS Components







Point of Service	Ordering & Inventory	Store Operations	
Full Service point-of-sale	Customer ordering/returns	Workforce Management	
Guided Selling (Kiosk)	In-Store Ordering Financial Manageme		
Loyalty and CRM	Stock / Replenishment	Sale Audit and Reporting	
Flexible promotion and pricing	Inventory	Store performance (KPI's)	
Digital Signage	Web-ordering	Intranet & E-mail support	

Source: http://www.unisoft.nl/_POSFlow_EN.pdf



- Point of Service
 - Ability to manage multiple customers
 - Pause to check on stock or price or to get extra item
 - Digital signage (clock-in/clock-out)
 - Sales tracking by employee
 - Integrates with payroll
 - Monitor/ control employee theft
 - ▶ Tips/ Gratuities tracking
 - Customer Relationship Management
 - Flexible Promotion and Pricing
 - Normal / Employee price discount / Volume discount / Tax







- Ordering and Inventory
 - Manage inventory reduction based on sales
 - Report inventory usage, inventory forecast
 - Trigger re-order list when inventory falls below pre-defined levels
 - Maintain sales, costs of goods and inventory ledgers
 - Print/ Design bar code labels from material master
 - Create, edit and track purchase orders
 - Track historical inventory purchase
 - Receive material to inventory





- Store Operation
 - Financial
 - Profit/Loss of each outlet (consolidated sales)
 - ▶ Report
 - Audit purposes
 - Remote support
 - Email/Intranet/MSN
 - Workforce
 - Staff operating



Functionalities of POS – Applications



- ▶ POS solution may be customized to cater to specific industries.
 - Restaurant / Pizzeria / Fast food
 - Using RF technology with PDA for ordering
 - Cinema
 - Seats selection
 - Pet Store
 - Scan/RFID for microchip in pet
 - General Retail
 - Customer Loyalty
 - Reverse logistics
 - Inventory Management







POS Documents – Report



- Inventory Movement Reports
 - Inventory Adjustment Report
 - Transfer In/Out
- Order
 - Inventory Status Reports
 - POS Sale Reports
 - Audit Reports



- EOD (End of Day) Reconciliation Sales Report
- Movement Report
 - Movement Report



POS Documents – Receipt



- Receipts
 - Store
 - GST Number
 - Employee
 - Sales/Transaction



POS – Merchandise Hierarchy



- It is a form of category management where items are grouped for easy labeling
 - It is how a product is being labeled & stored in the database of POS
- Before creating an item, there are 3 compulsory levels to be created
 - Level I: Department Group
 - Level 2: Department, Item group
 - Level 3: Item
- Each group is then assigned an ID for identification purposes
 - E.g. Department: Kids (ID: 500)
- Special code is also given when needed
 - E.g. Size of the item

POS – Merchandise Hierarchy



Level 1 (Department Group)	ID
Beach Wears	888

Level 2 (Department)	ID
Males	100
Females	200

Level 3 (Item Group)	ID
booties	11
swim suits	12
bermudas	13

Level 4 (Item Number)	ID
Sandman	101
Waterman	102
Tiger shark (F)	103
Great white (F)	104
Speed (M)	105
Zoom (M)	106
Cool Tan	107
Mega tan	108
Boomz	109
Breezy	110
Stylo	111
Malo	112

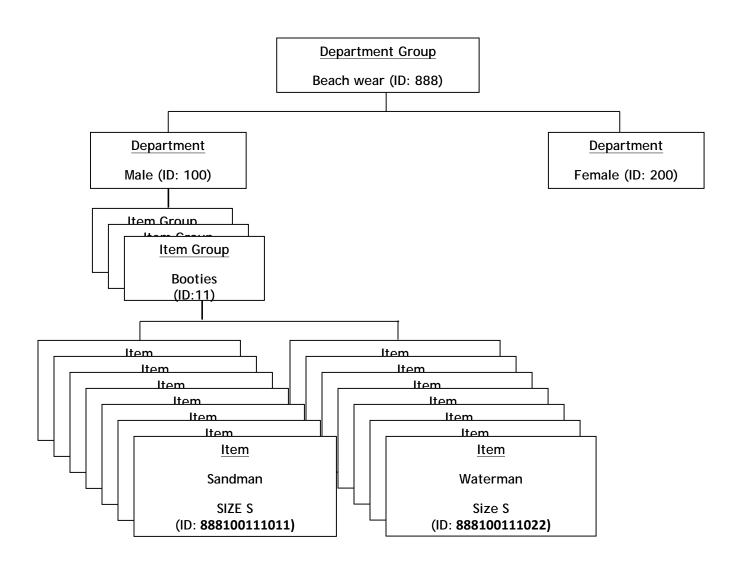
Level 5 (Item Size)	ID
XS	1
S	2
M	3
L	4
XL	5

Hence, and example of complete bar-code is as follows:

Department	Item Group	Item	Size	Barcode ID
Males	booties	Sandman	XS	888100111011
Males	booties	Waterman	XL	888100111025
Males	swim suits	Speed (M)	M	888100121053

POS – Merchandise Hierarchy

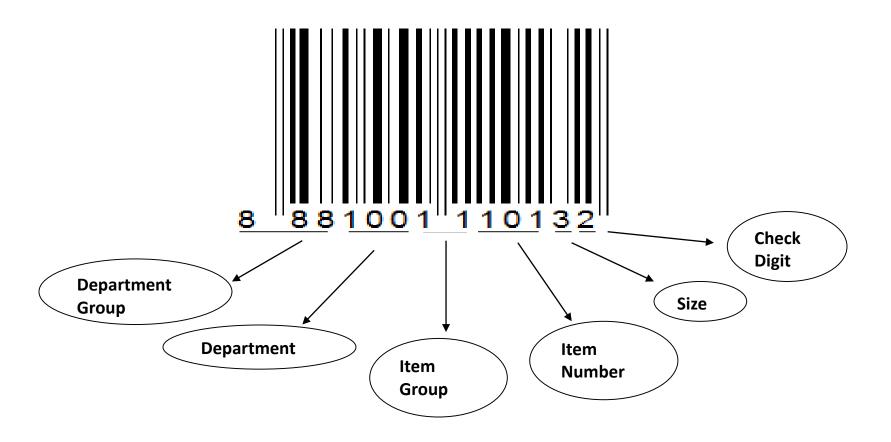




POS – Creating Barcode



Using the Barcode Creator, we fill in the content of the code to find the check digit of the content



POS Labeling – Bar Code (Re-Cap)



- Bar code is a machine-readable representation of information (using wide and narrow, black and white lines).
- Advantages
 - - Compared to keying in the article number manually
 - Accuracy- Less human errors
 - Cost-effective- Reduce labor cost
 - Higher customer satisfaction
 - Inventory Control- Portable scanners can be used to track delivery and receiving and quickly take physical inventory count.



Inventory List



- A report showing the type and quantity of materials on hand
- Inventory list consists of
 - Brand name
 - Product ID/Name
 - Price/Cost
 - Category
- Most of the POS system today is able to recognize inventory list in the following formats
 - Microsoft Excel
 - SQL/Access
 - Text file

An Example of Inventory List



Department	Item	Size	SKU/Barcode ID	Balance
Males	Sandman	XS	888100111011	2
Males	Sandman	S	888100111012	1
Males	Sandman	M	888100111013	0
Males	Sandman	L	888100111014	3
Males	Sandman	XL	888100111015	2
Males	Waterman	XS	888100111021	5
Males	Waterman	S	888100111022	10
Males	Waterman	M	888100111023	5
Males	Waterman	L	888100111024	1
Males	Waterman	XL	888100111025	4
Males	Speed (M)	XS	888100121051	1
Males	Speed (M)	S	888100121052	12

Sales Memo (Overall)

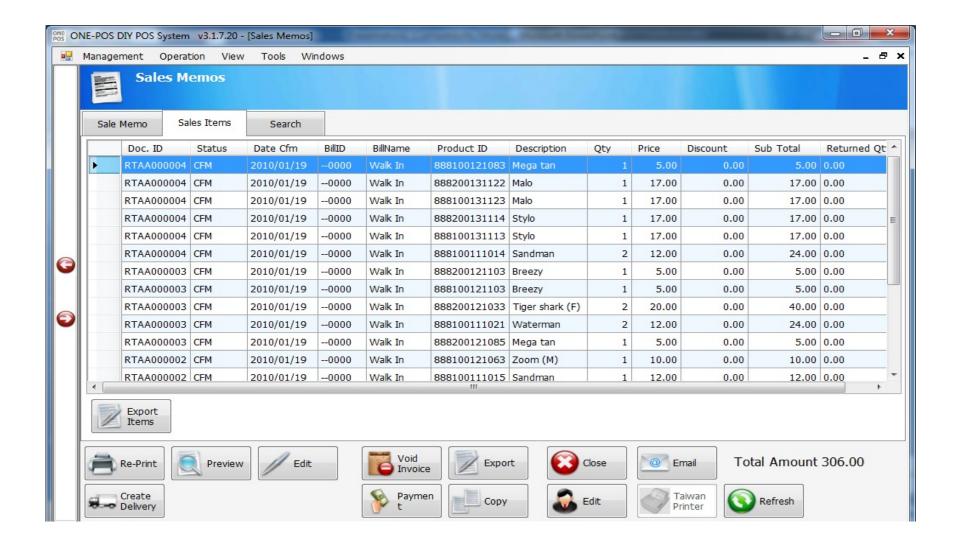


- Used to track sales performed throughout the day
 - Tracking purpose by supervisor
 - Reverse logistic (e.g. performing return)
 - Report can be generated



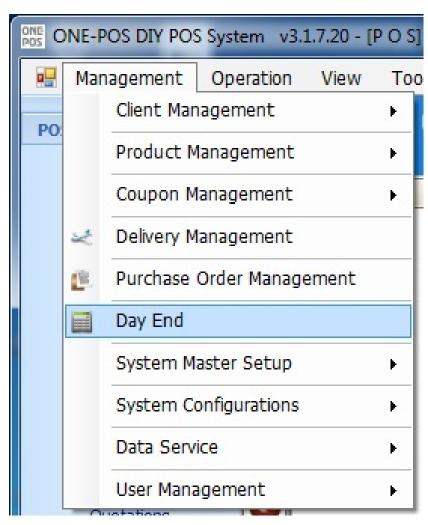
Sales Memo (Sales Items)



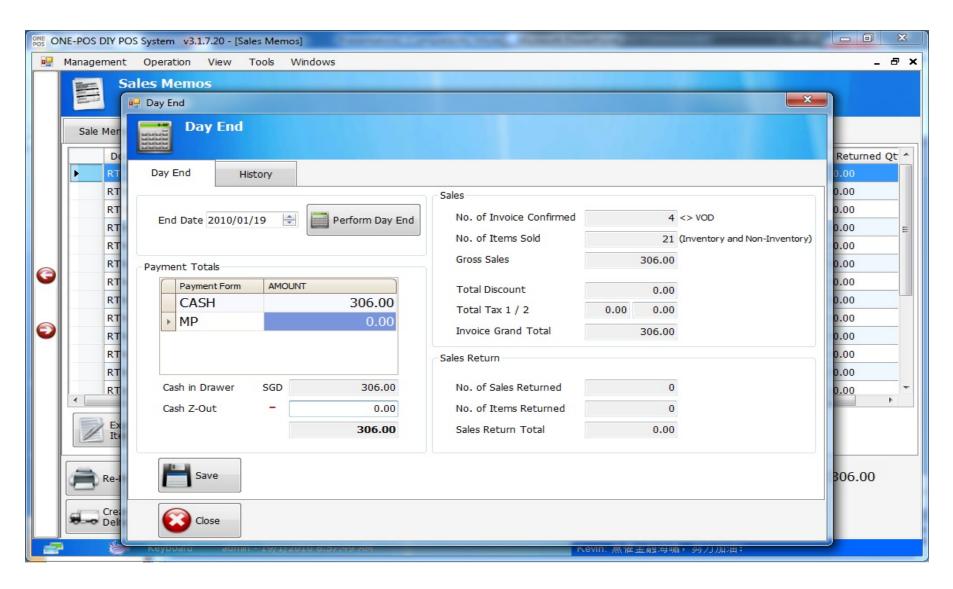




- "End of Day" is used to conclude the sale of the day
 - Record keeping
 - Various sales reports
 - Inventory report
- Once clicked, no more sales can be performed on the day
 - Normally done after the store has closed
- Management > Day End





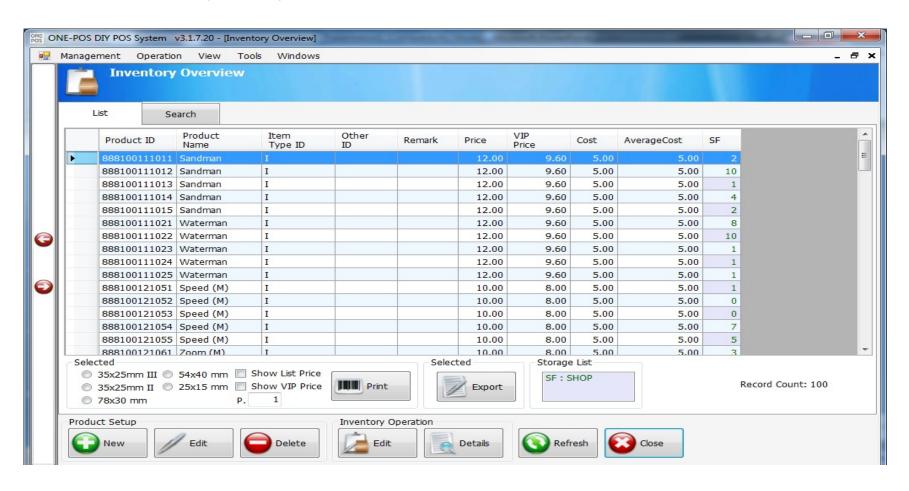




- A end of day report will be generated
- Information can be generated from this report
 - Sales date & time
 - Login user
 - Number of transactions
 - Number of items sold
 - Total sale
 - Total cash in the box



Inventories sold will be automatically be deducted from the database (3 > 2)



Suggested Solution



- In the presentation to George, the following areas should be covered:
 - Components of a POS system
 - Uses of a POS system
 - Perform sales
 - Record customer royalty
 - Perform reverse logistics
 - Inventory management
 - Sales reports
 - Sales Memo
 - Day End

Suggested Solution



- ▶ Advise to George on things to look for in a POS system:
 - Able to record all transactions
 - Able to identify users
 - Able to generate inventory reports for inventory management
 - Have customer loyalty program functions
 - Member discount
 - Loyalty points
 - Able to perform 'Day End'
 - Able to generate daily sales records
 - Able to do daily, monthly and annual closing
 - Able to back date inventory records
 - Allow for inventory adjustment but user ID must be recorded.
 - Allow for different access level.

Suggested Solution



Finally.....



Learning Objectives



- List the capabilities of a POS Point of Sale Software
 - List the Components of POS
 - List and explain the Functionalities of POS
- Develop Merchandise Hierarchy and Bar Coding for POS
- Able to import data into POS inventory management system Perform sales for customers
 - Sales memo
- Able to perform "End of Day" operation and explain what it is.