

Spartans Sporting Goods

Business Analysis Assignment



MSIS 2621 : Business Intelligence and Data Warehousing



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Introduction

Sporting goods management system ties together the use **point of sale (POS)** coupled to a powerful **inventory management** engine in addition to a fully integrated, real-time **accounting system** which automatically makes postings as we complete **day-to-day transactions**.

Technology in maintaining sporting goods enables managers to keep everything organized. By having quick access to data on the database, improved response time for customer queries, optimized order tracking technique and equipment maintenance with which managers can enhance daily sports activities for improved performance.

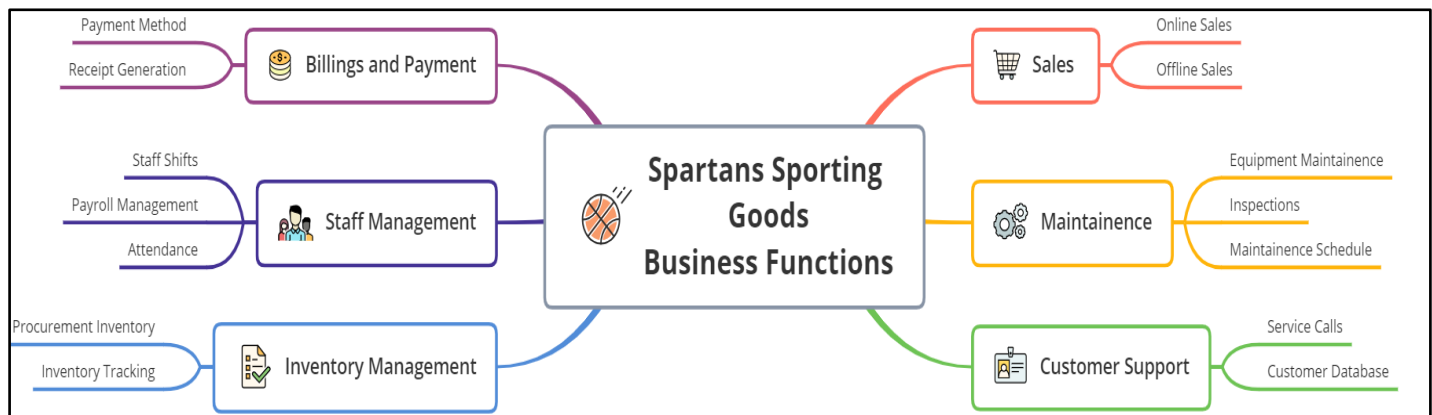
System Benefits

1. Eliminate manual work errors
2. Benefit from real-time insights
3. Enforce security
4. Reduce Report Generation time
5. Seamless Customer Experience

Key features of sports equipment management software

1. Sales Management
2. Inventory management
3. Payments Processing
4. Customer Support
5. Staff Management
6. Maintenance Scheduling

Mind Map



Business Scenario Analysis

The Business Scenario here includes the details Sporting goods management, the process and operation flow, swim lane diagram.

Scenario

A **Customer** enters the store to buy a new pair of shoes and tennis racket to start with a new hobby. The **Salesman** guides him through the aisles and assists him with the correct fit and model for the shoes. The Customer navigates through the store and finally gets his fit and size for shoes. Satisfied with the shoes, Customer now proceeds towards the tennis racket rack and seeks the help of Salesman for a racket for beginners. Salesman has a dialog with the customer regarding requirements for the racket types or any particular parameters the customer is looking for. Then Salesman shows him the existing rackets in different price ranges and according to the parameters of the customer, which are best suitable for beginners. Customer chooses his pick and proceeds towards payment. Salesman informs the **Inventory clerk** about the customer's pick and the Inventory clerk replaces the purchased items in the rack. The **Cashier** hands over the goods and receipt to the Customer. The receipt contains the bill amount for the order along with the prices for each item and the tax applied. The Customer then selects his Feedback on the screen based on his experience at the store.

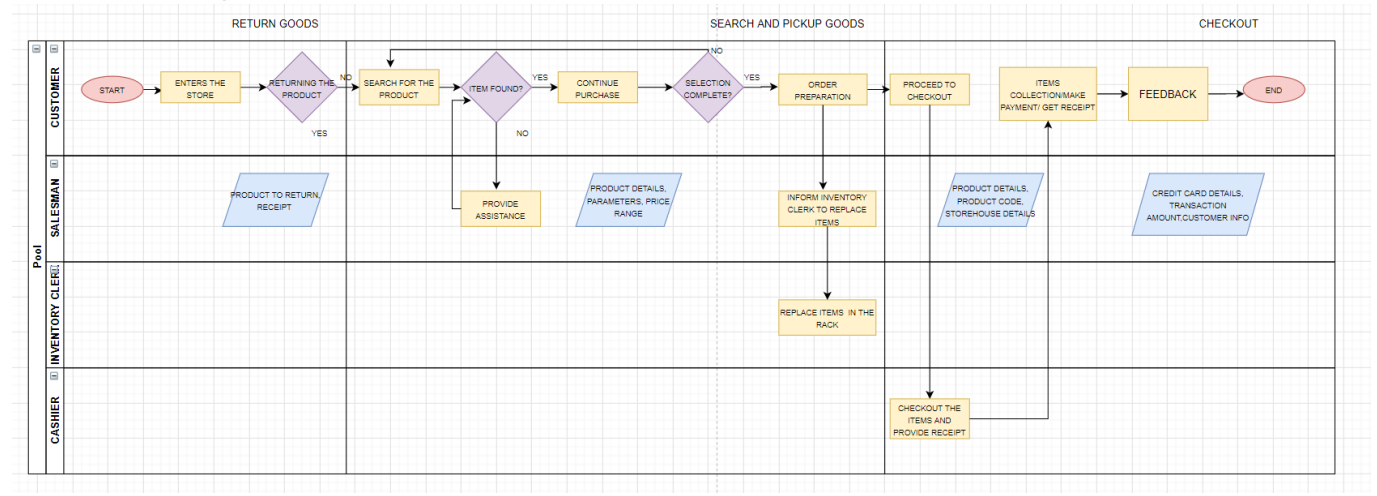
Parsing Scenario to Identify key Information

- **Stakeholders:** Customer, Salesman, Cashier
- **Products:** Shoes, Tennis Racket
- **Infrastructure:** Scanner, Computer, Card Reader, Receipt Printer

Business Data

Type of Data	Entity	Data
Business Data	Order Receipt	Sale Summary Sale Item Details Sale Amount Store Detail
Inventory Data	Inventory Checklist	Items Purchased Sale Summary

Swimlane Diagram



Interpreting the Tasks and Goals

	Customer	Staff
<u>Tasks</u>	<ul style="list-style-type: none"> ● Enter Store ● Look for items ● Ask for items ● Pick up items ● Proceed to checkout counter ● Swipe credit card (pay cash) ● Take Receipt ● Exit store ● Leave in car 	<ul style="list-style-type: none"> ● Welcome the Customer ● Help them through the racks ● Guide them the best product according to their use ● Explain the loyalty programs and offers ● Proceed through the checkout process ● Receive the feedback from the customer
<u>Goals</u>	Get the best product for the most reasonable price	Enable smooth experience through the process to get the customers visit the store again

Analytical Measures

Lead Measures

1. Number of items in an order
2. Total orders in a day
3. Number of New customers daily
4. Inventory at the end of Day
5. Feedback score at the end of the end
6. Peak business hours for each day
7. New Customers signing up for the loyalty program Daily

Lag Measures

1. Profit for the Quarter/Year
2. Frequent Customers
3. Most sold items in each category of goods every quarter/year
4. Price Dynamics based on the Orders/ Market
5. ROI/ Revenue growth
6. Expenses/ Costs incurred in a Quarter/Year
7. Stock for the coming season
8. How well was the Loyalty program received by the customers
9. Goods returned the most

Descriptive Analytics

This is a reflective analysis of user data and is meant to provide insight into historical patterns of behaviors and performance in online learning environments. Descriptive analytics is leveraged when a business needs to understand the overall performance of the company at an aggregate level and describe the various aspects.

1. Trends of revenue in the total fiscal year
2. Comparing sales for the past years
3. Determining the most common payment type(cash/debit/credit)
4. Most bought goods for the customers for each region
5. Validate if a promotional campaign was successful or not
6. Customer Clusters for the promotions
7. Sales across various branches
8. Goods which were out of stock the most
9. Reviews

Predictive Analytics

The subsequent step in data reduction is predictive analytics. Analyzing past data patterns and trends can accurately inform a business about what could happen in the future. This helps in setting realistic goals for the business, effective planning and restraining expectations. Predictive analytics is used by businesses to study the data and ogle into the crystal ball to find answers to the question “What could happen in the future based on previous trends and patterns?”. This is mainly undertaken to gather data on customers and predict next actions based on historical behavior.

1. Improving operations to better manage inventory and other resources
2. To set prices based on things like seasonality
3. Launch promotions that better targeted your customers
4. Introducing new goods into the chain based on inputs from the market

Business questions

1. How many transactions are made per day/month/year?
2. What is the average sale per transaction?
3. Which product/item is the most trending in the store?
4. What is the peak time at the store?
5. What is the maximum/minimum total bill amount for day/month/year?
6. Which were the category products that were sold the most/least?
7. What is the frequency of customers which came to the store?
8. Are the items on sale being purchased more by customers?
9. What percentage of customers are returning orders?
10. Which item/category are returned the most?
11. How many transactions were made by Credit Card/Debit Card?