

**A  
PROJECT REPORT  
ON**

**A STUDY ON RETAIL STORE INVENTORY MANEGEMENT WITH  
REFERENCE ON DIGISNARE TECHNOLOGIES LLP AT KALABURAGI  
(UNIT:KALABURAGI)”**

***Submitted to***  
**S.S MARGOL DEGREE COLLEGE OF ARTS SCIENCE AND COMMERNCE  
SHAHABAD**



***In partial fulfillment for the requirement of the award of degree in***  
**BACHELOR OF COMMERCE**

**Submitted by**  
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**SHAHABAD – 585228**  
**(KARNATAKA)**  
**2023-2024**



Hyderabad Karnataka Education Society's  
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**Certificate**

I hereby certify that this project entitled " **A STUDY ON RETAIL STORE INVENTORY MANEGEMENT WITH REFERENCE ON DIGISNARE TECHNOLOGIES LLP AT KALABURAGI** " Has prepared by **Ms.SHRADDHA PATIL (Reg. No. U04GN21C0114)** under the guidance of **Dr. SHRIMANT ASSIT PROFESSOR** Department of Commerce, S.S Margol college Degree Shahabad in partial fulfilment of the requirements for the award for degree during the academic year 2023-2024.

Place: SHAHABAD

Date:

  
**Prof. K.B. BILLAV**

**Principal**

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Shahabad - 585 228.**

## Declaration

I hereby declare that the project report title "**A STUDY ON RETAIL STORE INVENTORY MANEGEMENT WITH REFERENCE ON DIGISNARE TECHNOLOGIES LLP AT KALABURAGI**" Has prepared, under the guidance of **Dr.SHRIMANT. Assit Professor** Department of Commerce S.S Margol degree college Shahabad . This project report has submitted to the **S.S Margol degree college Shahabad.** through the Principal S.S Margol college degree Shahabad.

I also declare that this report has not been submitted to any other university or institution for the award of any degree or diploma.

PLACE: SHAHABAD

DATE:

  
**Ms. SHRADDHA PATIL**

Reg. No.U04GN21C0114

## ACKNOWLEDGEMENT

I express my gratitude and sincere thanks to my guide **Dr.SHRIMANT**. Assit. Professor S.S MARGOL DEGREE COLLEGE SHAHABAD for his guidance. I completed my project report.

I acknowledge my thanks to beloved principal **Prof K.B BILLAV**, and I also would like to express my sense of gratitude to our Assit. Professor **Dr. LAXMAN T, Smt.Sarita Shreepati, Smt,Farhin Banu Merchant**, of S.S Margol degree college of Shahabad for providing right academic animate at this institution that has made the entire task appreciable.

I express also gratitude and sincere thanks to **Akash Tonasali** Founder &CEO Digisnare Technologies LLP

I extend my deep sense of gratitude to my friends & family who have directly or indirectly helped me to complete my project successfully.

place:

Date :

  
**Ms. SHRADDHA PATIL**  
Reg. No.U04GN21C0114

Date: 15-May-2024

## Internship Certificate

This is to certify that **Shraddha Patil(USN-U04GN21C0114)** from S. S. Margol College of Arts, Science & Commerce, Shahabad, Kalaburagi. ( Bachelor of Commerce ) has completed 4 weeks of internship at **Digisnare Technologies LLP** from **April 15, 2024 to May 15, 2024**. During this period, she demonstrated exceptional skills and dedication to her work.

### Internship Details:

**Duration: April 15, 2024 to May 15, 2024.**

**Internship Role: Data Analytics**

**Technologies Used: Power BI**

This certificate is awarded as a testament to **Shraddha Patil's** commitment to hard work and valuable contributions during her internship. We appreciate her enthusiasm for learning and applying knowledge in Data Analytics. She has shown excellent problem-solving skills and an interest in her work.

We wish **Shraddha Patil** continued success in her academic and professional pursuits.



Regards,  
**Akash Tonasalli**  
Founder & CEO  
Digisnare Technologies LLP

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### 1. INTRODUCTION OF THE COMPANY

Digisnare is a multi legged organization in the internet service industry .It in houses a team of passionate, young, and energetic core members who are purely service oriented. To add, all the core members of our enthusiastic team are more than qualified and possess validated certifications concerning web design and development.

We provide multiple services including web design, web development, SEO, digital marketing, graphic design, social media marketing, web hosting, branding, and content writing.

Apart from these services we do conduct extensive training courses on the above mentioned topics as well. Many students have completed our training courses in digital marketing and web site related subjects. You can check out their thoughts and reviews about our training.

#### VISION

With a vision to bring in a drastic change in the corporate sector concerning digital marketing and website related services, we offer multiple services. Be it Digital marketing, web design, web development, SEO, and graphic design, we cater all.

#### MISSION

Our mission is to satisfy every single client. Being adept with the latest technologies and trends, we go along way with all our clients. Our service starts with basic conceptualizing and ends up in making things happen as you desired. Be it any products or branding we are the one stop solution. Most of our clients prize us for maintaining a wonderful business relationship even after long years. We are highly ethical, cooperative, and most importantly supportive concerning all your business needs. Our innovative and effective strategies are widely admired by one and all.



# 1. Overview of Internship Activities

## WHAT IS DATA ANALYTICS

Data analytics is the process of examining, cleaning, transforming, and modeling data to discover useful information, draw conclusions, and support decisionmaking. It involves the use of various techniques and tools to analyze and interpret data, uncover patterns, and extract valuable insights. The ultimate goal of data analytics is to help organizations make informed decisions and gain a competitive advantage.

There are different types of data analytics, including:

1. **Descriptive Analytics:** Involves summarizing and interpreting historical data to understand what has happened in the past. This type of analytics provides insights into trends, patterns, and key performance indicators.
2. **Diagnostic Analytics:** Focuses on analyzing data to determine the causes of past events or trends. It involves investigating why certain outcomes occurred and identifying factors that contributed to those outcomes.
3. **Predictive Analytics:** Involves using statistical algorithms and machine learning techniques to forecast future trends and outcomes based on historical data. This type of analytics helps organizations make predictions about future events and make proactive decisions.
4. **Prescriptive Analytics:** Goes beyond predicting future outcomes and provides recommendations on what actions to take to achieve a desired result. It involves using optimization and simulation techniques to suggest the best course of action.

Data analytics is widely used in various industries, including business, finance, healthcare, marketing, and more. It relies on data from different sources, such as databases, spreadsheets, sensors, social media, and other sources, and involves the use of tools like statistical analysis software, data visualization tools, and machine learning algorithms.

### WHY TO LEARN DATA ANALYTICS

Learning data analytics offers numerous advantages in today's datadriven world. Here are several compelling reasons to acquire skills in data analytics:

- 1. Informed Decision Making:** Data analytics helps individuals and organizations make informed decisions by providing insights derived from data. This leads to better strategies and more effective planning.
- 2. Competitive Advantage:** Organizations that harness the power of data analytics gain a competitive edge. Analyzing market trends, customer behavior, and operational data can reveal opportunities for growth and improvement.
- 3. Career Opportunities:** There is a high demand for professionals with data analytics skills across various industries. Learning data analytics can open up diverse career paths, including data analyst, data scientist, business analyst, and more.
- 4. Improved Efficiency:** Analyzing data allows for the identification of inefficiencies and areas for optimization. This can lead to streamlined processes, reduced costs, and improved overall efficiency.
- 5. Innovation:** Data analytics is instrumental in driving innovation. Analyzing data can uncover patterns that lead to new product ideas, improved services, or more effective business models.
- 6. Risk Management:** Data analytics helps in assessing and managing risks by identifying potential issues early on. This is particularly valuable in finance, healthcare, and other industries where risk assessment is critical.
- 7. Personal and Professional Development:** Learning data analytics enhances your analytical and problemsolving skills. It also keeps you updated on the latest technologies and methodologies in the rapidly evolving field of data science.
- 8. Global Relevance:** Data analytics is a globally relevant skill. As businesses and industries worldwide increasingly rely on data, individuals with data analytics skills are in demand across borders.
- 9. Adaptability:** Data analytics skills are versatile and can be applied across various domains. Whether you're in finance, marketing, healthcare, or any other field, the ability to analyze and interpret data is valuable.

## 3. TOOLS USED IN DATA ANALYTICS

Data analytics involves the use of various tools to process, analyze, and visualize data. The choice of tools depends on factors such as the specific task at hand, the type and size of the data, and the preferences of the data analyst or data scientist. Here are some commonly used tools in data analytics:

### 1. Programming Languages:

- **Python:** Widely used for data analysis and machine learning, with libraries like Pandas, NumPy, and Scikitlearn.
- **R:** Especially popular for statistical analysis and data visualization.

### 2. Data Visualization Tools:

- **Tableau:** Enables interactive and shareable dashboards and reports.
- **Power BI:** A Microsoft tool for creating interactive visualizations and business intelligence reports.
- **Matplotlib and Seaborn:** Python libraries for creating static, animated, and interactive visualizations.

### 3. Statistical Analysis Tools:

- **RStudio:** An integrated development environment (IDE) for R, widely used for statistical computing and data analysis.
- **SPSS:** Statistical software used for analysis in social science.

### 4. Database Management Systems (DBMS):

- **SQL (Structured Query Language):** Essential for querying and managing relational databases.
- **MySQL, PostgreSQL, Oracle:** Examples of relational database management systems used for storing and retrieving structured data.

### 5. Big Data Tools:

- **Hadoop:** A framework for distributed storage and processing of large datasets.
- **Spark:** A fast and generalpurpose cluster computing system for big data processing.

## 6. Machine Learning Tools:

- **Scikitlearn:** A machine learning library for Python.
- **TensorFlow and PyTorch:** Frameworks for building and training machine learning models.

## 7. Text Analytics Tools:

- **NLTK (Natural Language Toolkit):** A Python library for working with human language data.
- **TextBlob:** Simplifies text processing in Python.

## 8. Excel and Google Sheets:

- **Microsoft Excel:** Widely used for data analysis, visualization, and basic statistical functions.
- **Google Sheets:** Offers similar functionality to Excel and allows collaboration in realtime.

## 9. ETL (Extract, Transform, Load) Tools:

- **Apache NiFi, Talend, Apache Airflow:** Used for data integration, transformation, and workflow automation.

## 10. Version Control Systems:

- **Git:** Essential for tracking changes in code and collaborating on projects.

## POWER BI

Power BI is a business analytics service by Microsoft that provides interactive visualizations and business intelligence capabilities with an interface that is easy to use for end users to create their own reports and dashboards. Here are key features and aspects of Power BI:

### 1. Data Connectivity:

- Power BI can connect to a wide range of data sources, including Excel spreadsheets, databases (both onpremises and cloudbased), online services, and various other data formats.

### 2. Data Transformation and Modeling:

- Power BI allows users to transform and shape data using Power Query, a powerful ETL (Extract, Transform, Load) tool. Users can create relationships between different data tables using Power BI's data modeling capabilities.

### 3. Data Visualization:

- Power BI is renowned for its robust data visualization capabilities. Users can create a variety of interactive charts, graphs, maps, and tables to represent data trends and insights. Visualizations are highly customizable.

### 4. Dashboards:

- Users can create interactive dashboards that bring together different visualizations and reports. Dashboards allow for realtime monitoring of key performance indicators (KPIs) and help in gaining a quick overview of business metrics.

### 5. Natural Language Query (Q&A):

- Power BI supports natural language queries, allowing users to ask questions about their data using everyday language. The tool interprets the queries and generates visualizations accordingly.

### 6. Collaboration and Sharing:

- Power BI enables collaboration among users and teams. Reports and dashboards can be shared easily, and there are options for embedding reports in websites or applications.

### 7. Mobile Access:

- Power BI offers mobile apps for iOS and Android, allowing users to access reports and dashboards onthego. Reports are responsive and optimized for mobile viewing.

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### **9. Power BI Desktop:**

- Power BI Desktop is a free, standalone application that allows users to create reports and dashboards on their local machines before publishing them to the Power BI service

### **10. Power BI Service:**

- Power BI Service is a cloudbased service where reports and dashboards can be published, shared, and accessed. It provides additional features like scheduled data refresh, data alerts, and more.

### **11. Integration with Other Microsoft Services:**

- Power BI integrates seamlessly with other Microsoft services, such as Azure, Excel, and SharePoint. It can also be integrated with thirdparty applications and services.

## **ADVANTAGES OF POWER BI**

Power BI offers several advantages that make it a popular choice for business intelligence and data visualization. Here are some key advantages of using Power BI:

### **1. UserFriendly Interface:**

- Power BI has an intuitive and userfriendly interface that allows both technical and nontechnical users to create compelling visualizations and reports without extensive training.

### **2. Wide Range of Data Connectors:**

- Power BI supports a vast array of data connectors, allowing users to connect to various data sources, including databases, online services, and cloudbased platforms, facilitating comprehensive data integration.

### **3. Data Transformation and Cleaning:**

- Power BI includes Power Query, a robust ETL tool, enabling users to transform and clean data easily. This helps in preparing data for analysis and visualization.

### **4. Rich Visualization Options:**

- Power BI provides a diverse set of visualization options, including charts, graphs, maps, tables, and more. Users can create interactive and visually appealing reports to effectively communicate insights.

### **5. RealTime Data Monitoring:**

- Power BI supports realtime data monitoring, allowing users to create dashboards that update in realtime. This is especially valuable for monitoring key performance indicators (KPIs) and making timely decisions.

### **6. Natural Language Query (Q&A):**

- Power BI's Q&A feature enables users to ask questions about their data in natural language, making it easy for individuals to explore and understand data without the need for complex queries.

### **7. Integration with Microsoft Ecosystem:**

- Power BI seamlessly integrates with other Microsoft services, such as Azure, Excel, and SharePoint. This integration simplifies workflows and enhances collaboration within the Microsoft ecosystem.

### **8. Mobile Access:**

- Power BI offers mobile apps for iOS and Android, allowing users to access reports and dashboards on smartphones and tablets. The mobile experience is optimized for onthego data consumption.

### **9. Collaboration and Sharing:**

- Power BI enables easy collaboration and sharing of reports and dashboards. Users can share insights with colleagues, stakeholders, or clients, fostering collaboration and informed decisionmaking.

### **10. Security and Compliance:**

- Power BI provides robust security features, including data encryption, rolebased access control, and integration with Azure Active Directory. It also supports compliance with various regulatory standards.

### **11. CostEffective Solution:**

- Power BI offers different pricing plans, including a free version with limited features and paid plans with advanced capabilities. This flexibility makes it a costeffective solution for organizations of various sizes.

### **12. Constant Updates and Improvements:**

- Microsoft regularly updates and enhances Power BI with new features and improvements. Users benefit from a tool that evolves to meet the changing needs of the business intelligence landscape.

### LIMITATIONS OF POWER BI

While Power BI is a powerful tool for business intelligence and data visualization, it does have some limitations. It's important to be aware of these limitations to make informed decisions about its usage. Here are some notable limitations of Power BI:

#### 1. Data Volume Limitations:

- Power BI Free has limitations on data refresh frequency and the amount of data that can be processed. Power BI Pro and Premium plans offer more generous limits, but large datasets may still require additional considerations.

#### 2. Limited Advanced Analytics Capabilities:

- While Power BI supports basic analytics and reporting, it may not have the same level of advanced analytics features as some specialized tools. Organizations with complex statistical or machine learning needs may require additional tools.

#### 3. Data Modeling Complexity:

- While Power BI provides robust data modeling capabilities, complex data relationships and models can be challenging to manage, particularly for users without a strong background in database design and modeling.

#### 4. Dependency on a Stable Internet Connection:

- Power BI relies on a stable internet connection, and users may experience limitations or difficulties accessing reports and dashboards if the connection is unreliable or slow.

#### 5. Limited Print and Export Options:

- Power BI has limitations when it comes to printing and exporting reports. While PDF and PowerPoint export options are available, the formatting and layout may not always be preserved perfectly.

#### 6. Steep Learning Curve for Advanced Features:

- While the basic features are userfriendly, mastering advanced features of Power BI, such as DAX (Data Analysis Expressions) for custom calculations, may require a learning curve for some users.

#### 7. Limited Customization of Visualizations:

- While Power BI offers a variety of visualization options, advanced customization may be limited compared to some other specialized visualization tools. Some users may find the customization options restrictive for specific design needs.



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### **9. Limited Native Data Transformation Features:**

- While Power BI provides data transformation capabilities through Power Query, users may find limitations compared to more advanced ETL tools for complex data transformations.

### **10. Limited Natural Language Processing (NLP):**

- While Power BI supports natural language queries, its natural language processing capabilities may not be as advanced as some dedicated NLP tools, limiting the sophistication of interactions.

### **11. Dependency on Microsoft Ecosystem:**

- Power BI is tightly integrated with the Microsoft ecosystem. While this is an advantage for organizations using Microsoft technologies, it may be a limitation for those using other platforms.

## TABLEAU

Tableau is a leading data visualization and business intelligence software that enables users to connect, visualize, and share data in a way that provides insights and facilitates decision making. Here are key aspects of Tableau:

### 1. Data Connectivity:

- Tableau supports a wide range of data sources, including databases, spreadsheets, cloud-based data, and more. It can connect to various data platforms, allowing users to bring in and analyze diverse datasets.

### 2. Data Visualization:

- One of Tableau's strengths is its powerful data visualization capabilities. It allows users to create a variety of interactive and shareable charts, graphs, dashboards, and reports to represent data in a meaningful way.

### 3. Ease of Use:

- Tableau is known for its user-friendly interface that caters to both technical and nontechnical users. The drag-and-drop functionality makes it easy to create visualizations without extensive programming knowledge.

### 4. AdHoc Analysis:

- Users can perform ad hoc analysis by exploring and manipulating data on the fly. This enables quick insights and helps in uncovering patterns and trends in real time.

### 5. Dashboards and Storytelling:

- Tableau allows users to create interactive dashboards and combine multiple visualizations into a cohesive story. This feature is useful for presenting data-driven narratives to stakeholders.

### 6. Data Blending and Joining :

- Tableau enables the blending and joining of data from different sources, making it possible to analyze diverse datasets in a single view.

### 7. Publishing and Sharing:

- Tableau provides options to publish and share dashboards and reports online. Users can collaborate and share insights with others within the Tableau platform or embed visualizations in websites and applications.

### **8. Integration with Other Tools:**

- Tableau can be integrated with various data sources, databases, and applications. It also integrates with other analytics and data preparation tools, providing flexibility in the data analysis workflow.

### **9. Security and Governance:**

- Tableau provides features for data security and governance, including user access controls, encryption, and compliance with industry standards.

# ADVANTAGES OF TABLEAU

Tableau offers several advantages that make it a popular choice for data visualization and business intelligence. Here are key advantages of using Tableau:

### 1. UserFriendly Interface:

- Tableau has an intuitive and userfriendly interface that allows users, including those without a strong technical background, to create compelling visualizations and dashboards.

### 2. Broad Data Connectivity:

- Tableau supports a wide range of data sources, including databases, spreadsheets, cloud services, and more. This flexibility allows users to connect to diverse datasets for analysis.

### 3. Powerful Data Visualization:

- Tableau provides powerful data visualization capabilities, enabling users to create a variety of interactive charts, graphs, maps, and dashboards. The visualizations are highly customizable and aesthetically pleasing.

### 4. RealTime Data Analysis:

- Tableau allows for realtime data analysis and updating of visualizations. Users can connect to live data sources or set up scheduled refreshes to ensure that insights are based on the latest data.

### 5. AdHoc Analysis and Exploratory Data Analysis (EDA):

- Users can perform adhoc analysis and explore data interactively. This feature is valuable for uncovering patterns, trends, and insights on the fly.

### 6. Dashboards and Storytelling:

- Tableau supports the creation of interactive dashboards and stories, allowing users to present datadriven narratives. This is beneficial for conveying insights and making data more accessible to stakeholders.

### **7. Mobile Accessibility:**

- a. Tableau offers mobile applications for iOS and Android, enabling users to access and interact with visualizations on smartphones and tablets. The mobile experience is optimized for onthego data consumption.

### **8. Collaboration and Sharing:**

- a. Tableau facilitates collaboration through the sharing of interactive dashboards and reports. Users can publish their visualizations to Tableau Server or Tableau Online for easy sharing within organizations.

### **9. Data Blending and Joining:**

- a. Tableau allows users to blend and join data from multiple sources, providing a holistic view of the data. This capability is crucial for integrating diverse datasets and gaining comprehensive insights.

### **10. Scalability:**

- a. Tableau is scalable and can handle large datasets and complex visualizations. This scalability makes it suitable for both small teams and large enterprises.

# LIMITATIONS OF TABLEAU

While Tableau is a powerful tool for data visualization and business intelligence, it does have some limitations. Understanding these limitations can help users make informed decisions about its usage. Here are some notable limitations of Tableau:

### 1. Cost:

- Tableau can be relatively expensive, particularly for organizations requiring advanced features and scalability. Licensing costs for Tableau Server and Tableau Online can add up, especially for larger deployments.

### 2. Steep Learning Curve for Advanced Features:

- While Tableau's basic functionalities are userfriendly, mastering advanced features such as complex calculations using Tableau Calculated Fields and Level of Detail (LOD) expressions may require a learning curve for some users.

### 3. Limited Data Transformation and Cleaning:

- Tableau's data preparation capabilities are not as advanced as some dedicated ETL(Extract, Transform, Load) tools. Users may find limitations in complex data transformation and cleaning tasks within Tableau.

### 4. Limited Predictive Analytics Capabilities:

- Tableau's native predictive analytics capabilities are more limited compared to specialized tools. Users with advanced predictive modeling needs may need to integrate Tableau with other tools or use external predictive analytics platforms.

### 5. Dependency on Extracts for Large Datasets:

- For very large datasets, Tableau might require data extracts, which can increase storage requirements. Extracts can also introduce delays in updating data, affecting the real-time nature of the analysis.

### 6. Limited Natural Language Processing (NLP):

- Tableau's natural language processing capabilities for querying data are not as advanced as some other tools. Users may find limitations in the sophistication of interactions using natural language.

### **7. Limited Version Control:**

- Tableau lacks robust builtin version control for workbooks and dashboards. Managing changes and collaborating on Tableau projects may require external version control systems.

### **8. Dependency on Desktop for Authoring:**

- While Tableau Server and Tableau Online allow for sharing and collaboration, the full authoring experience is primarily in Tableau Desktop. This can limit the ability of users without Tableau Desktop licenses to create and modify visualizations.

### **9. Limited Customization in Tableau Public:**

- Tableau Public, the free version of Tableau, has limitations on data privacy and customization. Visualizations created in Tableau Public are publicly accessible, and certain features are restricted.

### **10. Limited Offline Access:**

- Users may face limitations in accessing Tableau visualizations offline. While Tableau allows for the creation of packaged workbooks, the offline experience may not be as seamless as online access.

## SQL

### **Structured Query Language (SQL):**

#### **Definition:**

SQL, or Structured Query Language, is a domain-specific programming language designed for managing and manipulating relational databases. Originally developed by IBM in the 1970s, SQL has become the standard language for interacting with and querying relational database management systems (RDBMS).

## Key Components and Features:

### 1. Data Definition Language (DDL):

- SQL includes commands for defining and managing the structure of a database. DDL commands create, modify, and delete database objects like tables, indexes, and views.

### 2. Data Manipulation Language (DML):

- DML commands are used to interact with the data stored in the database. The primary DML commands are SELECT (querying data), INSERT (adding new records), UPDATE (modifying existing records), and DELETE (removing records).

### 3. Data Control Language (DCL):

- DCL commands manage access to data. This includes granting and revoking permissions on database objects. Common DCL commands are GRANT and REVOKE.

### 4. Transaction Control Language (TCL):

- TCL commands manage transactions, ensuring the consistency and integrity of the database. Key TCL commands include COMMIT (committing a transaction) and ROLLBACK (rolling back a transaction).

### 5. Queries and Filtering:

- SQL queries allow users to retrieve specific data from one or more tables. The WHERE clause is used to filter data based on specified conditions.

### 6. Aggregation and Grouping:

- SQL provides functions like COUNT, SUM, AVG, and GROUP BY for aggregating and summarizing data, enabling users to analyze information at different levels.

### 7. Popular Database Management Systems (DBMS) Implementing SQL:

- SQL is supported by various database systems, including My SQL, Postgre SQL, OracleDatabase, Microsoft SQL Server, SQL ite, and more.



# ADVANTAGES

### 1. Standardized Language:

- SQL is a standardized language for relational databases, making it widely accepted and supported across various database management systems (DBMS).

### 2. Ease of Learning and Use:

- SQL has a relatively simple and straightforward syntax, making it easy to learn and use. It is designed to be humanreadable and allows users to express complex queries with minimal effort.

### 3. Data Retrieval and Querying:

- SQL excels at retrieving specific data from databases. The SELECT statement allows users to retrieve data based on various criteria, facilitating efficient data querying.

### 4. Data Modification:

- SQL provides commands like INSERT, UPDATE, and DELETE for modifying data in the database. This flexibility allows for efficient data management.

### 5. Data Integrity:

- SQL supports the implementation of constraints such as primary keys, foreign keys, and unique constraints, ensuring data integrity and consistency within the database.

### 6. Transaction Management:

- SQL includes Transaction Control Language (TCL) commands like COMMIT and ROLLBACK, allowing users to manage transactions and ensure the atomicity and consistency of database operations.

### 7. Data Aggregation and Analysis:

- SQL provides powerful aggregate functions (e.g., SUM, AVG, COUNT) and GROUP BY clause for data aggregation and analysis, enabling users to derive meaningful insights from large datasets.

### 8. MultiUser Access:

- SQL databases support concurrent access by multiple users. The database management system handles concurrent transactions and ensures data consistency.

### **9.Data Security:**

- SQL includes Data Control Language (DCL) commands like GRANT and REVOKE, allowing administrators to control access to the database, enhancing data security.

### **10.Scalability:**

- SQL databases can handle large amounts of data and are scalable to accommodate growing datasets and user loads.

## **LIMITATIONS OF SQL**

### **1. Limited to Relational Databases:**

- SQL is designed for relational databases, and its capabilities are primarily suited for handling structured data. It may not be the ideal choice for managing unstructured or semistructured data.

### **2. Performance Issues with Complex Queries:**

- Performance can be a concern, especially with complex queries or large datasets. Poorly optimized queries may lead to slower response times.

### **3. Scalability Challenges:**

- While SQL databases can handle substantial amounts of data, scalability may become a challenge for extremely large datasets or high transaction volumes. NoSQL databases may offer better scalability in certain scenarios.

### **4. Learning Curve for Advanced Features:**

- Advanced features of SQL, such as complex joins, subqueries, and optimization techniques, may have a steeper learning curve for beginners.

### **5. Lack of Support for Hierarchical Data:**

- Representing and querying hierarchical data structures, like trees or graphs, can be cumbersome in SQL. Recursive queries for hierarchical data may be complex to write and maintain.

### **6. Limited Support for Versioning:**

- SQL databases may lack builtin support for versioning, making it challenging to track changes to data over time. Version control may need to be implemented at the application level.

### **7. Complexity in Managing NoSQL Data:**

- While SQL is not designed for NoSQL databases, integrating SQL with NoSQL systems can introduce complexities, and SQL may not fully exploit the capabilities of NoSQL data models.

### **8. Inflexibility in Schema Modifications:**

- Modifying the database schema, especially in production environments, can be challenging. Some changes may require downtime or complex migration procedures.

### **9. Vendor Specific Extensions:**

- Different database management systems may have vendorspecific extensions to SQL. This can lead to issues when migrating between database systems.

### **10. Limited Support for Temporal Data:**

- SQL databases may lack builtin support for managing temporal data (data that changes over time), requiring additional effort to implement effective temporal data models.

## 4. SYSTEM REQUIREMENTS

### HARDWARE CONFIGURATION:

#### Client Side:

**RAM : 512MB**

**Hard disk : 10GB**

**Processor : 1.0GHz**

#### Server side:

**RAM : 1GB**

**Hard Disk : 20GB**

**Processor : 2.0HZ**

### SOFTWARE CONFIGURATION:

#### Client Side:

**Web browser :** Google chrome , Mozilla firefox , Internet explorer or any compatible browser

**Operating system :** Windows or any equivalent os

#### Server side:

**Web server : APACHE**

**Server side language : PYTHON**

**Data base server : MYSQL**

**Web browser :** Google chrome , Mozilla firefox , Internet explorer or any compatible browser

**Operating system :** Windows or any equivalent os

### 4. JOB OPPORTUNITIES AFTER DATA ANALYTICS

Completing a data analytics course opens up various job opportunities across industries as organizations increasingly recognize the value of data-driven decision-making. Here are some potential job roles you could explore after completing a data analytics course:

#### 1. Data Analyst:

- Data analysts are responsible for collecting, processing, and analyzing data to help organizations make informed decisions. They create reports, dashboards, and visualizations to communicate insights.

#### 2. Business Intelligence Analyst:

- Business Intelligence (BI) analysts focus on interpreting and analyzing business data to provide actionable insights. They often work with BI tools to create reports and dashboards for decisionmakers.

#### 3. Data Scientist:

- Data scientists use advanced statistical and mathematical techniques to analyze complex datasets. They develop predictive models, algorithms, and machine learning solutions to uncover patterns and trends.

#### 4. Data Engineer:

- Data engineers design, develop, and maintain the architecture that allows for the processing of large volumes of data. They work on data pipelines, ETL (Extract, Transform, Load) processes, and database management.

#### 5. Machine Learning Engineer:

- Machine learning engineers focus on developing and deploying machine learning models. They work on training models, optimizing algorithms, and integrating machine learning solutions into applications.

#### 6. Quantitative Analyst:

- Quantitative analysts, or quants, use mathematical and statistical methods to analyze financial and market data. They play a crucial role in financial institutions, hedge funds, and investment firms.

#### 7. Healthcare Data Analyst:

- In the healthcare industry, data analysts work with medical data to improve patient outcomes, optimize healthcare operations, and contribute to medical research.

### **8. Marketing Analyst:**

- Marketing analysts analyze data related to marketing campaigns, customer behavior, and market trends. They help optimize marketing strategies for better performance.

### **9. Operations Analyst:**

- Operations analysts focus on improving efficiency and effectiveness within an organization. They use data to identify areas for improvement in processes and operations.

### **10. Risk Analyst:**

- Risk analysts assess and analyze data to identify potential risks and develop strategies to mitigate them. This role is common in financial institutions and insurance companies.

## **6. REFERENCES**

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# RETAIL STORE INVENTORY MANAGEMENT

## INTRODUCTION:

Inventory management is a critical aspect of retail store operations. It involves overseeing and controlling the ordering, storage, and use of products to ensure that a retail store has the right amount of stock at the right time. Effective inventory management helps retailers minimize costs, optimize stock levels, and improve customer satisfaction.

## MEANING OF RETAIL STORE INVENTORY MANAGEMENT

Retail Store Inventory Management refers to the systematic approach of overseeing and controlling the ordering, storage, and use of products that a retail store sells. This process ensures that the right quantity of products is available at the right time and place to meet customer demand while minimizing costs and maximizing efficiency.

## Types of Retail Store Inventory Management

Retail store inventory management can be approached in various ways depending on the store's needs, the type of products sold, and the scale of operations. Here are some common types of inventory management systems and methods used in retail:

1. Periodic Inventory Management:
2. Perpetual Inventory Management
3. Just-In-Time (JIT) Inventory Management
4. Safety Stock Inventory Management
5. Vendor-Managed Inventory (VMI)
6. Consignment Inventory

# FEATURE OF RETAIL STORE INVENTORY MANAGEMENT

### 1. Real-Time Inventory Tracking:

Stock Levels: Monitor current stock levels in real-time to avoid overstocking or stockouts.

Sales Tracking: Keep track of sales to adjust inventory levels accordingly.

### 2. Automated Reordering:

Reorder Points: Set reorder points for products to trigger automatic reordering when stock falls below

a certain level.

Supplier Management: Integrate with suppliers for seamless reordering processes.

### 3. Inventory Analytics and Reporting:

Sales Trends: Analyze sales data to identify trends and make informed inventory decisions.

Performance Reports: Generate reports on inventory performance, including turnover rates and profitability.

### 4. Barcode and RFID Integration:

Barcode Scanning: Use barcode scanning for quick and accurate inventory updates.

RFID Technology: Implement RFID for more advanced and efficient inventory tracking.

### 5. Stock Audits and Cycle Counting:

Regular Audits: Conduct regular stock audits to ensure inventory accuracy.

Cycle Counting: Perform cycle counts to maintain continuous accuracy without major disruptions.



### **LIMITATION OF RETAIL STORE INVENTORY MANAGEMENT**

#### **1. Real-Time Inventory Tracking:**

Stock Levels: Monitor current stock levels in real-time to avoid overstocking or stockouts.

Sales Tracking: Keep track of sales to adjust inventory levels accordingly.

#### **2. Automated Reordering:**

Reorder Points: Set reorder points for products to trigger automatic reordering when stock falls below a certain level. Supplier Management: Integrate with suppliers for seamless reordering processes.

#### **3. Inventory Analytics and Reporting:**

Sales Trends: Analyze sales data to identify trends and make informed inventory decisions.

Performance Reports: Generate reports on inventory performance, including turnover rates and profitability.

#### **4. Barcode and RFID Integration:**

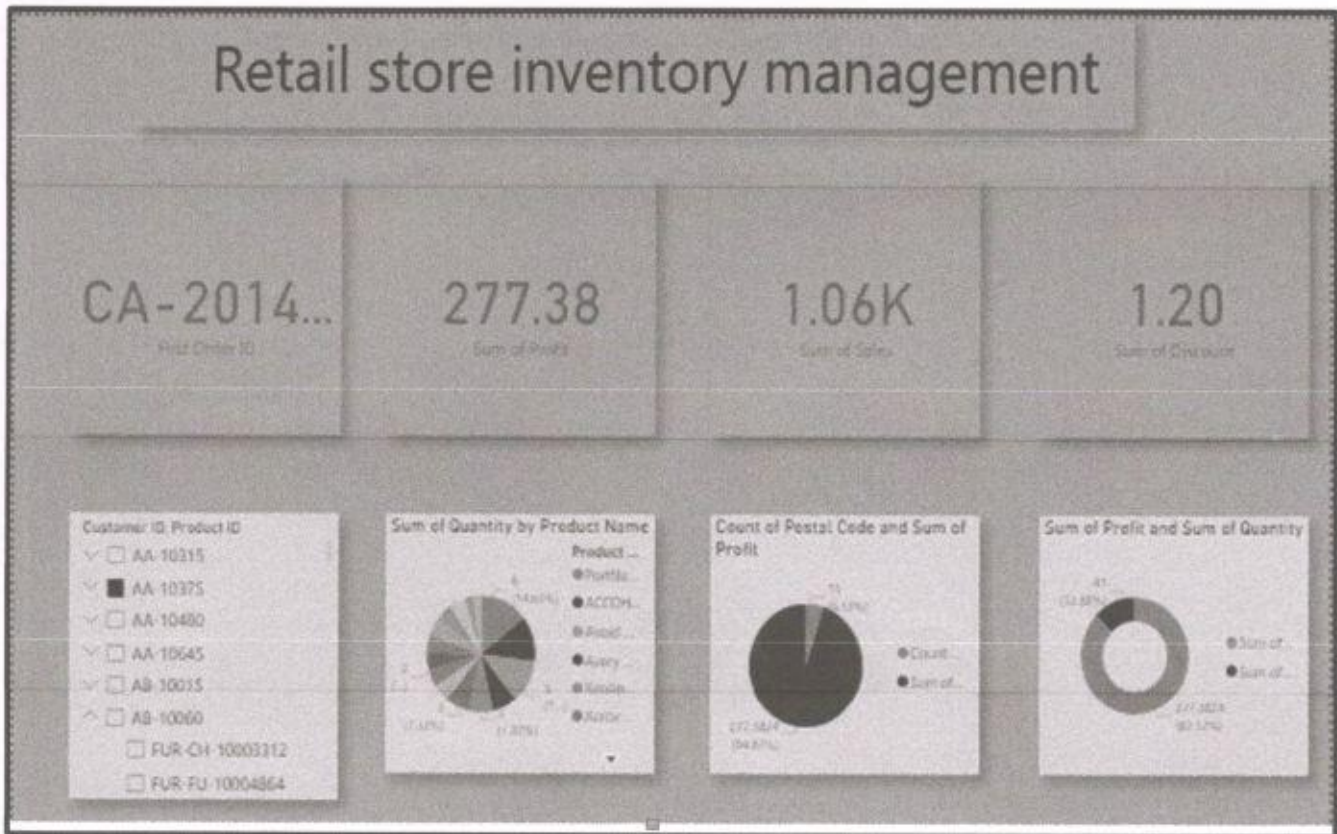
Barcode Scanning: Use barcode scanning for quick and accurate inventory updates.

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# PROJECT DONE





**PROJECT DONE :**

### CONCLUSION

In conclusion, a data analysis course is a transformative educational journey that empowers individuals with the skills essential for navigating the complexities of the data-driven world. Through this course, participants acquire a solid foundation in statistical methods, programming languages, and data visualization tools. The practical application of these skills in real-world scenarios enhances problem-solving abilities and equips learners to extract meaningful insights from diverse datasets. Completing a data analysis course not only fosters technical proficiency but also cultivates a mindset of critical thinking and effective communication. As organizations increasingly rely on data for decision-making, graduates of data analysis courses become valuable assets, contributing to informed strategies and innovative solutions. This educational investment opens doors to a wide array of career opportunities in industries ranging from business and finance to healthcare and technology, making it a pivotal step towards a successful and fulfilling professional journey.