

Project Title

by

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Presentation outlines

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Abstract

- **Quotation Creation and Conversion:** The process begins with the creation of a detailed and accurate quotation tailored to the customer's requirements. This involves itemizing the products or services, specifying quantities, prices, and any applicable discounts.
- **Order Acceptance and Confirmation:** Upon receiving the customer's acceptance of the quotation, the sales team verifies the details and terms.

Your Company Name		<i>Quotation</i>	
Your company logo			
Address: City, State, ZIP Phone: () 00-000 0000 Fax: () 00-000 0000		DATE: 01/01/01 (Quotation # 000) Expiry date: 01	
Quotation For: Name: Company: Address: City, State, ZIP Phone:		Quotation valid until: 01/01/01 Preparation by:	
Comments or Special instructions: None			
QUANTITY	P.U. QUANTITY	UNIT PRICE	TOTAL
			Total amount
QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			SUB TOTAL 0 TAX RATE 000% SALES TAX - Freight - TOTAL 0

If you have any questions concerning this quotation please contact Edward J. O'Brien (number) x (line).

THANK YOU FOR YOUR INQUIRY

- **Real-time Inventory:** In the context of the quotation creation and conversion process, a crucial addition is the integration of real-time inventory management. As the sales team itemizes products or services for the quotation, the system should provide up-to-the-minute information on the availability of these items in the inventory. This ensures that accurate quotations are generated, taking into account the current stock.



Introduction

- The sales process in Hindustan Tungsten Carbide involves a meticulous journey from creating a tailored quotation to issuing a tax invoice.
- This system presents a concise overview of the four pivotal stages that constitute this process: Quotation Creation and Conversion, Order Acceptance and Confirmation, Proforma Invoice Generation, and Tax Invoice Issuance.
- The system constantly monitors the availability of products in the inventory. When creating a tailored quotation, the sales team can readily check stock levels to ensure that the requested items are in stock. If a product is available in limited quantities, the system can automatically allocate stock to the customer's order as soon as the quotation is accepted

Literature Review

Sr.No	Title of the paper	Author's name	IEEE transaction/Journal/conference/Workshop	Summary	Findings/Limitations
1	From ERP to Advanced Resource Planning: Improving Operational Performance by Getting the Inputs Right	Marc Lambrecht; Nico Vandaele	40th Annual Hawaii International Conference on System Sciences (HICSS'07)	In this paper, we show that the planning and decision support capabilities of the MPC (Manufacturing Planning and Control) system, which forms the core of any ERP package, may be greatly enhanced by including an Advanced Resource Planning (ARP) module as an add-on at the midterm planning level.	Low accuracy

Literature Review Continue

Sr.No	Title of the paper	Author's name	IEEE transaction/Journal/conference/Workshop	Summary	Findings/Limitations
2	Designing Green Procurement System Based On Enterprise Resources Planning For The Rubber Processing Industry	Octa Karlina; Ari Yanuar Ridwan	International Conference on Electrical Engineering and Informatics (ICEEI)	The user requirements for green procurement that focus on the ability of the application system to provide purchase requisition, request for quotation, supplier selection, purchase order and integrating data	Low performance

Literature Review Continue

Sr.No	Title of the paper	Author's name	IEEE transaction/Journal/conference/Workshop	Summary	Findings/Limitations
3	ERP system adoption traditional ERP systems vs. cloud-based ERP systems	Abdullah A. Al-Ghofaili; Majed A. Al-Mashari	Fourth edition of the International Conference on the Innovative Computing Technology	This paper proposes three alternative approaches for organizations to select from based on security rate, investment level and organizational size	Insufficient Explanation of Cloud Computing Lack of Specifics

Literature Review Continue

Sr.No	Title of the paper	Author's name	IEEE transaction/Journal/conference/Workshop	Summary	Findings/Limitations
4	A comparison of classification methods for recognizing single-trial ERP in RSVP-based brain-computer interfaces	Xiaolin Xiao; Minpeng Xu	IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA)	This study compared a recently developed algorithm, i.e. discriminative canonical pattern matching (DCPM), with five traditional classification methods, i.e. linear discriminant analysis (LDA), four advanced methods of LDA included stepwise LDA, Bayesian LDA, shrinkage LDA and spatial-temporal discriminant analysis (STDA), for the detection of single-trial ERPs with a small number of training samples	Scope of Dataset Interpretability Computational Complexity

Problem statement

Data and incoming orders. It should automatically generate purchase or production orders for items that are running low or are expected to be in high demand. This proactive approach to inventory management helps prevent stockouts, ensures products are available when needed, and optimizes warehouse space. By addressing these inventory management challenges and seamlessly integrating them into the streamlined sales process.

Proposed System

- **Quotation Generation:** The system allows sales teams to create detailed and accurate quotations tailored to customer requirements.
- **Order Acceptance and Confirmation:** Upon customer acceptance of the quotation, the system verifies details and terms, and upon confirmation, triggers subsequent workflow steps.
- **Module Inventory Management:** The system maintains real-time records of module inventory. It tracks quantities, stock levels, and warehouse locations.
- **Automated Replenishment:** The system monitors module stock levels and automatically generates purchase orders when stock falls below a predefined threshold.
- **Reporting and Analytics:** The system offers reporting and analytics tools to monitor sales trends, inventory turnover, and profitability.

Algorithm (Hashing)

Step 1: User Authentication and Access Control: Users are required to authenticate themselves using a secure login process.

Step 2: Module Inventory Management: Initialize and update the module inventory database with information on module quantities, stock levels, and locations.

Step 3: Quotation Generation: Sales teams create detailed quotations by selecting products/services and specifying quantities.

Step 4: Order Acceptance and Confirmation: Upon customer acceptance of the quotation, verify details and terms.

Step 5: Proforma Invoice Generation: Generate a Proforma Invoice with a detailed cost breakdown, including product prices, taxes, and shipping charges.

Step 6: Tax Invoice Issuance: After receiving payment, generate a Tax Invoice with all necessary legal and financial information for taxation purposes.

Risk Analysis

- Data Security Breaches:** There is a risk of data breaches or unauthorized access to sensitive customer and financial data. Mitigation strategies include robust encryption, access controls, regular security audits, and employee training.
- System Integration Challenges:** Integrating various modules and ensuring seamless communication between them can be technically challenging
- Staff Training and User Adoption:** Employees may have difficulty adapting to the new system, leading to inefficiencies. Address this risk through comprehensive training programs and user-friendly interfaces.
- Cost Overruns:** The project may exceed the allocated budget due to unforeseen expenses or scope changes. Regular budget tracking and contingency planning can mitigate this risk.

Mathematical Model

System Description :

$$S = (I, O, F)$$

Where,

- **S: System.**
- **$I = \{ UL, URU, SE, QC \}$ are set of Inputs**

Where,

1. URU : User record Update
2. UL : User Login
3. SE: Stock Entry
4. QC: Quotation Creation

F = {A, DP, S, IM} are set of Function

Where,

A : Authentication

DP: Data Processing.

S: Security

IM: Inventory Management

O = { QM, AM } are set of Output

Where,

QM: Quotation Master

AM: Account Module

Success Conditions :

Proper Data

Failure Conditions :

No database, Internet connection

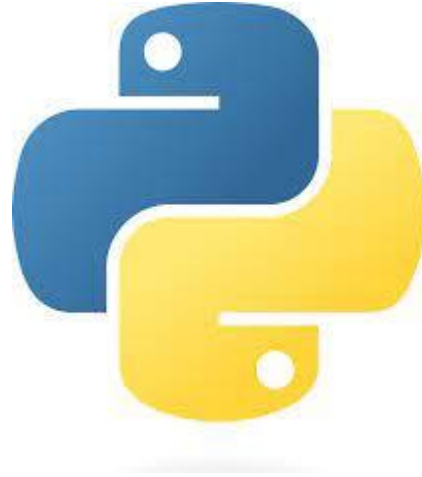
Hardware Requirements

1. RAM 4 GB or Above
2. i3 Processor or above
3. 150 GB Hard disk or above



Software Requirements

1. Windows 10 or above
2. Python 3.10
3. Sqlite
4. Django
5. Vs code



Project Goals

- Improved Efficiency and Accuracy: Quotation creation becomes more efficient, reducing the time required to respond to customer inquiries.
- Enhanced Customer Satisfaction: Faster response times and accurate quotations lead to improved customer satisfaction.
- Optimized Inventory Control: Automated replenishment reduces the risk of stockouts and overstock situations, optimizing inventory levels.
- Cost Reduction: Streamlined processes and reduced manual work lead to cost savings.
- Effective Communication: Clear communication between sales, production, and logistics teams ensures seamless order fulfillment.

Project Modules

Quotation Generation Module:

- User Interface for Sales Teams
- Customer Requirements Input
- Quotation Generation Algorithm
- Customization and Personalization Options
- Document Generation (PDFs, etc.)

Order Acceptance and Confirmation Module:

- Customer Acceptance Tracking
- Verification of Details and Terms

Inventory Management Module:

- Real-time Inventory Records
- Module Tracking (Quantities, Stock Levels, Warehouse Locations)

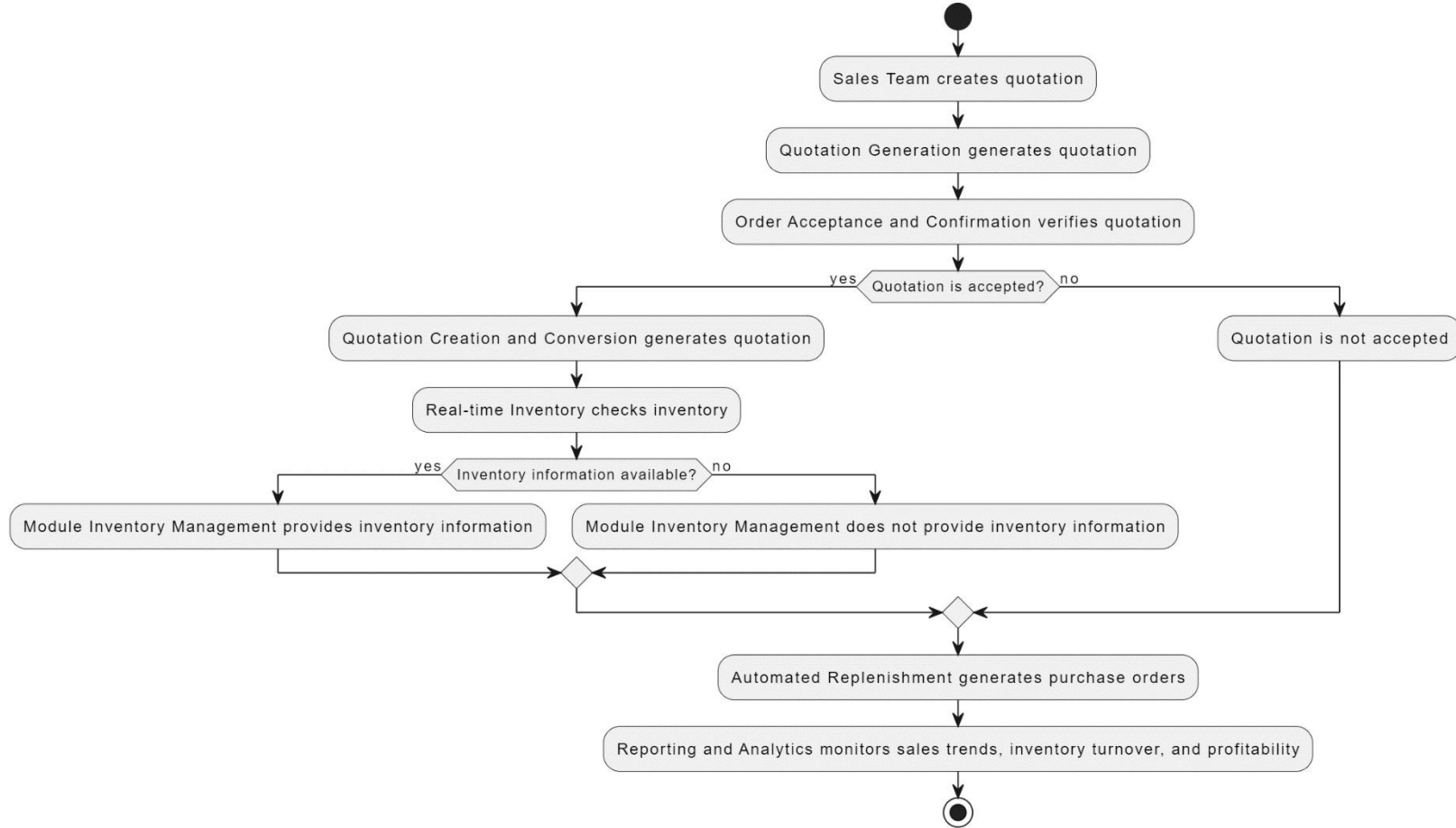
Automated Replenishment Module:

- Stock Level Monitoring
- Threshold-Based Alerts
- Purchase Order Generation
- Vendor Management

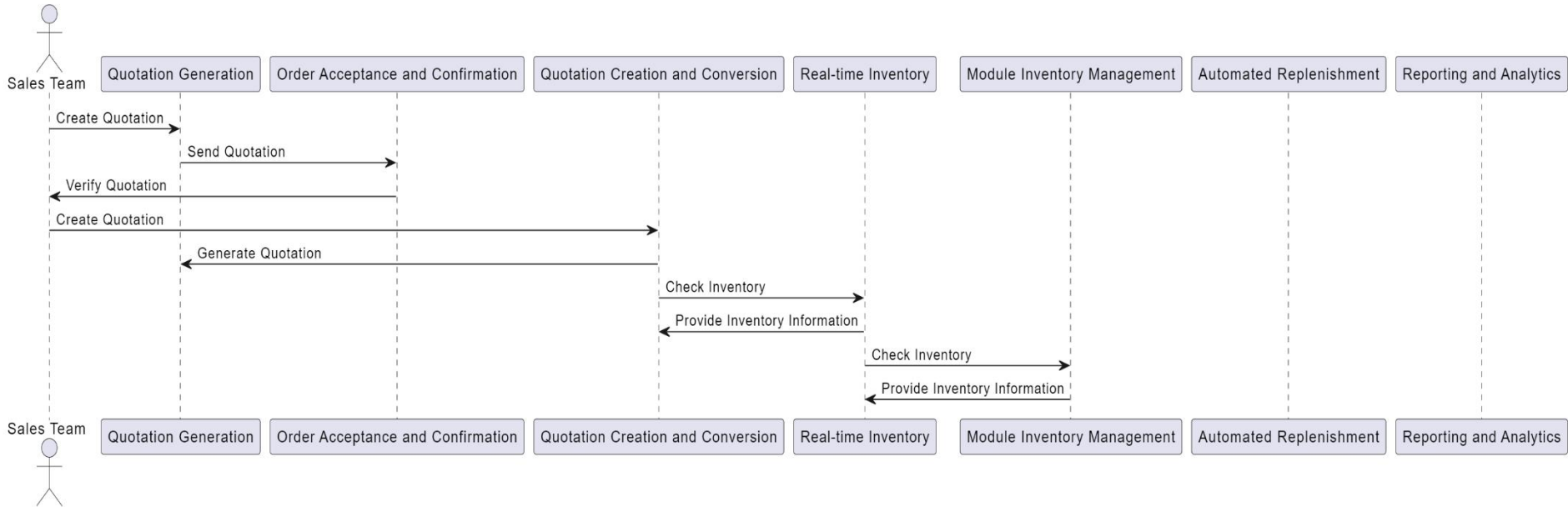
User Management and Authentication Module:

- User Roles and Permissions
- Secure Authentication
- Password Management
- User Profile Management

Activity Diagram



Sequence Diagram



Conclusion

In conclusion, the project offers a comprehensive solution to streamline business operations, enhance customer satisfaction, and optimize resource utilization. Through efficient quotation generation, automated inventory management, robust security measures, and data-driven insights, the project enables organizations to respond swiftly to customer needs, reduce operational costs, and make informed decisions. Moreover, it ensures compliance with legal requirements, safeguards sensitive data, and fortifies the organization's competitive position.

Future Scope

Project extends beyond its initial implementation, offering opportunities for ongoing enhancements and adaptations. As technology continues to evolve, incorporating artificial intelligence and machine learning can enable predictive inventory management, further reducing costs and improving resource allocation. Integration with emerging e-commerce platforms and mobile applications can expand customer reach and accessibility. Enhanced data analytics capabilities can provide deeper insights into market trends, enabling proactive decision-making.

References

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