



# Effective Data Management Using Iterative Approach From Data Systems

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## Abstract

The existing offering process is susceptible to vulnerabilities that can negatively impact project delivery. Previous studies have extensively explored memory management issues associated with large datasets; however, these studies have not proposed solutions for problem analysis or mitigation. Additionally, there has been a lack of examination into the efficiency of the data maintenance process itself. This project aims to identify and analyze issues at each stage of the public tendering process, offering potential solutions to address or mitigate these concerns. The vendor selection process for subcontracting projects or purchasing project-related goods and services is conducted through the bidding process. Bid records contain specifications for the project or information about the goods and services to be procured. In this project, we consolidate all sensitive and large-volume data provided by various stakeholders in the bidding process. Instead of relying on traditional approaches in big data systems, we employ a divide-and-retrieve approach. A prominent issue in the bidding system is its inability to provide a comprehensive contractor database containing information about their personnel, previous works, experiences, and performance evaluations. Another significant factor to consider is the scarcity of human resources, both in terms of quantity and expertise. The project aims to address these challenges and enhance the efficiency of the public tendering process.

**Keywords:** Large Datasets, Stakeholders, Divide-Retrieve Approach, Bidding System.

## 1. INTRODUCTION

Memory management in large amounts of data has been a subject of extensive research, but little attention has been given to studying it from a user perspective. Previous projects have primarily focused on developing efficient data maintenance techniques and identifying problem areas in such applications. However, there has been a lack of examination into the process of how data is stored and maintained within these systems. The objective of this project is to identify and analyze issues at each stage of the public tendering process and propose possible solutions to address or mitigate these issues. The selection of a vendor for subcontracting a project or purchasing goods and services associated with that project is done through the bidding process. Bid records contain information about the goods and services to be

purchased or specifications for the project. In contrast to conventional approaches used in big data systems, this project adopts a divide-and-retrieve approach to handle all sensitive and substantial data provided by various participants in the bidding process.

A prevalent problem in the bidding system is its inability to provide a thorough contractor database with information about their staff, past projects, experiences, and performance reviews. Online bids can be submitted at any time, offering flexibility and removing geographical constraints. Items are listed in online auctions, allowing buyers to investigate and make informed decisions before bidding. Sellers and bidders can participate from anywhere with internet access. The purpose of the project is to develop new iterative approaches to the general linear regression problem, directly building on the traditional divide-and-conquer approach. The study involved tendering practitioners who were given questionnaires, and the collected data were measured and analyzed. Expert judgment was utilized to formulate proposed solutions. The findings revealed 135 issues during the tendering process, and the proposed solutions are grounded in the four pillars of the public procurement agent's reformation concept.

## 2.LITERATURE SURVEY

1. M. Mohammadi and A. Al-Fuqaha, "Enabling cognitive smart cities using big data and machine learning: Approaches and challenges," *IEEE Communications Magazine*, vol. 56, no. 2, pp. 94–101, 2018 - Provides an overview of online auction mechanisms, platforms, and their underlying technologies. Discusses different types of online auctions, including English auctions, Dutch auctions, and Vickrey auctions. Analyzes the role of strategic bidding, bidder behavior, and auction design in online auction platforms.

2. M. S. Hajirahimova and A. S. Aliyeva, "About big data measurement methodologies and indicators," *International Journal of Modern Education and Computer Science*, vol. 9, no. 10, p. 1, 2017. Reviews the economic literature on electronic auctions, focusing on theoretical and empirical studies. Explores various auction formats and their characteristics, such as ascending auctions, sealed-bid auctions, and combinatorial auctions. Highlights the impact of bidder collusion, information asymmetry, and auction design on the outcomes of online bidding auctions.

3. "Modelling Bidders' and Sellers' Strategies in Online Auctions" by Chakraborty, R., et al. (2016). Investigates the bidding strategies adopted by buyers and sellers in online auctions. Discusses the impact of factors such as reserve prices, bid increments, and auction duration on bidding behavior. Utilizes game theory models and simulations to analyze strategic interactions between bidders and sellers.

4. "eBay Auctions: Value versus No-Value Bidders" by Roth, A. E., & Ockenfels, A. (2002). Examines data from eBay auctions to understand the behavior and strategies of different types of bidders. Analyzes the impact of factors such as bid increments, starting prices, and auction duration on bidder participation and outcomes. Provides insights into the dynamics of online bidding auctions from an industry perspective.

5. "A Case Study of Online Auctions for Agricultural Products" by Li, M., et al. (2014). Investigates the use of online bidding auctions in the agricultural sector, focusing on China's agricultural e-commerce platforms. Explores the benefits and challenges of adopting online auction systems for agricultural products. Discusses the impact of online auctions on market efficiency, price discovery, and farmer's income.

### 3.EXISTING SYSTEM

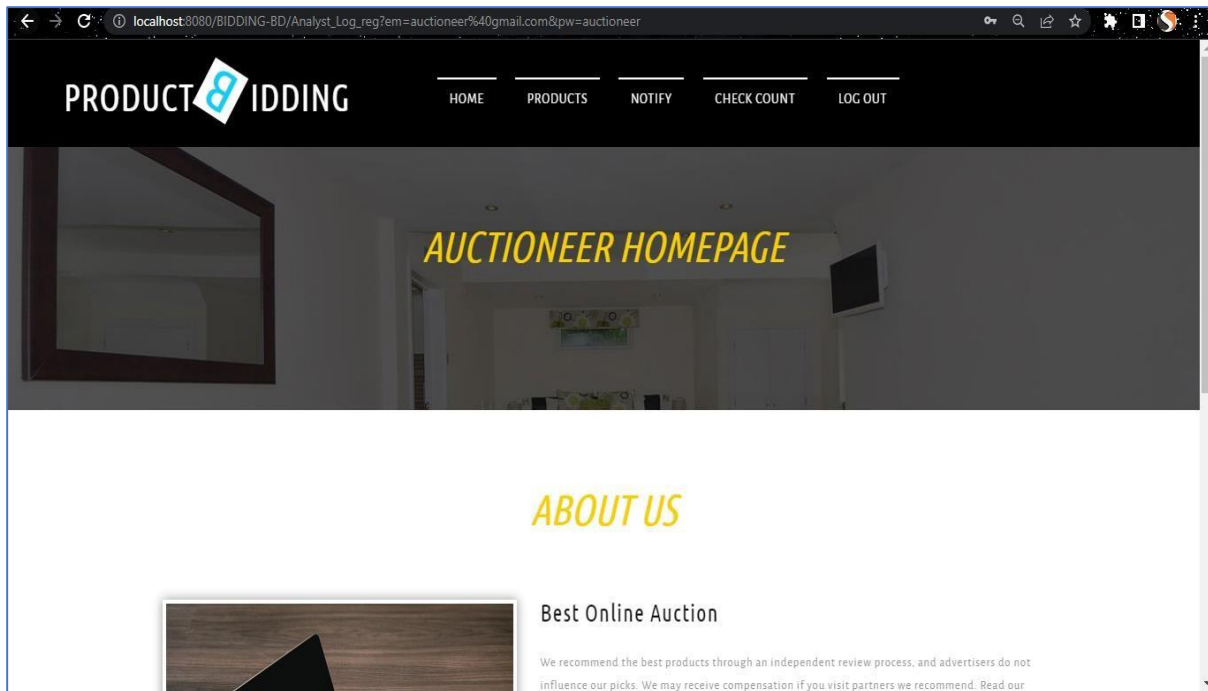
A poor application performance can have significant implications on the efficiency of online bidding processes, potentially leading to the need for rebidding with revised scopes and delayed bid submission dates. This can pose challenges in bid evaluation and source selection, particularly when the scope of work is unclear or ambiguous. Such challenges may result in project delays for the company. To address these issues, the study recommends that proper attention be given to application and data management performance in online bidding activities. Enhancing collaboration between the contracts departments and user departments in scoping bid documents is crucial for avoiding delays and ensuring clarity in project timelines. The study also highlights the frequent occurrence of challenges related to data fetching and combining, especially when dealing with large amounts of data during the tender process. Additionally, the expansion of e-procurement introduces the potential for deceitful practices, impacting the commission to win a tender. Based on the findings, the e-procurement procedure in Portugal was identified to be plagued by various issues that could negatively impact the value of tendering, overall competency, time efficiency, and expenses associated with the procurement process. Addressing these challenges is essential for improving the effectiveness of the online bidding system and ensuring successful tender outcomes.

### 4. PROPOSED SYSTEM

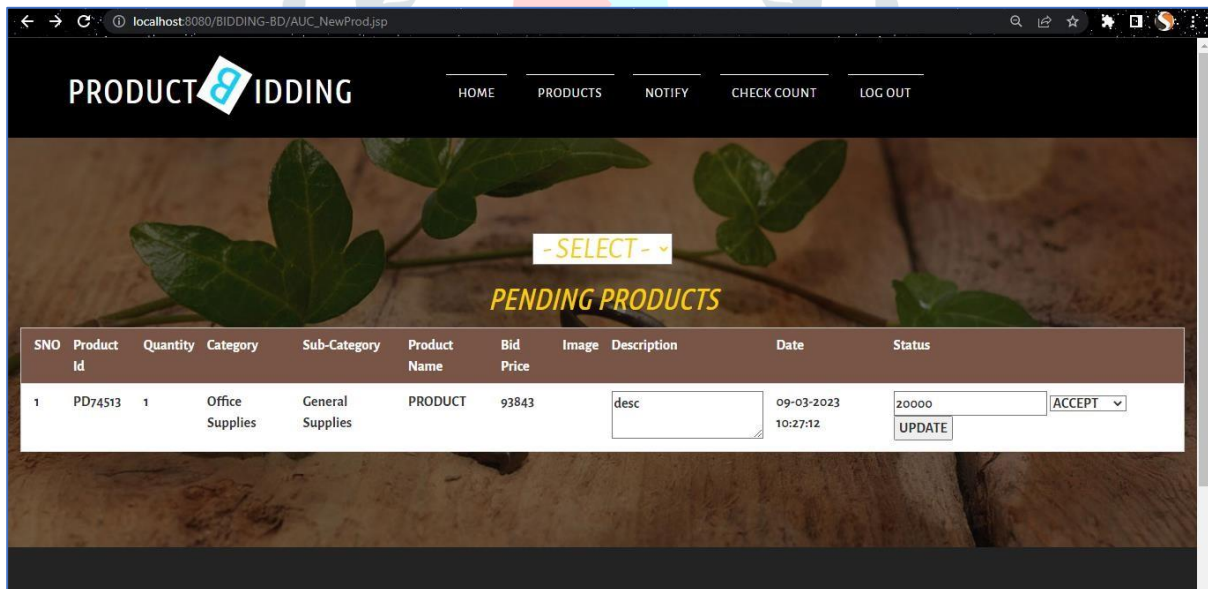
The objective is to establish a user-friendly auction platform that facilitates the sale of products and offers value-added services to both sellers and bidders. The platform is designed to handle sensitive merchant data, manage bidding records, and oversee transactions seamlessly. User registration is secure, enabling the creation of personal profiles, and the entire site is easily accessible for comprehensive inquiry. To address data management challenges, a modified version of the traditional divide and conquer method is implemented as a divide and iterate approach. This approach involves decomposing large volumes of data into manageable chunks, optimizing memory usage, and enhancing processing time—particularly crucial when dealing with high-velocity data processing. The computing platform efficiently handles bidding records and transactions, ensuring the secure storage of sensitive data related to merchants. The primary aim of this work is to pioneer new iterative methodologies for solving the general linear regression problem. These methodologies are specifically designed to be integrated directly into the traditional divide and conquer approach, enhancing the efficiency of data processing in the auction platform. The iterative techniques contribute to the platform's ability to manage large datasets, making it a robust solution for online auction activities.

## 5. EXPERIMENTAL RESULTS

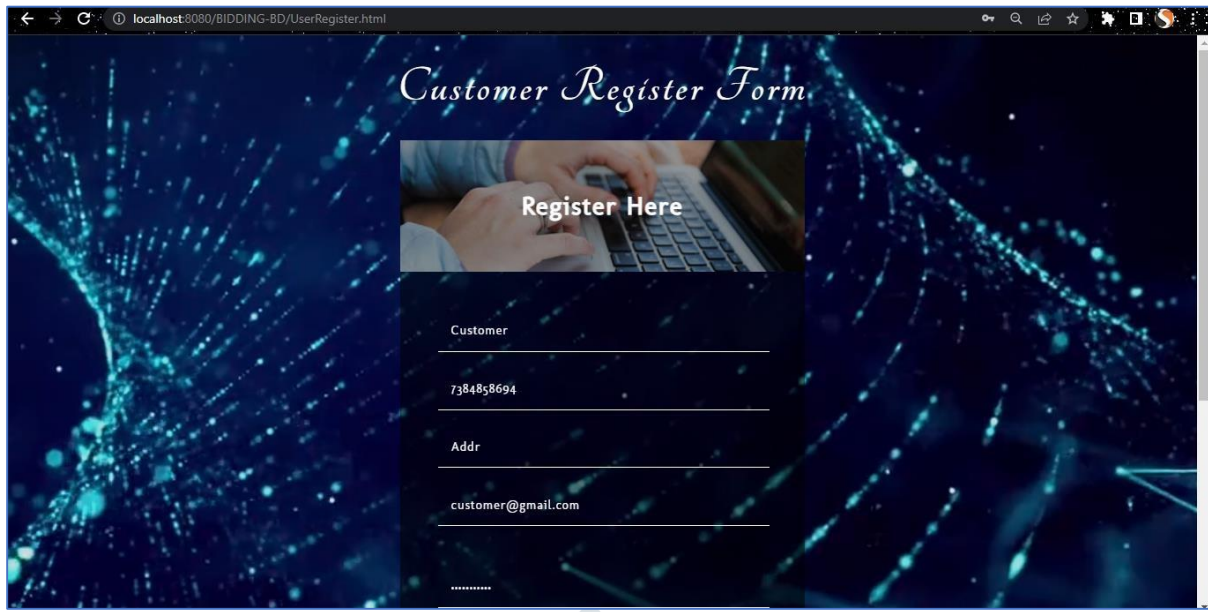
### Auctioneer Homepage:



### Pending Products:



## Customer Registration Form:



## 6. CONCLUSION

Software development is an ongoing process that adapts the life of the software to meet the evolving needs of users over time. The project has been developed with a focus on ease of modification and enhancement to accommodate changes as necessary. Online auction technologies are continuously evolving, transforming the landscape of online business. Despite this, the uncooperative behavior of major online auction platforms often hinders the progress of auction-related research and the development of new security methods. One of the challenges faced is the scarcity of high-quality auction data and literature on the design of online bidding processes. This lack of comprehensive information can impede the understanding of online auction dynamics and hinder the exploration of innovative approaches to enhance security and functionality. The project acknowledges the dynamic nature of technology and aims to stay adaptable to emerging trends, fostering a flexible and responsive environment for the continuous improvement of online auction platforms.

## 7. REFERENCES

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