



IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 10, Issue 6, June 2022

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.165



9940 572 462



6381 907 438



ijircce@gmail.com



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Group-Based Skyline for Pareto Optimal Groups

Baalamurugan. S G, Daison. P, Gopalakrishnan. S, Mr. G. Yuvaraj

U.G Scholar, Department of CSE, Velammal Institute of Technology, Chennai, Tamil Nadu, India

U.G Scholar, Department of CSE, Velammal Institute of Technology, Chennai, Tamil Nadu, India

U.G Scholar, Department of CSE, Velammal Institute of Technology, Chennai, Tamil Nadu, India

Assistant Professor, Department of CSE, Velammal Institute of Technology, Chennai, Tamil Nadu, India

ABSTRACT: Outsourcing data and computation to cloud server provides a cost-effective way to support large scale data storage and query processing. However, due to security and privacy concerns, sensitive data (e.g., medical records) need to be protected from the cloud server and other unauthorized users. One approach is to outsource encrypted data to the cloud server and have the cloud server perform query processing on the encrypted data only. It remains a challenging task to support various queries over encrypted data in a secure and efficient way such that the cloud server does not gain any knowledge about the data, query, and query result. In this paper, we study the problem of secure skyline queries over encrypted data. The skyline query is particularly important for multi-criteria decision making but also presents significant challenges due to its complex computations. We propose a fully secure skyline query protocol on data encrypted using semantically-secure encryption. As a key subroutine, we present a new secure dominance protocol, which can be also used as a building block for other queries. Furthermore, we demonstrate two optimizations, data partitioning and lazy merging, to further reduce the computation load. Finally, we provide both serial and parallelized implementations and empirically study the protocols in terms of efficiency and scalability under different parameter settings, verifying the feasibility of our proposed solutions

I. INTRODUCTION

As an emerging computing paradigm, cloud computing attracts increasing attention from both research and industry communities. Outsourcing data and computation to cloud server provides a cost effective way to support large scale data storage and query processing. However, due to security and privacy concerns, sensitive data need to be protected from the cloud server as well as other unauthorized users.

A common approach to protect the confidentiality of outsourced data is to encrypt the data. To protect the confidentiality of the query from cloud server, authorized clients also send encrypted queries to the cloud server. Figure 1 illustrates our problem scenario of secure query processing over encrypted data in the cloud. The data owner outsources encrypted data to the cloud server. The cloud server processes encrypted queries from the client on the encrypted data and returns the query result to the client. During the query processing, the cloud server should not gain any knowledge about the data, data patterns, query, and query result.

II. EXISTING SYSTEM

In the existing system, we used a fully secure skyline protocol on encrypted data using two non-colluding cloud servers under the semi-honest model. It ensures semantic security in that the cloud server knows nothing about the data including indirect data patterns, query, as well as the query result. In addition, the client and data owner do not need to participate in the computation.

III. PROPOSED SYSTEM

AIM:

To give quality products with satisfied price as possible and gives more information about the products.

OBJECTIVE:

Now a days online shopping demand gets increased day by day above 75% people shopping online. And they not only see one platform to search their products. They using more then one platform to search there products like(amazon, flipkart.etc) and also they waste there time for that. In our project they can search there products but in this one platform they can get to know that particular products price in different platform.

PROBLEM STATEMENT:

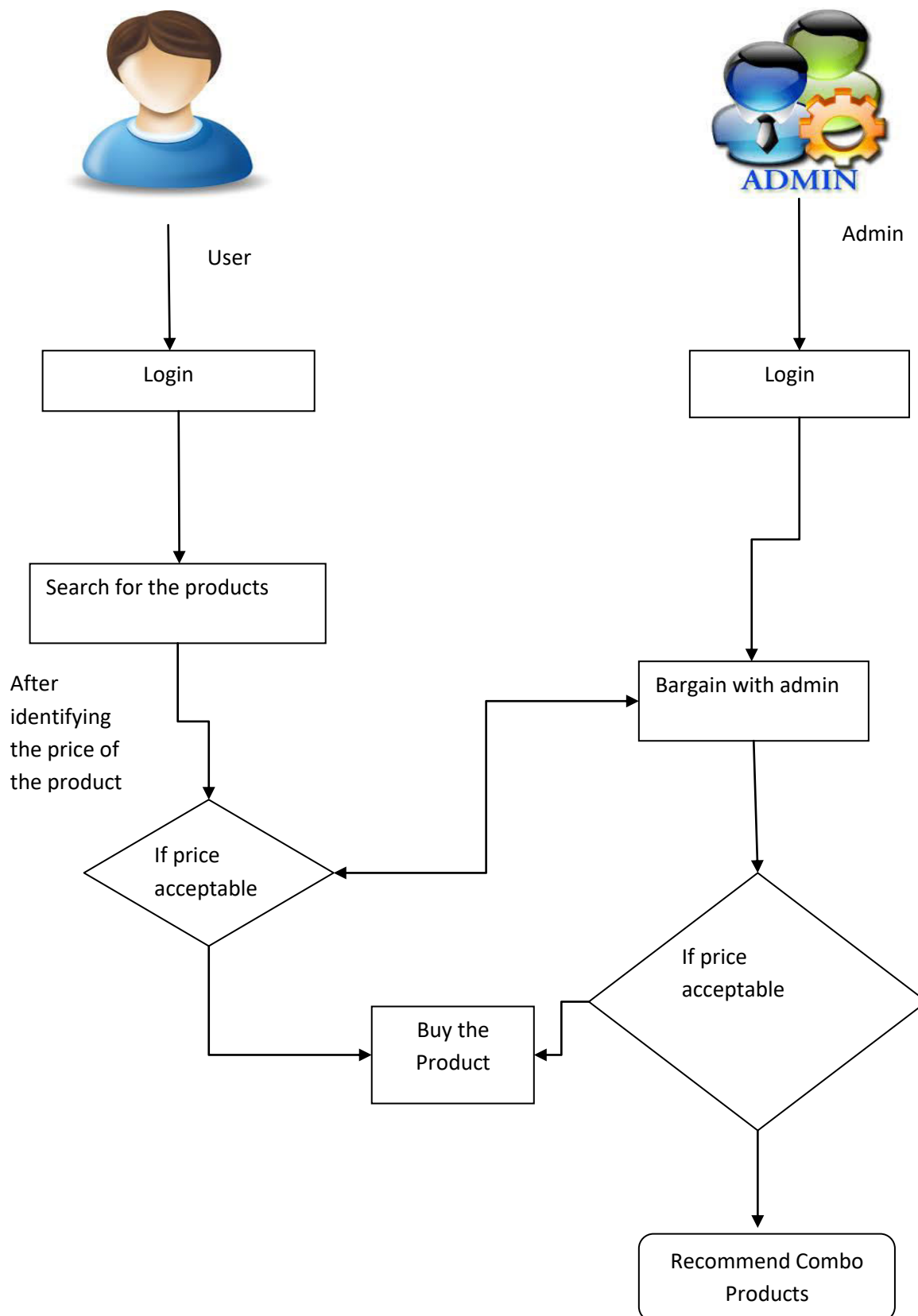
Manage the server properly is an challenging

One. Because lots of people using the web server at the same time may happen network traffic.

WORKING DETAILS:

Efficient and comfortable online shopping is important now a days. People don't want to waste their times for loading the server and other unnecessary things. They only need fast and good products with their expected price. So just for selecting the products we give more efficient and optimized result to the users.

ARCHITECTURE DIAGRAM:



IV. CONCLUSION

we proposed the problem of G-Skyline groups for finding Pareto optimal groups. This is the first work to extend the original skyline definition to group level which captures the quintessence of original skyline definition. To compute the G-Skyline groups efficiently, we presented a novel structure based on skyline layers that not only partitions the points efficiently but also captures the dominance relationship between the points. We then presented point-wise and unit group-wise algorithms to compute the G-Skyline groups efficiently. To mitigate the drawback of too many returned G-Skyline groups, we proposed the top-k representative G-Skyline groups based on the number of dominated points and the number of dominated groups and presented efficient algorithms for computing them. A comprehensive experimental study is reported demonstrating the benefit of our algorithms.

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BIOGRAPHY

Mr.G. Yuvaraj, Associate Professor of Computer Science and Engineering Department in Velammal Institute of Technology, Panchetti

Baalamurugan S G is a B.E. final year student in the department of Computer Science and Engineering from Velammal Institute of Technology, Panchetti.

Daison P is a B.E. final year student in the department of Computer Science and Engineering from Velammal Institute of Technology, Panchetti.

Gopalakrishnana S is a B.E. final year student in the department of Computer Science and Engineering from Velammal Institute of Technology, Panchetti.



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