

Using Stored Procedure and Triggers in MySQL for Automated Trade Execution

Chiranjiv Shende¹, Mayuri Lichade², Prof. Ms. Yamini B. Laxane³, Prof. Bhagyashree Kumbhare⁴

PG Student, Department of Master of Computer Application^{1,2}

Professor, Department of Master of Computer Application³

HOD, Department of Master of Computer Application⁴

Smt. Radhikatai Pandav College of Engineering Nagpur, Maharashtra, India

Abstract: *The automation of trade execution in fintech applications necessitates robust and reliable database mechanisms, where MySQL a widely used open-source relational database management system, offers powerful features such as triggers and stored procedure to achieve this automation. Automated trade execution has emerged as a vital aspect of modern financial markets, enabling traders and institutions to efficiently capitalize on market opportunities with minimal latency. The increasing complexity and volume of trades require robust systems capable of executing strategies in real time, ensuring that decisions are executed with precision and speed. This paper explores the integration of MySQL—a powerful relational database management system—into the land of automated trading by leveraging its stored procedures and triggers. These features facilitate the encapsulation of business logic directly within the database, allowing for streamlined processing and enhanced performance. Stored procedures serve as predefined collections of SQL statements, which can be executed on call. They promote code reuse and enhance security by controlling access to sensitive data. Meanwhile, triggers act as automated responses to any events within the database, such as the insertion or modification of records. By utilizing these, traders can automate complex processes such as order placements, risk assessments, and compliance checks without requiring continuous human intervention. This research aims to interpret how the strategic implementation of stored procedures and triggers in MySQL can lead to more efficient trade execution systems. By examining their capabilities and discussing potential challenges, this study contributes to the broader understanding of how database technologies can be used to meet the demands of high-frequency trading environments. As financial markets continue to evolve, so too must the tools we employ to navigate them effectively..*

Keywords: Automated Trade, Stored Procedure, Triggers encapsulation, database

