

## Task 2

Blockchain Name	Type	Consensus Mechanism used	Permission Model	Speed/Throughput	Smart Contract Support	Token Support	Use Case	Notable Technical Feature
Solana	Public	Proof of Stake	Open	>50,000 TPS	Yes (Rust, C, C++)	Native(SOL) and non native(SPL)	High frequency trading, NFTs	High Throughput and low gas fees
Hyperledger Fabric	Private	Raft	Permissioned	>2000 TPS	Yes (Go,Java, JavaScript)	No Native Token	Supply Chain management, Trade Finance	Modular architecture and channels for pvt txns
R3 Corda	Consortium	Raft	Permissioned	>1600 TPS	Yes (Kotlin, Java)	No Native token	Financial Services, Healthcare, Insurance	P2P data sharing and a unique Unspent txn o/p (UTXO) model

## Report

Solana, Hyperledger Fabric, and R3 Corda offer distinct technical strengths. Solana excels with its high throughput and minimal transaction fees, leveraging Proof of History (PoH) and Proof of Stake (PoS) for rapid and scalable decentralized applications (dApps) in a permissionless setting. Hyperledger Fabric, a permissioned platform, prioritizes privacy through private channels and offers flexible consensus mechanisms, making it ideal for secure and efficient supply chain networks among known entities. R3 Corda is specifically designed for regulated financial industries, focusing on transactional privacy and interoperability without a native cryptocurrency, catering to inter-bank financial applications where confidentiality and compliance are crucial.

For a high-performance dApp, Solana is preferred. Hyperledger Fabric suits supply chain networks with its permissioned and private nature. R3 Corda is the top choice for inter-bank financial applications due to its emphasis on privacy and regulatory requirements within the financial sector.