PASTA worksheet

Stages	Sneaker company
I. Define business and security objectives	• *The app processes legitimate payments.* • *App store user's information such as login id and password, ratings and other messaging between buyers and sellers.* • *Application should follow user privacy and other payment security standards.*
II. Define the technical scope	List of technologies used by the application: • *Application programming interface (API)* • *Public key infrastructure (PKI)* • *SHA-256* • *SQL* *API framework should be used as it uses encryption inorder to login users which smothens and strengthens the login process. PKI is used as it will provide security and trust between clients and the website. SQL is used as the database query language due to its fast speed, availability of different supporting tools and less complexity with databases. Meanwhile SHA-256 generated a pair of keys which can be used to encrypt sensitive data inside the database hence enhancing the security.*
III. Decompose application	Sample data flow diagram
IV. Threat analysis	• *Internal threats such as employees can leak sensitive data in public mistakenly or intentionally for some motives.* • *External threats such as malicious actors can use the input fields to exfiltrate the sensitive data from the database.*
V. Vulnerability analysis	*Possible vulnerabilities will be SQLI,XSS and internal information disclosure.* • *In case of SQLI, an attacker might steal sensitive data from the database.* • *Usage of encryption in storing data potential reduces the risk of any harm to the database.*
VI. Attack modeling	Sample attack tree diagram

VII. Risk analysis and impact	Some of the controls that should be implemented are : SHA256, principle of least privilege, password policy, incident response procedure.
