

PASTA worksheet

Stages	Sneaker company
I. Define business and security objectives	<ul style="list-style-type: none">• Seamless user experience with easy sign-up, login, and account management.• Strong data privacy measures to build user trust.• Efficient transaction processing with multiple payment options.
II. Define the technical scope	<p>List of technologies used by the application:</p> <ul style="list-style-type: none">• Application programming interface (API)• Public key infrastructure (PKI)• SHA-256• SQL <p>One would evaluate Public Key Infrastructure (PKI) first. PKI manages the encryption keys for securing sensitive data exchanges and ensuring data integrity. Any vulnerabilities in PKI can lead to severe security breaches, including unauthorized data access and compromised encryption keys, making it a critical priority over the others.</p>
III. Decompose application	Sample data flow diagram
IV. Threat analysis	<ul style="list-style-type: none">• Insider Threats: Employees with access to sensitive data could misuse their privileges to access, modify, or leak user information, such as credit card details or personal data.• SQL Injection Attacks: Attackers could exploit vulnerabilities in SQL queries to gain unauthorized access to the database, potentially retrieving or altering sensitive information like user data and credit card information.
V. Vulnerability analysis	<ul style="list-style-type: none">• Lack of prepared statements• Broken API token
VI. Attack modeling	Sample attack tree diagram
VII. Risk analysis and	<ul style="list-style-type: none">• SHA-256

impact	<ul style="list-style-type: none">• Incident Response Procedures• Password Policy• Principle of Least Privilege
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- Kushagra Gupta