

PASTA worksheet

Stages	Sneaker company
I. Define business and security objectives	<ul style="list-style-type: none">• <i>The application should process payments.</i>• <i>Certain technologies are required to keep information private and secure.</i>• <i>Everything will need to be compliant with PCI-DSS.</i>
II. Define the technical scope	<p>List of technologies used by the application:</p> <ul style="list-style-type: none">• <i>API</i>• <i>PKI</i>• <i>AES</i>• <i>SHA-256</i>• <i>SQL</i> <p>APIs facilitate the exchange of data between customers, partners, and employees, so they should be prioritized. However, details such as which APIs are being used should be considered before prioritizing one technology over another.</p>
III. Decompose application	Sample data flow diagram
IV. Threat analysis	<ul style="list-style-type: none">• <i>Injection attacks are common for SQL databases.</i>• <i>Session hijacking is possible.</i>
V. Vulnerability analysis	<p>List 2 vulnerabilities in the PASTA worksheet that could be exploited.</p> <ul style="list-style-type: none">• <i>A lack of prepared statements can make our SQL database vulnerable to injection attacks.</i>• <i>Session hijacking is possible because the app communicates cookies between multiple layers.</i>
VI. Attack modeling	Sample attack tree diagram
VII. Risk analysis and impact	<p>List 4 security controls that you've learned about that can reduce risk.</p> <p>SHA-256, incident response procedures, password policy, and principle of least privilege</p>