

PASTA worksheet

Stages	Sneaker company
I. Define business and security objectives	<ul style="list-style-type: none">• <i>Ensure easy sign-up, login, and account management while maintaining data privacy.</i>• <i>Secure and smooth process for buying and sales transactions with multiple payment options.</i>• <i>Ensure that private communications between seller and buyer are secure.</i>
II. Define the technical scope	<p>List of technologies used by the application:</p> <ul style="list-style-type: none">• <i>Application programming interface (API)</i>• <i>Public key infrastructure (PKI)</i>• <i>SHA-256</i>• <i>SQL</i> <p>I think that the APIs should be prioritized because they are used to interface with several different programs and platforms expanding the attack surface and can be compromised to gain access to very sensitive information.</p>
III. Decompose application	Sample data flow diagram
IV. Threat analysis	<ul style="list-style-type: none">• <i>SQL injection could be used to gain access to sensitive information</i>• <i>XSS attacks could be utilized to steal exploit cookies to hijack a target session</i>
V. Vulnerability analysis	<ul style="list-style-type: none">• <i>No prepared statements to protect against SQLi</i>• <i>Weak cryptographic algorithm</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> <ul style="list-style-type: none">• <i>Using prepared statements</i>• <i>Input validation</i>• <i>Least privilege</i>

	<ul style="list-style-type: none">• Hashing passwords and credit card numbers (SHA-256)
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