

PASTA worksheet

Description: Our application should seamlessly connect sellers and shoppers. It should be easy for users to sign-up, log in, and manage their accounts. Data privacy is a big concern for us. We want users to feel confident that we're being responsible with their information.

Buyers should be able to directly message sellers with questions. They should also have the ability to rate sellers to encourage good service. Sales should be clear and quick to process. Users should have several payment options for a smooth checkout process. Proper payment handling is really important because we want to avoid legal issues.

Stages	Sneaker company
I. Define business and security objectives	<i>This company does a lot of back-end processing as it is responsible for payment, communication between buyer and seller, and storing customer data.</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>APIS are to be prioritized over the others. They have the means to exchange sensitive information between customers and employees. There are also probably many different APIs that the company uses, so therefore they would be prone to a larger attack surface.</p>
III. Decompose application	Sample data flow diagram
IV. Threat analysis	<ul style="list-style-type: none">• Session hijacking• SQL Injections
V. Vulnerability analysis	<ul style="list-style-type: none">• <i>Weak/minimal prepared statements</i>• <i>Weak login credentials</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">• Principles of least privilege• Password policies• 2FA• Frequent Audits
