

PASTA worksheet

Stages	Sneaker company
I. Define business and security objectives	<p>Make 2-3 notes of specific business requirements that will be analyzed.</p> <ul style="list-style-type: none">• <i>The app will process transactions at a fast rate as well as offer several payment options</i>• <i>The back-end process this will be conducted will contain user account management, data privacy, messaging between buyers and sellers, rating system, sales processing, payment handling.</i>• <i>Industry regulations will be applied to the way payment is handled.</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>securing the application's core mechanisms of data exchange and encryption, before focusing on the integrity and storage of the data itself. This approach helps in prioritizing the mitigation of risks that could have the broadest impact on the application's security posture.</i></p>
III. Decompose application	<u>Sample data flow diagram</u>
IV. Threat analysis	<p>List 2 types of threats in the PASTA worksheet that are risks to the information being handled by the application.</p> <ul style="list-style-type: none">• <i>The internal threat is Weak login credentials</i>• <i>The external threats are SQL injection, session hijacking, and lack of prepared statements</i>
V. Vulnerability analysis	<p>List 2 vulnerabilities in the PASTA worksheet that could be exploited.</p> <ul style="list-style-type: none">• <i>Things that could be wrong with the codebase are insecure coding practices, lack of input validation, improper error</i>

	<p><i>handling, outdated libraries or frameworks and hard coded credentials</i></p> <ul style="list-style-type: none"> • <i>Weaknesses in the database can be insecure storage of sensitive data, insufficient access controls, lack of data encryption, misconfigurations</i> • <i>Flaws in the network could be unsecured communication channels and misconfigured firewalls and networks</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"> -access control and authentication mechanisms -data encryption -network security controls -regular security audits and vulnerability assessments
