PASTA worksheet

Scenario

Review the following scenario. Then complete the step-by-step instructions.

You're part of the growing security team at a company for sneaker enthusiasts and collectors. The business is preparing to launch a mobile app that makes it easy for their customers to buy and sell shoes.

You are performing a threat model of the application using the PASTA framework. You will go through each of the seven stages of the framework to identify security requirements for the new sneaker company app.

Stages	Sneaker company
I. Define business and security objectives	Make **2-3 notes** of specific business requirements that will be analyzed. ● *Will the app process transactions?* ● *Does it do a lot of back-end processing?* ● *Are there industry regulations that need to be considered?* • *Prioritize data privacy and user confidence to ensure responsible handling of user information.* • *Implement a seller rating system to enhance user experience and promote seller accountability.* • *Offer multiple secure payment options for a smooth checkout process and to prevent legal issues.*
II. Define the technical scope	List of technologies used by the application: ● *API* ● *PKI* ● *AES* ● *SHA-256* ● *SQL* Write **2-3 sentences** (40-60 words) that describe why you choose to

	prioritize that technology over the others. The adoption of Public Key Infrastructure (PKI) stands out as a priority among the technologies mentioned. PKI provides strong encryption and authentication techniques, which are in line with the app's focus on user confidence and data protection. The program may provide secure communication channels, protect user data, and verify the legitimacy of users and transactions by integrating PKI, which is essential for upholding trust in the platform.
III. Decompose application	Sample data flow diagram
IV. Threat analysis	List **2 types of threats** in the PASTA worksheet that are risks to the information being handled by the application. ● *What are the internal threats?* - ***Unauthorized Access by Insiders*** ● *What are the external threats?* *- SQL injection attacks*
V. Vulnerability analysis	List **2 vulnerabilities** in the PASTA worksheet that could be exploited. ● *Could there be things wrong with the codebase?* ● *Could there be weaknesses in the database?* ● *Could there be flaws in the network?* - *Insecure authentication and authorization* - *Insufficient data privacy controls*
VI. Attack modeling	Sample attack tree diagram
VII. Risk analysis and impact	List **4 security controls** that you've learned about that can reduce risk. 1. Authentication and authorization controls 2. Data encryption 3. Payment security 4. Secure communication channels