Testing is a process used in plenty of industries to assess the quality of products, services, or systems. From the initial design to the final deployment and even for continuous improvement after deployment, it is used at different points of the development process. Testing can help identify issues early in the development phase, when they can be quicker and less expensively fixed. Moreover, it ensures that the final product meets the set standards and requirements.

The main goal of the project is to develop a payment system application. One of the main features of this app is the ability to create and manage user profiles. Users can make payments by giving the preferred currency, the sender and recipient, and the payment amount. The app's built-in automatic exchange rate tool guarantees accurate currency conversions while conducting transactions. The system also provides secure authentication methods to safeguard user data and transaction integrity.

Unit testing is necessary to confirm the functionality of individual components. Building test cases ensures that payment transactions are accurate, confirming that the designated amount is deducted from the sender's account and given to the recipient's account, and validating the precision of the automatic exchange rate calculation.

Integration testing primarily focuses on how the different components of the application interact with one another. The most important modules that require testing are the ones related to user administration, payment processing, and currency conversion. An appropriate integration strategy would be incremental integration, which involves integrating and testing components individually. For example, the user management and payment processing modules should be integrated first to guarantee that user authentication and payment authorization work together.

System testing consists of evaluating the entire integrated application to ensure that all requirements are satisfied. Testing will be done on end-to-end payment scenarios, where a user logs in, starts a payment, chooses the recipient, amount, and currency, and then authorizes the transaction.