

Case Study May 2015

Electronic Banking

Comprehension Questions

How do the data security concerns differ between the bank's clients in European countries and those in African countries?

What is a TAN and why is its use in authentication processes more secure than a simple username/password combination?

What is the difference between data validation and data verification?

What is Encryption?

What is the difference between 'phishing' and 'pharming'?

What are 'push-and-pull' technologies?

What kinds of services can rural customers use in the M-PESA system in Kenya?

Technology Questions

1. Distinguish between symmetric and asymmetric encryption and describe how both are used in the SSL protocol.

2. What is a Digital Certificate and how is it used in the encryption process?

3. With reference to a real example, describe how an 'agency has used backdoor methods in decrypting transmissions'.

4. What is 'malware' and how does a 'man-in-the-browser' Trojan work?

5. Outline an example of out-of-band verification in an authentication process.

6. What is a 'user agent' and how does it relate to the 'Device Description Repositories'?

7. Evaluate the relative security of WEP, WPA-TKIP and WPA2-AES protocols.

8. What is the GSM Protocol used for?

9. Evaluate the relative security of 1024 and 2048-bit encryption keys for SSL encryption.
10. Contrast and compare how NFC technology and QR Codes might be used within the payment process on mobile devices.

Extended Answer Questions

1. Contrast and Compare the use of NFC Contactless Technology with the use of QR codes with respect to the safeguarding of sensitive information.
2. Evaluate the advantages and disadvantages to the bank's customers of using a mobile payment service such as Zapp or Pingit.
3. Contrast and compare the use of TANs as opposed to using Biometric Authentication procedures in banking services with respect to the safeguarding of sensitive information.
4. Compare and contrast the strengths and weaknesses of the levels of security offered by WEP, WPA, GSM and SSL protocols.
5. Discuss the usability issues that TransEuropa will have to consider when designing a user interface that will work with their STK for their developing world mobile project.