Juhwan Lee CS300: Elements of Software Engineering Professor Fei Xie

Exercise 7.4 (Textbook Pg. 219)

Suggest, giving reasons, appropriate forms of authentication for the following products:

a. An e-learning product for teachers and students, funded by advertising, that allows users to recommend videos and other learning materials on a range of topics.

Access control

Access control allows different users to have different levels of access depending on their roles. They will be given permission to access certain data and perform certain tasks based on their roles. It is used to make sure the user is who he claims to be. A student's access will be limited to the permissions granted to them. A teacher on this platform, likewise, will have access to data and activities based on the platform's permissions.

b. A personal finance app for mobile devices that can automatically transfer funds between different accounts based on rules set up by the user.

Multi-factor authentication and traffic encryption

In the case of a personal finance app, traffic encryption should be used to secure the channel between different accounts, as well as Multi-factor Authentication. Multi-factor authentication necessitates the use of two or more distinct and completely independent methods to identify a user. It adds multiple layers of security, increasing the user's confidence. If any of the authentication steps fail, the transaction will be canceled.

c. A human resources product for businesses that helps manage the process of recruiting new staff.

Password based

In the case of the human resource product, only one user is required to manage the recruiting process. As a result, password-based authentication would suffice in this situation. Because it provides the product with basic security, no one else can access it without providing the required ID and password.