Something You Have: Smart Cards

- Attacks against smart cards have also been engineered by experts such as Paul Kocher, Cryptography Research- (www.cryptography.com)

- By studying a smart card's power consumption as it conducted various operations, Kocher was able to determine the contents stored on the card.

- While such attacks are possible, they require a reasonable amount of expertise on the part of the attacker.

Something You Have: ATM Cards

- ATM card is another example of a security mechanism based on some secret the user has.

- On the back of an ATM card is a magnetic stripe that stores data—namely the user's account number.

- This data is used as part of the authentication process when a user wants to use the ATM.

Something You Have: ATM Cards

- Since the magnetic stripe on an ATM card is so easy to copy, credit card companies also sometimes incorporate holograms or other hard-to-copy elements on the cards themselves.

Something You Are

Something You Are: Biometric

- The third general method of authenticating a user is based on something that the user *is*.

- Most of the authentication techniques that fall into this category are biometric techniques, in which something about the user's biology is measured.

- When considering a biometric authentication technique as part of your system, it is important to consider its effectiveness and social acceptability.