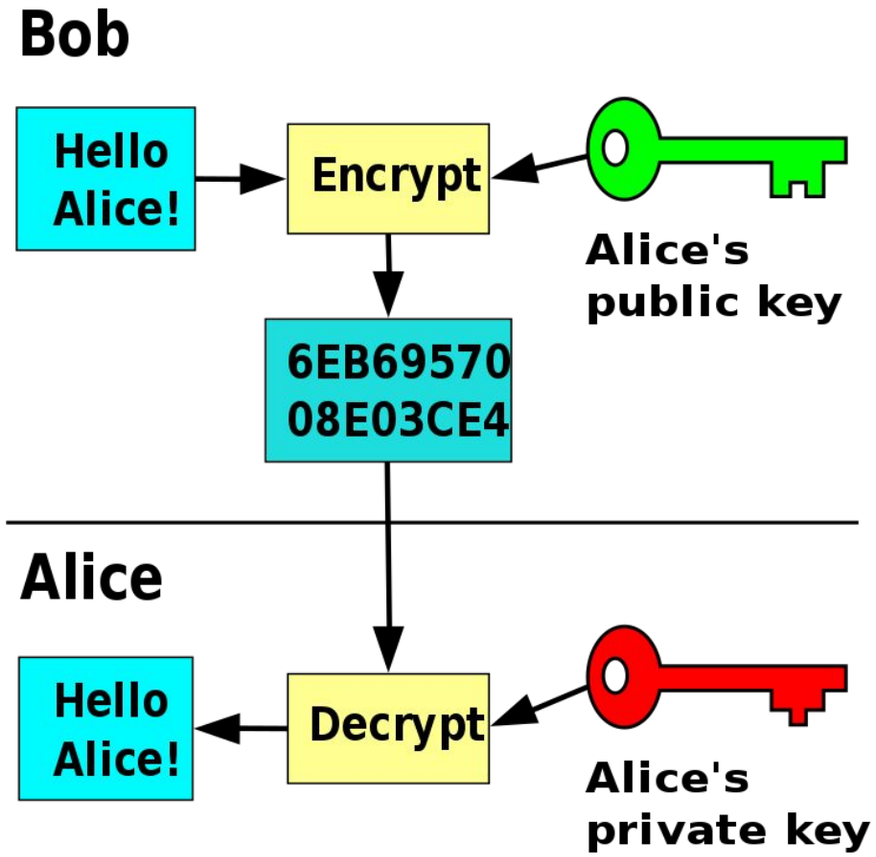
Asymmetric Encryption

- Public-key cryptography, or asymmetric cryptography, is a cryptographic system that uses pairs of keys: public keys which are made public, and private keys which are known only to the owner.
- Data encrypted with the private key can only be decrypted with the public key, and vice versa.
- In such a system, any person can encrypt a message using the receiver's public key, but that encrypted message can only be decrypted with the receiver's private key.



Digital Signatures

- A digital signature verifies the authenticity of digital messages or documents.
- A valid digital signature gives the recipient a very strong reason to believe that:
  - the message was created by a known sender.
  - the message was not altered in transit.
- A digital signature of a file is the hash of that file encrypted with the private key of the one that signs.