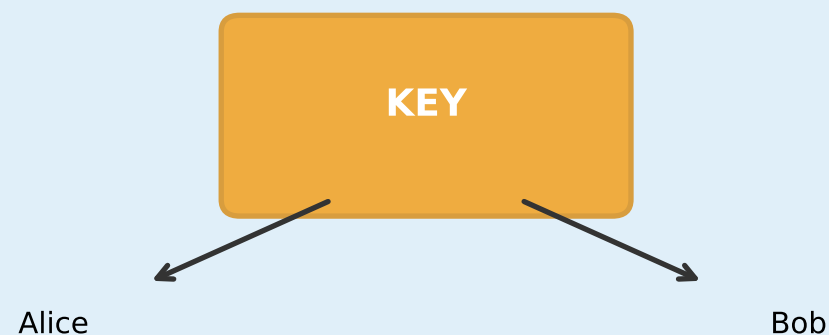


# Symmetric vs Asymmetric Cryptography

## SYMMETRIC

Same key for encrypt & decrypt



Fast (AES: GB/s)

Key distribution problem

Examples: AES, ChaCha20

## Symmetric

**Speed**

Very Fast

**Key Length**

128-256 bits

**Use Case**

Bulk encryption

**In Blockchain**

Encrypt data

## ASYMMETRIC

Public key + Private key pair



Slower (RSA: KB/s)

Solves key distribution

Examples: RSA, ECDSA

## Asymmetric

Slow

2048+ bits (RSA)

Key exchange, signatures

Sign transactions