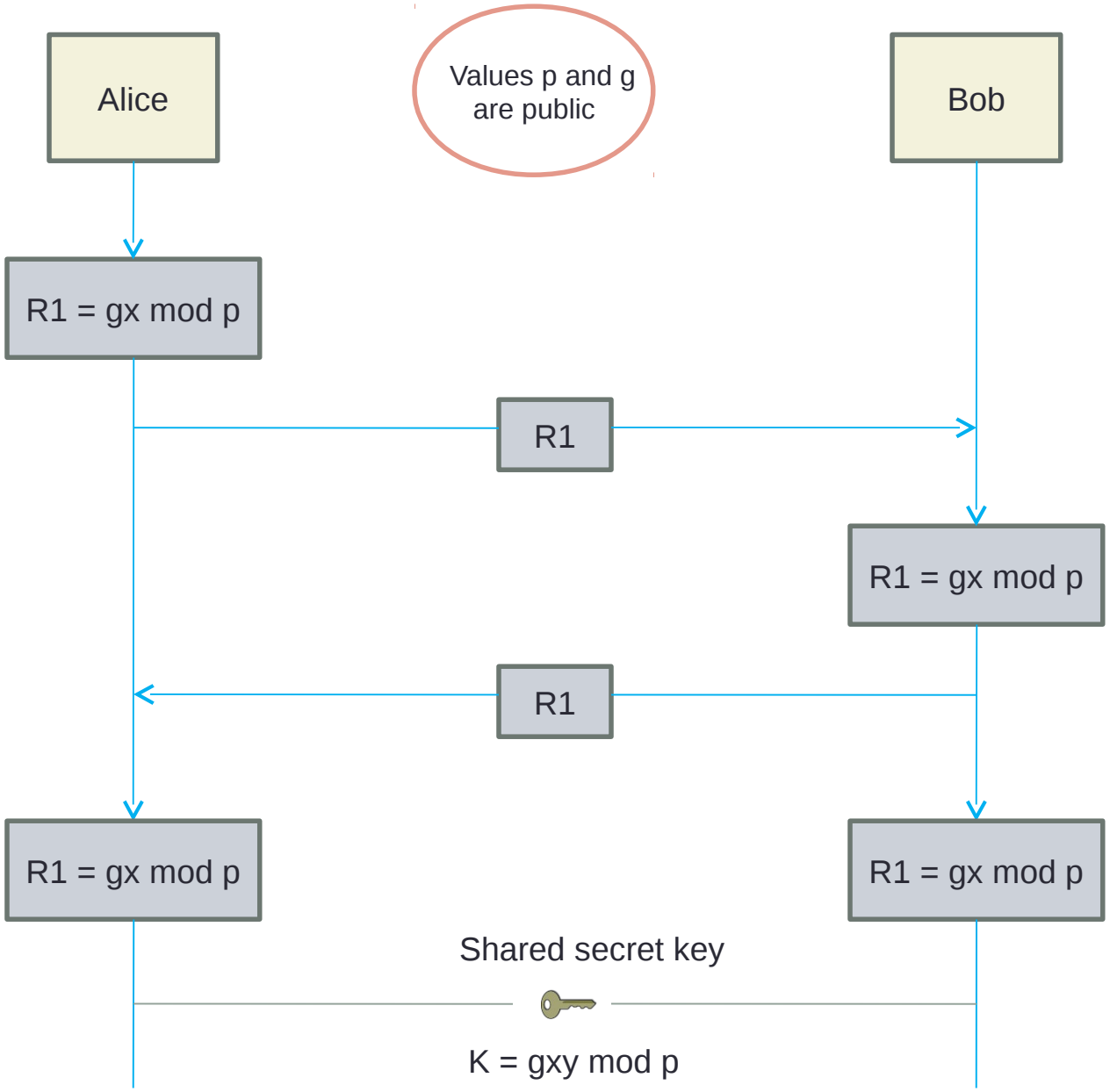
Diffie-Hellman Key Agreement

Diffie-Hellman protocol allows two communicating parties, say Alice and Bob, to create a symmetric session key with out the need of a KDC (Key Distribution Center)

Diffie-Hellman Protocol
Alice and Bob chose two numbers p and g which are public. 'p' is a large prime of the order of 1024 bits. 'g' is a generator of order p-1 in the group Z_p^*
Alice chooses a large random number 'x' in the range 0 to p-1 and calculates R1 = gx mod p
Bob chooses a large random number 'y' in the range 0 to p-1 and calculates R2 = gy mod p
Alice sends R1 to Bob and Bob sends R2 to Alice
Alice Calculates K = (R2)x mod p
Bob Calculates K = (R1)y mod p

Diffie-Hellman Key Agreement



P is a large prime of the order of 1024 bits

g is a generator of order p-1 in the group Zp^*