**Diffie-Hellman Key Exchange for 4 Parties (Java)**

The Diffie-Hellman key exchange is a cryptographic protocol that allows multiple parties to establish a shared secret key over an insecure channel. In this README file, we will explain how to implement a four-party Diffie-Hellman key exchange using Java.

Algorithm Overview

* Initialize global parameters (prime number p and generator g).
* Each party generates a private key (a, b, c, d), and calculates the corresponding public key.
* The parties exchange their public keys.
* Each party calculates the shared secret using the public keys of the other parties and their own private key.
* The shared secret is now established and can be used for secure communication.