Approach Note

Step 1: Users Carl, Phoebe, Alice and Bob will enter a secret key which will be stored in SSS System.

Step 2: Users will enter the number of total shares(n) to be created.

Step 3: Users will enter minimum amount of keys required to unlock this locker which is equal to k.

Step 4: An equation will be created with a degree k-1. This equation when plotted on graph, random values of x are used to calculate values of y.

Step 5: This values of x and y combined is a shared key. In this case 4 shared keys will be created and provided to all 4 users. Meaning each user will have his/her own private key.

Step 6: Minimum amount of required shared keys to unlock the locker is equal to 2. Meaning any 2 out of 4 users are required to unlock the locker

Step 7: Alice and Bob enter their own private shared keys into the locker. Using the shared keys, the algorithm calculates the secret key generated from the shared key values entered.

Step 8: This calculated secret key is compared with the original secret key stored in the locker. Once the secret key is verified to be true, Alice and Bob can access the locker.