

In the bank scenario, homomorphic and public-key searchable encryption schemes that allow for keyword searches of encrypted data should be implemented. Here, the Bank can encrypt clients' records and index them using keywords such as "Deposit," "Loan," "years" or "Transaction" (e.g., 10000, 2000, 3, 11000). When a manager searches for Clients with a specific keyword, the system can search the encrypted index for the corresponding keyword and return the encrypted records. The RSA encryption method is used to encrypt the data. Only authorized employees of the Bank with the appropriate access rights can decrypt the retrieved records, ensuring clients' privacy.

Also, let the clerk multiply the given integer, "years" in the keywords, with the other dynamically selected/preferred keywords from the menu without decrypting the data (Utilize the multiplicative homomorphic property of RSA encryption and do the Multiplication operation on the encrypted data without decrypting them) and print the result of the multiplication in encrypted form. Decrypt the multiplication result and verify that it matches the product of the original integers.