Step 1: Start

Step 2: Initialize Scanner for Input

2.1:Create Scanner object,

scanner = new Scanner(System.in)

Step 3:Input Key

3.1:Prompt "Enter a key" and read input into key,

print("Enter a key: ")

key = scanner.nextLine()

Step 4:Generate Blowfish Key

4.1:Convert key to bytes as keyBytes.

4.2:Hash keyBytes with MD5 to produce keyHash.

4.3:Create blowfishKey with keyHash for Blowfish,

keyBytes = key.getBytes()

keyHash = MD5.digest(keyBytes)

blowfishKey = new SecretKeySpec(keyHash, "Blowfish")

Step 5:Input Message

5.1:Prompt "Enter a message" and read input into message.

5.2:Convert message to bytes as messageBytes.

print("Enter a message: ")

message = scanner.nextLine()

messageBytes = message.getBytes()

Step 6:Encrypt the Message

6.1:Initialize Cipher for Blowfish encryption.

6.2:Set cipher mode to encrypt with blowfishKey.

6.3:Encrypt messageBytes to produce ciphertextBytes.

cipher = Cipher.getInstance("Blowfish")

cipher.init(ENCRYPT_MODE, blowfishKey)

ciphertextBytes = cipher.doFinal(messageBytes)

Step 7:Display Ciphertext

7.1:Print each byte in ciphertextBytes as hexadecimal.

print("Ciphertext is: ")

for each byte in ciphertextBytes:

print byte as hexadecimal

Step 8:Decrypt the Ciphertext

8.1:Reinitialize Cipher for decryption with blowfishKey.

8.2:Decrypt ciphertextBytes to produce plaintextBytes.

8.3:Convert plaintextBytes to plaintext.

cipher.init(DECRYPT_MODE, blowfishKey)

plaintextBytes = cipher.doFinal(ciphertextBytes)

plaintext = new String(plaintextBytes)

Step 9: Display Plaintext

9.1:Print plaintext,

print("Plaintext is: " + plaintext)

Step 10: Stop