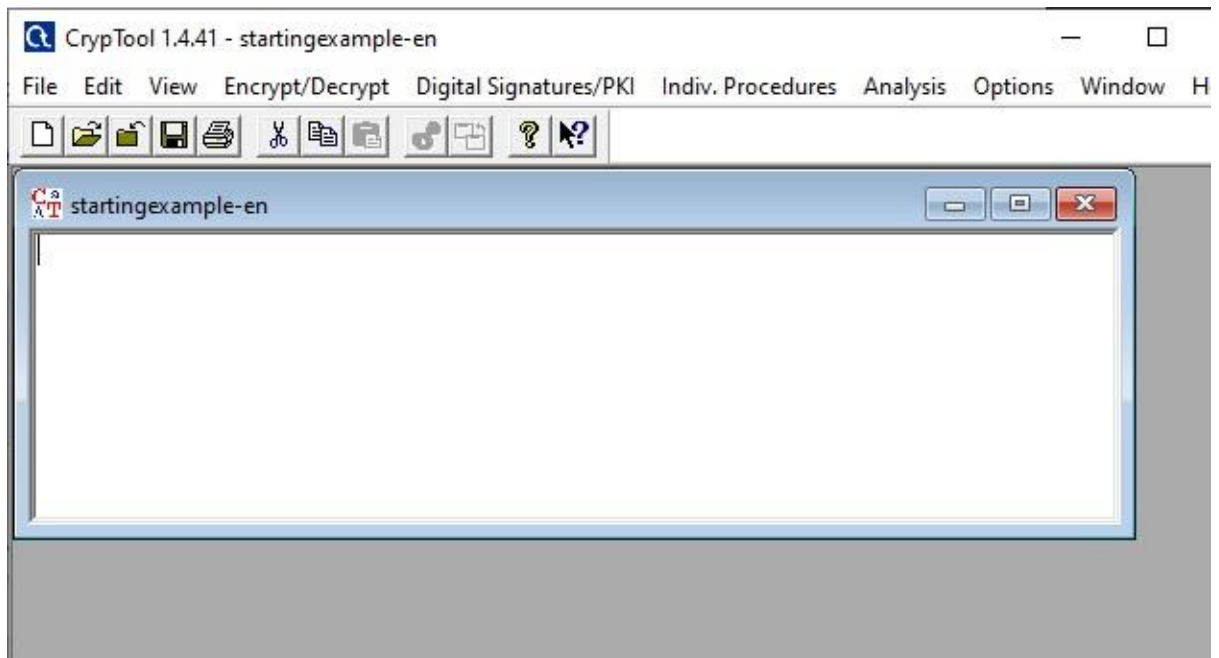
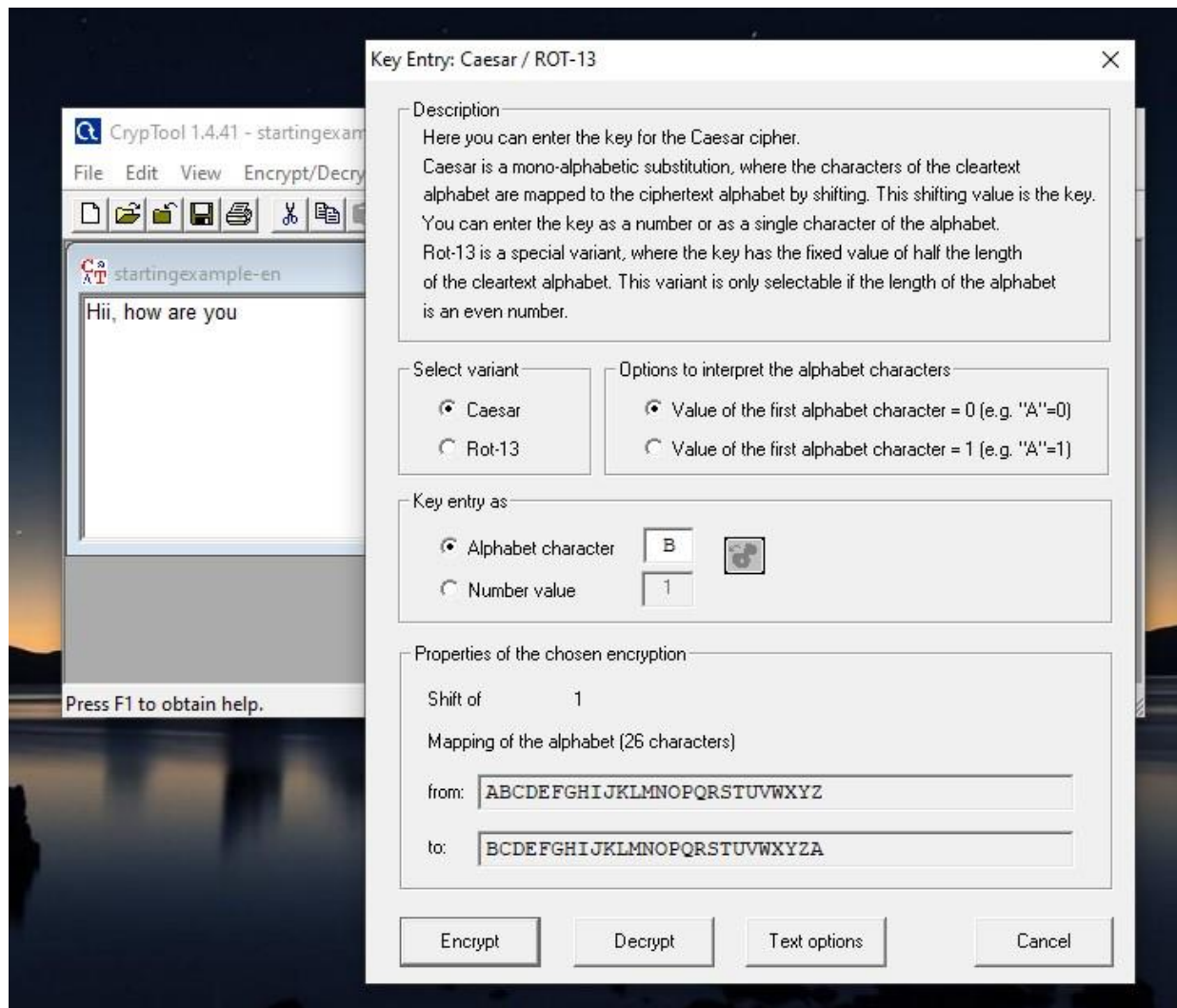


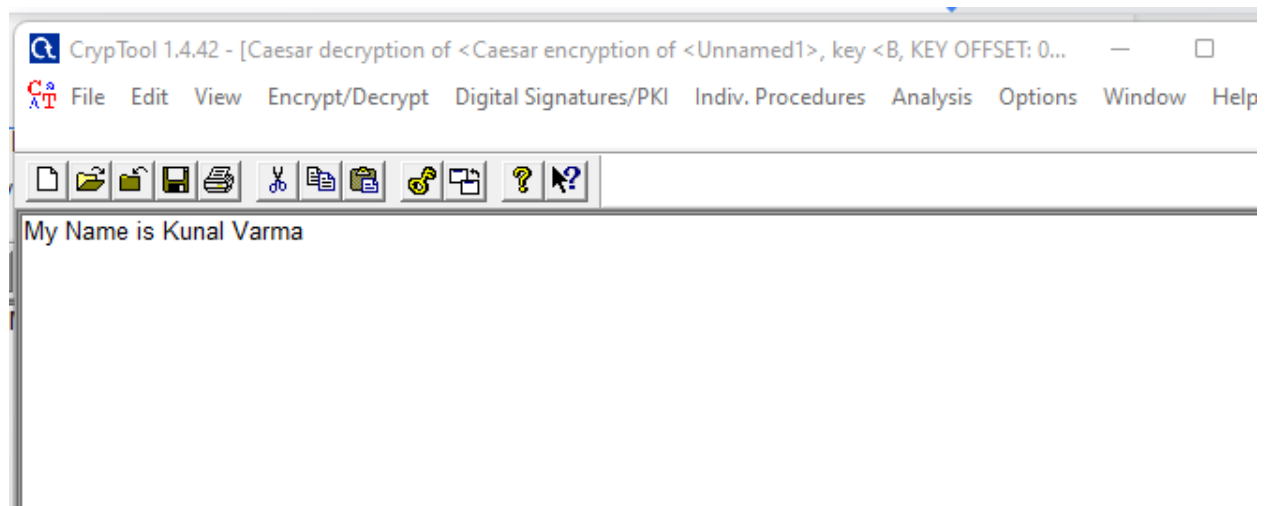
A. Using Cryptool to encrypt and decrypt password.



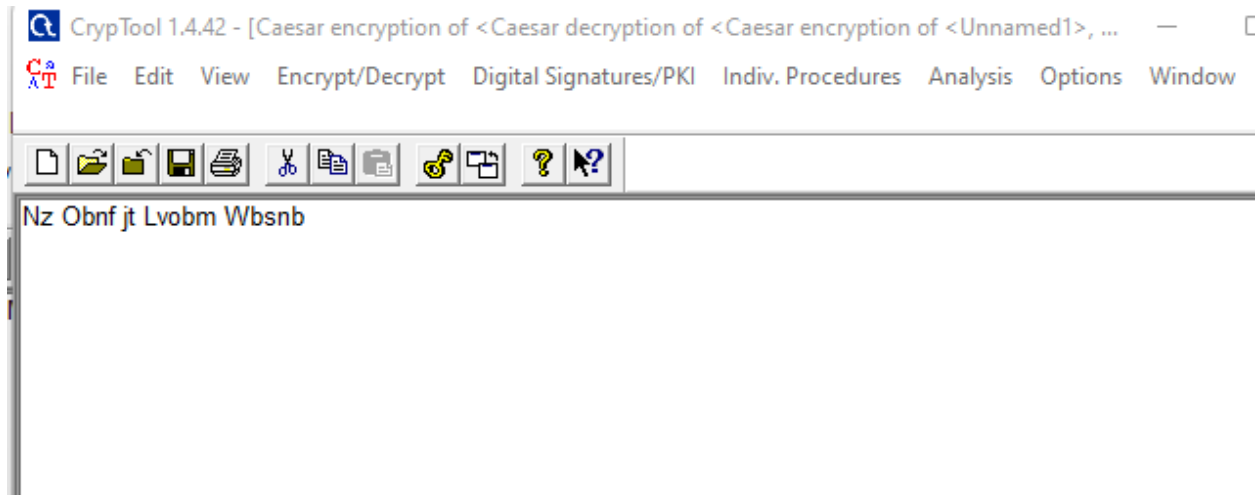
a) Ceaser Cipher



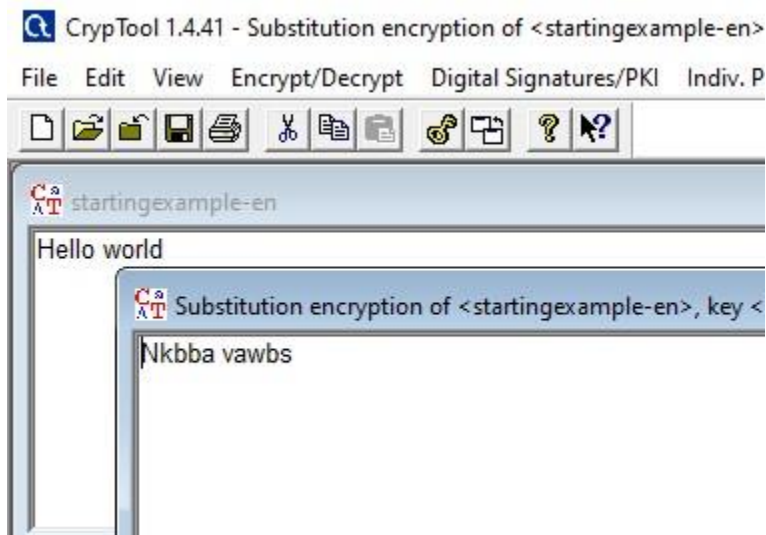
Encrypted password:



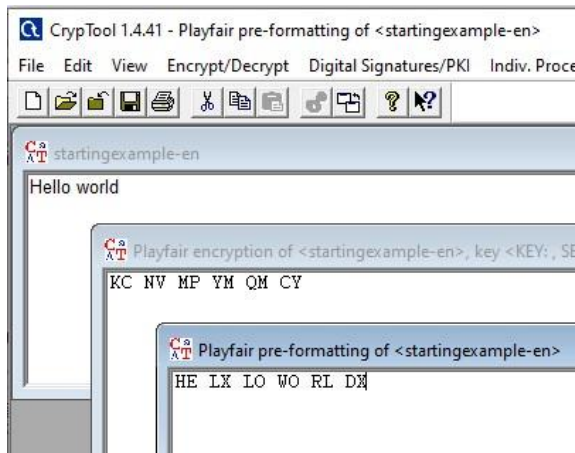
Decrypted password:



b) Substitution Cipher



c) Playfair Cipher



B. Implement Encryption and Decryption using Ceaser Cipher.

```
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.util.Scanner;
public class CeaserCipher {
    static Scanner sc=new Scanner(System.in);
    static BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
    public static void main(String[] args) throws IOException {
        // TODO code application logic here
        System.out.print("Enter any String: ");
        String str = br.readLine();
        System.out.print("\nEnter the Key: ");
        int key = sc.nextInt();
        String encrypted = encrypt(str, key);
        System.out.println("\nEncrypted String is: " +encrypted);
        String decrypted = decrypt(encrypted, key);
        System.out.println("\nDecrypted String is: " +decrypted);
        System.out.println("\n");
    }
    static String encrypt(String str, int key) {
        String encrypted = ""; for(int i = 0; i < str.length(); i++) {
            int c = str.charAt(i); if(Character.isUpperCase(c)) {
                c = c + (key % 26); if (c > 'Z') c = c - 26;
            }
            if(Character.isLowerCase(c)) {
                c = c + (key % 26); if (c > 'z') c = c - 26;
            }
            encrypted += (char) c;
        }
    }
}
```

```

    }
    return encrypted;
}
static String decrypt(String str, int key)
{
    String decrypted = "";
    for(int i = 0; i < str.length(); i++)
    {
        int c = str.charAt(i);
        if(Character.isUpperCase(c))
        { c = c - (key % 26); if (c < 'A') c = c + 26; }
        if(Character.isLowerCase(c))
        {
            c = c - (key % 26); if (c < 'a') c = c + 26; } decrypted += (char) c; } return decrypted;
    }
}

```

Output:

```

D:\>javac CeaserCipher.java

D:\>java CeaserCipher
Enter any String: Hello World

Enter the Key: 5

Encrypted String is: Mjqqt Btwqi

Decrypted String is: Hello World

```