

```
import string
```

```
def caesar_decrypt(ciphertext, shift):
```

```
    alphabet = string.ascii_uppercase
```

```
    shifted_alphabet = alphabet[shift:] + alphabet[:shift]
```

```
    table = str.maketrans(alphabet, shifted_alphabet)
```

```
    return ciphertext.translate(table)
```

```
def polyalphabetic_decrypt(ciphertext, keyword):
```

```
    alphabet = string.ascii_uppercase
```

```
    decrypted_text = ""
```

```
    keyword_repeated = (keyword * (len(ciphertext) // len(keyword))) + keyword[:len(ciphertext) % len(keyword)]
```

```
    for char, keyword_char in zip(ciphertext, keyword_repeated):
```

```
        if keyword_char in alphabet:
```

```
            shift = string.ascii_uppercase.index(keyword_char)
```

```
            decrypted_text += caesar_decrypt(char, shift)
```

```
        else:
```

```
            decrypted_text += char
```

```
    return decrypted_text
```

```
def substitution_decrypt(ciphertext, substitution_dict):
```

```
    decrypted_text = ''.join(substitution_dict.get(char, char) for char in ciphertext)
```

```
    return decrypted_text
```

```
def monoalphabetic_decrypt(ciphertext, key):
```

```
    substitution_dict = dict(zip(key, string.ascii_uppercase))
```

```
return substitution_decrypt(ciphertext, substitution_dict)
```

```
def vigenere_decrypt(ciphertext, keyword):
```

```
    decrypted_text = ""
```

```
    keyword_repeated = (keyword * (len(ciphertext) // len(keyword))) + keyword[:len(ciphertext) % len(keyword)]
```

```
    for char, keyword_char in zip(ciphertext, keyword_repeated):
```

```
        if char.isalpha() and keyword_char.isalpha():
```

```
            try:
```

```
                shift = string.ascii_uppercase.index(keyword_char) - string.ascii_uppercase.index('A')
```

```
                decrypted_text += caesar_decrypt(char, shift)
```

```
            except ValueError:
```

```
                decrypted_text += char
```

```
        else:
```

```
            decrypted_text += char
```

```
    return decrypted_text
```

```
def main():
```

```
    encrypted_text = input("Enter the encrypted text: ").upper()
```

```
    print("Choose the cipher type:")
```

```
    print("1. Caesar")
```

```
    print("2. Polyalphabetic")
```

```
    print("3. Substitution")
```

```
    print("4. Monoalphabetic")
```

```
    print("5. Vigenere")
```

```
    cipher_type = int(input("Enter the number corresponding to the cipher type: "))
```

```
if cipher_type == 1:
    shift_caesar = int(input("Enter the Caesar shift: "))
    result = caesar_decrypt(encrypted_text, shift_caesar)
elif cipher_type == 2:
    keyword_poly = input("Enter the Polyalphabetic keyword: ").upper()
    result = polyalphabetic_decrypt(encrypted_text, keyword_poly)
elif cipher_type == 3:
    substitution_dict = dict(input("Enter the Substitution parameters (e.g., {'B': 'A', 'U': 'V'}): "))
    result = substitution_decrypt(encrypted_text, substitution_dict)
elif cipher_type == 4:
    key_mono = input("Enter the Monoalphabetic key: ").upper()
    result = monoalphabetic_decrypt(encrypted_text, key_mono)
elif cipher_type == 5:
    keyword_vigenere = input("Enter the Vigenere keyword: ").upper()
    result = vigenere_decrypt(encrypted_text, keyword_vigenere)
else:
    print("Invalid cipher type selected.")
    return

print("Decrypted Result:", result)
```

```
if __name__ == "__main__":
    main()
```