Crypto Challenge Write-Up - The Cursed Parchment

Layers: Base92 → Affine Cipher

Given Ciphertext

```
>wufvG.c?dSI?f0wCPR34l\j/7RgVbtb
```

Step 1 – Identify the Encoding

The ciphertext contains mixed symbols, numbers, uppercase and lowercase letters, indicating it is likely an encoding scheme rather than a simple classical cipher.

Tool Used: dcode.fr → Cipher Identifier

Procedure:

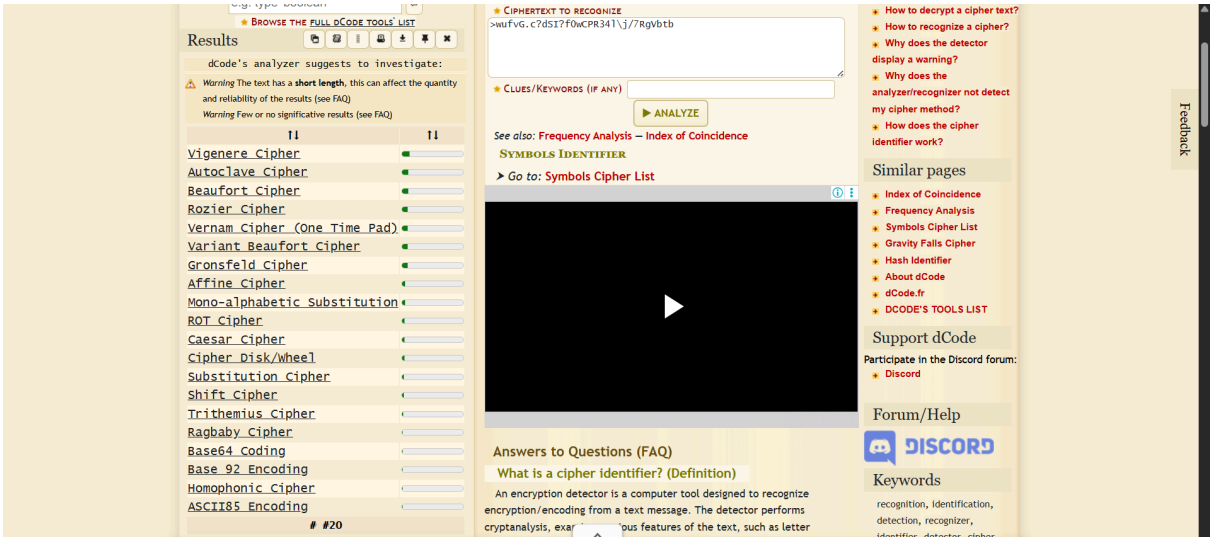
1. Navigate to dcode.fr → Cipher Identifier
2. Paste the ciphertext:

   ```
   >wufvG.c?dSI?f0wCPR34l\j/7RgVbtb
   ```

3. Run the analysis.

Result:

The tool suggests Base92 Encoding as the most probable match.



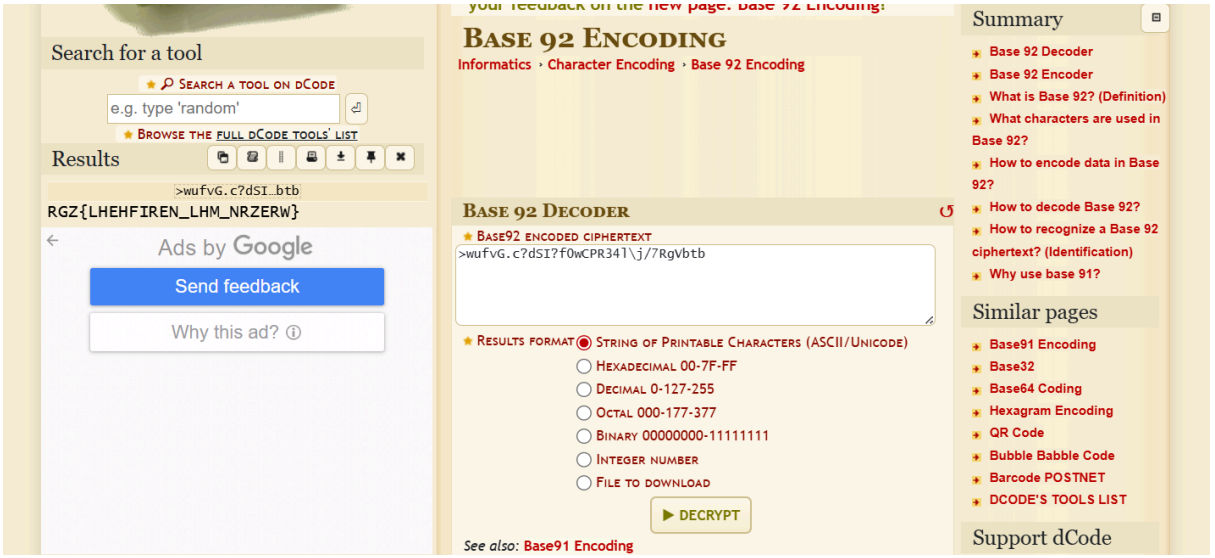
Step 2 – Decode Base92

Tool Used: dcode.fr → Base92 Decoder

Procedure:

- Paste the ciphertext into the Base92 decoder.
- Click Decrypt.

Output:




```
RGZ{LHEHFIREN_LHM_NRZERW}
```

The output:

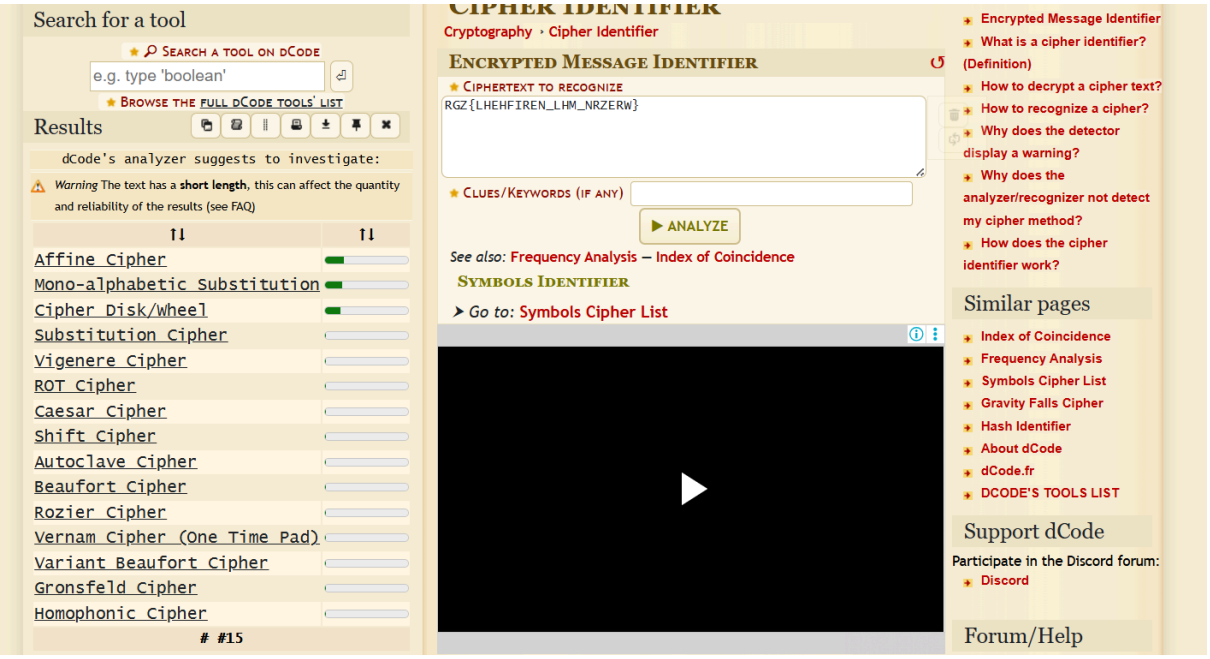
- Contains only uppercase letters

- Resembles a structured flag format
- Indicates another encryption layer

Step 3 – Identify the Second Cipher

The decoded text resembles a substitution cipher.

Based on the structure and challenge hint, it is identified as an Affine Cipher.



Step 4 – Brute Force Affine Cipher

Tool Used: dcode.fr → Affine Cipher Decoder

Procedure:

1. Paste:

   ```
   RGZ{LHEHFIREN_LHM_NRZERW}
   ```

2. Select alphabet: `ABCDEFGHIJKLMNOPQRSTUVWXYZ`
3. Click Automatic Brute Force Decryption

The tool tests all valid combinations of coefficients (a, b).

Correct Key

```
a = 9, b =7
```

Final Decrypted Output:


```
EXC{MARAUDERS_MAP_SECRET}
```