

# **Cryptography Challenges**

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# Fencing On Rails\_1

Difficulty: Easy

## Challenge

I forgot to buy a ticket! I asked the train conductor to let me off this time and he said he would, but only if I helped him decipher this message sent by his 5 fencing instructors. Help me solve it so i don't have to pay a fine

Encrypted Message: i1is i4nfikr5c{3t}r

#### Hints

- Encryption Script Present in the challenge folder
- Rail Fence Cipher
- Surely one Rail conductor doesn't need so many instructors.

# Desu Yo\_1

Difficulty: Medium

### Challenge

My friend sent me this hex string and said "weak desu yo". What did he mean by this?

#### **Encrypted Message:**

 $\xc8\xd7\xdb\x02\x25\xa0\x6b\xcb\xa4\xb7\x86\xa0\x42\x71\x06\x13\x6e\xdc\x11\xfe\xf8\x9e\xfc\x61\x3b\x28\x35\x80\x17\x4c\x65\x87$ 

#### Hints

- DES
- Encryption Script
- Weak Keys



# **RSA Starter**

Difficulty: Medium

### Challenge

Can you crack this revolutionary asymmetric encryption system?

#### cipher.txt:

```
\begin{array}{lll} n &=& \\ 108479011759769393727176308457457051185868202028229648190\\ 667018102389154815514421272511788818630907941383004277918\\ 921724359698326811100798212287777156373854025160462416970\\ 207713010402684330377900249272920821196418994434689542195\\ 444008546643909734553918562196237000260811736016995830450\\ 094506601223180883688118367193617732939585810720318219660\\ 211710733808215174048484794731011578459721161876052257146\\ 687991978315725043744813520691467819521825409725421924282\\ 740640715767718923851036438509804069110541415248000720606\\ 907056103122751808376882405235966768597369796819161915929\\ 329975604623470108492326664937 \end{array}
```

e = 65537

 $\begin{array}{l} c = \\ 551940464039515807400740396933190659698814517552103157901 \\ 302208116485553487364559020139846605613149677875893049327 \\ 855581027728335881582761046428020476566023624654782900712 \\ 169848486370004204828767889948118481368286540519002718573 \\ 820758931364175489610814327584860219679731591039865372364 \\ 938280683799713345159073364944139930644621928548202326427 \\ 313765214415870574993875784555928599639790323118534133481 \\ 181510897922279319456483547168066234333710914250446053028 \\ 136246154089708758959859848480779884155548880428742408536 \\ 741330376562260935284789773921284976881026919766133271053 \\ 1585774180052484876172501963 \end{array}$ 

#### Hints

- RSA cryptosystem.
- Convert the digits to alphabets.