

# Mock Semifinals 2024 Web-Based Challenge

## Challenge 1: Cipher Recovery

### Description

The following are several encoded or encrypted ciphertexts that need to be decoded or decrypted. Decrypt or decode the ciphertexts. Each ciphertext is weighted equally.

**Ciphertext 1:** This has been encoded using hexadecimal encoding.

62486e796362424f50496163694c66486164644876436967504e5778676766437a756  
146416b6d78566c6363494e63414f4b48627a4853734141767744767078

**Ciphertext 2:** This has been encoded using base64 encoding.

aGFqYVljcHICTURxQ0JZc0RQakVBZ015RnVjZFdYSmV4RHFBWHBKWXRRSnps  
VGt5Wnp0YIRndGdRTFd5ZWtnRA==

**Ciphertext 3:** This has been encoded using base85 encoding.

=\*JUM7nn/&9m9?S<)>@!Bi\b;I.`r77L!H;/T0<H?j1%;F5(oAU.9Q7!<Z`D0L"mARSMJ  
7n6u`D00E,

**Ciphertext 4:** This has been XORed with the byte 0x42, then encoded using hexadecimal encoding.

0d18280330382504240606003a36232b090c0b081015122e1b180b0c29232b0c0c26  
2f151a252d032b3825230713212d23381a1037063b3834260d251b2e0c09

**Ciphertext 5:** This has been encrypted with AES-128-ECB. The key (in hexadecimal encoding) is 83575899e954456cafafc928b2bb7ba7.

6bcf26dc730cdb190c200dc2b81611ea951d64a92d8b9ba6f81684119efb1e072b814  
2c75e838a6ea2fd61fe724aba37d9604a30923708533d61ead75be11d237c6432dca  
72554211ff35925313ea424

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## Submission Instructions

You must submit your answer as a .csv file, in the following format:

- ☐ The first line of the submission should contain your team number. In the case of this practice competition, please use your unique ID instead.
- ☐ The second line should contain the decoded or decrypted text of the first ciphertext.
- ☐ The third line should contain the decoded or decrypted text of the second ciphertext.
- ☐ The fourth line should contain the decoded or decrypted text of the third ciphertext.
- ☐ The fifth line should contain the decoded or decrypted text of the fourth ciphertext.
- ☐ The sixth line should contain the decoded or decrypted text of the fifth ciphertext.

Each ciphertext is weighted equally in scoring. You will get points for each ciphertext you get correct. You will get 10 tries to submit before you will not be able to submit anymore.

## Example Submission

```
pleasant_boat
hhDkSLfvpcSTOjTUGCDTqhUDTFPPysLbzwnNFadbGqkikiGvvWkAWdPeTtRvEQua
PrviXhbCRcmiQcWpwuMMEwEVBekzThqVsePXFxlJTNyYwTXCFDfcQpUIcFlBlIKF
iYPCOydofVMNfAOYzHftgYHjpyYzjPaGbGivMcDeiOndYlPtVhoZFxSqMTJuLsbt
FStTtqMgYSdNSxsGoVDWdMYBomIoDcPqnTzpkWnfPATFnNTzuZKamMZpmDDiMOld
ErQoneAMwxNPnHeUFmUjynJLXvzQBjdtRKRdAIRFATLzdhJgRiwdbUhvpCqwovkF
```