A screenshot of a video game

Description automatically generated

A screenshot of a computer screen

Description automatically generated

* Requirements: Persistence, general cryptography knowledge
* In this level, we are given the encrypted password so now it is our job to decrypt the password to get the correct password to move on
* Initially, because these are basic labs we could assume that the author is using common algorithms such as Ceaser’s cipher or ROT13; we are going to have to play with this a bit to figure out the pattern to this



* After inputting the string of ‘11111111’, we get the encryption of 12345678
  + First character of 1 stays the same ->1
  + Second character of 1 goes up 1 value ->2
  + Third character of 1 goes up 2 values -> 3
  + Fourth character of 1 goes up 3 values -> 4
  + Fifth character of 1 goes up 4 values -> 5
  + Sixth character of 1 goes up 5 values -> 6
  + Seventh character of 1 goes up 6 values -> 7
  + Eighth character of 1 goes up seven values -> 8
* So it seems like every value is shifted depending on where in the string’s index it is
  + So if a character is on index 3, the character is shifted 3 times (remember that in relation to computers, we start counting from 0, which is why the value at index 0 does not change



* After inputting the string 27a, we get the following encryption: 28c
* We will now use the pattern in mind to reverse engineer the encrypted password and find the decrypted password (I will now go through a long and very brute-force way of getting the password; I am sure this can be done a lot smoother
  + Remember **“Persistence”** is the requirement for this room

A screen shot of a chart

Description automatically generated

* I will be referencing the ASCII chart for find the last 6 symbols, if I go 6 spaces back from the ‘<’ character, I get the value of 6
* I will now use the same approach for the last value
* After going through the process, I have the string: 27aec169
* Let us see if that is indeed the unencrypted password….

A screen shot of a message

Description automatically generated

* The password for this room is "27aec169." By observing the pattern, each character in the string shifts according to its index position, with each character shifting by a number of times equal to its index. Using this approach and referencing the ASCII character chart, we ultimately derived the correct password.