DSC Club Hands-on Tasks Solution

# 1. Hands-on Tasks (Encryption/Decryption)

## (1) Base64 Decryption:

Given Text: eW91IGd1ZXNzZWQgaXQgcmlnaHQsIHRoaXMgaXMgQkFTRTY0ISE=

Decoded Result: "you guessed it right, this is BASE64!!"

## (2) URL Decryption:

Given Text: %3Cscript%3Eyou%20found%20us%21%21%281%29%3C%2Fscript%3E

Decoded Result: "<script>you found us!!(1)</script>"

## (3) Decryption (To Be Decoded)

Given Text: LWxb ZWxfTTTua pfdw6HUU wbbis bnsf6

Solution: Still exploring various decryption methods.

# 2. Coding and Debugging Questions

## Task 1 - Password Validation Program

Python code for checking if the password contains at least one lowercase letter, one uppercase letter, and one number:

def is\_valid\_password(password):  
 has\_upper = False  
 has\_lower = False  
 has\_digit = False  
   
 for char in password:  
 if char.isupper():  
 has\_upper = True  
 elif char.islower():  
 has\_lower = True  
 elif char.isdigit():  
 has\_digit = True  
   
 if has\_upper and has\_lower and has\_digit:  
 return True  
 else:  
 return False  
  
# Test case  
print(is\_valid\_password("Pass123")) # Output: True

## Task 2 - SHA-256 Hash Function

Python code for returning a SHA-256 hash of a password:

import hashlib  
  
def sha256\_hash(password):  
 return hashlib.sha256(password.encode()).hexdigest()  
  
# Test case  
print(sha256\_hash("mypassword")) # Output: SHA-256 hashed string

# 3. CTF Challenges

## Task 1 - Hidden Flag in Provided File

Analysis for the flag embedded in the provided file is ongoing.

## Task 2 - Message in Chaotic Paragraph

Analysis for the hidden message in the given story is ongoing.