

**INSTITUTE OF COMPUTER TECHNOLOGY**  
**B-TECH COMPUTER SCIENCE ENGINEERING 2025-26**  
**SUBJECT: CRYPTOGRAPHY**

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NAME: Rahul Prajapati

ENRLL. NO: 23162171020

BRANCH: CYBER SECURITY

BATCH: 52

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**PRACTICAL\_1**

**Aim:** To understand the fundamentals of encryption and decryption by implementing a basic or standard encryption algorithm that takes a user-inputted password, converts it into ciphertext, and then decrypts it back to its original form, displaying both ciphertext and original text in the console.

**Source\_Code:**

```
from cryptography.fernet import Fernet  
import getpass  
key = Fernet.generate_key()  
cipher = Fernet(key)  
password = getpass.getpass("Enter your password: ").encode()  
encrypted = cipher.encrypt(password)  
print(" Encrypted password:", encrypted)  
decrypted = cipher.decrypt(encrypted)  
print(" Decrypted password:", decrypted.decode())
```

**OUTPUT:-**

```
● PS C:\Users\Hp\OneDrive\Desktop\SEM_05\Cryptography\Practicals_source_code> python .\pass.py  
Enter your password:  
Encrypted password: b'gAAAABoiYzx685223arFx5qoH88Z-27D8nqjbS5usffitVaaBZhfm4EJnIt8h0RvZ8qtaqZk9kdT7MbLxqDWsdA_PXRuKCZRA=='  
Decrypted password: Rahul@0932  
● PS C:\Users\Hp\OneDrive\Desktop\SEM_05\Cryptography\Practicals_source_code> python .\pass.py  
Enter your password: Rahul@0952  
Encrypted password: b'gAAAABoiY1SaKQGm9GuJ9MR1Y_AjP4anqtwkpyS72MUdx5MJitmrvD9TuHaPFk0Y07ipaKGzle6EW0v7DhB83Ctqqwg6opow=='  
Decrypted password: Rahul@0952
```