

Task 1:

Fernet encryption

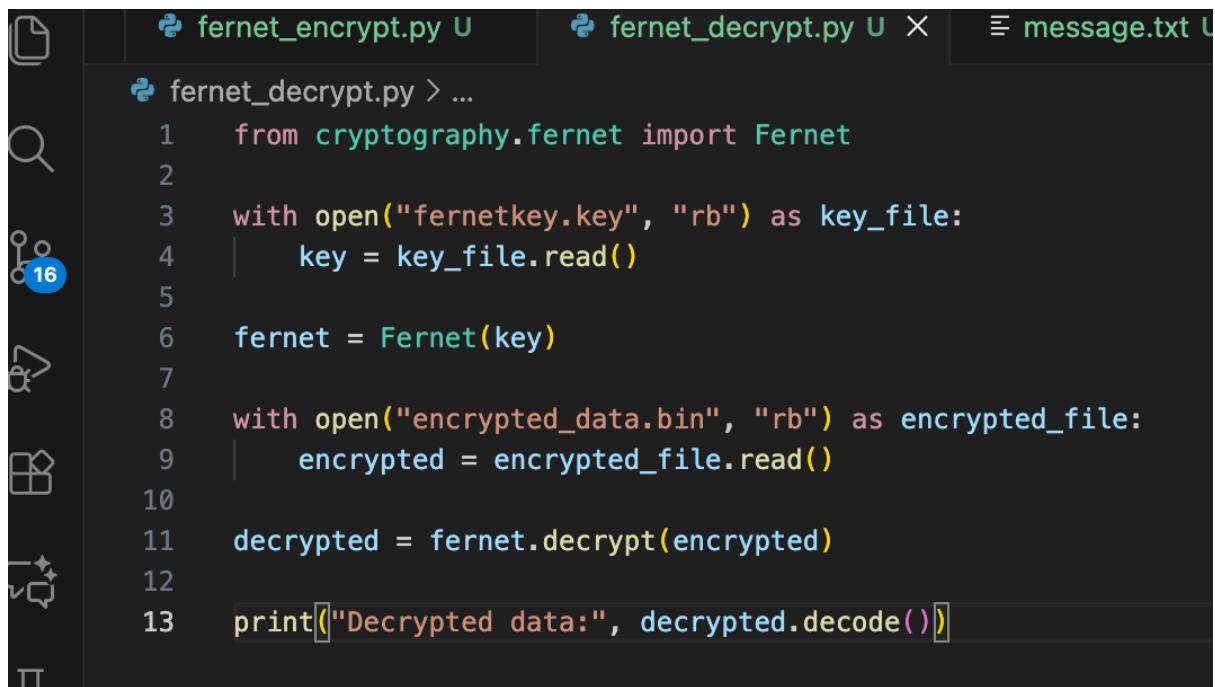
```
⚡ fernet_encrypt.py > ...
1   from cryptography.fernet import Fernet
2
3   key = Fernet.generate_key()
4   fernet = Fernet(key)
5
6   with open("fernetkey.key", "wb") as key_file:
7       key_file.write(key)
8
9   with open("data.txt", "rb") as file:
10      original = file.read()
11
12  encrypted = fernet.encrypt(original)
13
14  with open("encrypted_data.bin", "wb") as encrypted_file:
15      encrypted_file.write(encrypted)
16  print("Encrypted data:", encrypted)
17
18
```

Fernet Key

The screenshot shows a terminal window with three tabs open:

- fernetkey.key**: A file containing a single line of base64 encoded data: mKQOI8x6cV-oEKn4lkFTqLBwdTD0rzlvDfwo9zUVxtM=.
- data.txt**: A file that is currently empty.
- fernet_encrypt.py**: The Python script used for encryption.

Fernet Decryption



```
fernet_decrypt.py > ...
1  from cryptography.fernet import Fernet
2
3  with open("fernetkey.key", "rb") as key_file:
4      key = key_file.read()
5
6  fernet = Fernet(key)
7
8  with open("encrypted_data.bin", "rb") as encrypted_file:
9      encrypted = encrypted_file.read()
10
11 decrypted = fernet.decrypt(encrypted)
12
13 print("Decrypted data:", decrypted.decode())
```

Task 2:

encryption

```
simple > simplecry.py > ...
1  from simplecrypt import encrypt
2
3  password = "Password123"
4
5  with open("message.txt", "rb") as f:
6      message = f.read()
7
8  encrypted = encrypt(password, message)
9
10 with open("encrypted_message.bin", "wb") as f:
11     f.write(encrypted)
12
13 print("Encrypted message written to 'encrypted_message.txt'")
```

Decryption

```
simple > 🐍 desimple.py > ...
1   from simplecrypt import decrypt
2
3   password = "Password123"
4
5   with open("encrypted_message.bin", "rb") as f:
6       encrypted = f.read()
7
8   decrypted = decrypt(password, encrypted)
9
10  print("Decrypted message:", decrypted.decode())
```

Task 3:

```
simple > 🐍 script.py > ...
1   import paramiko
2
3   hostname = "localhost"
4   port = 2222
5   username = "admin"
6   password = "root"
7
8   with open("command.txt", "r") as f:
9       command = f.read().strip()
10
11  ssh = paramiko.SSHClient()
12  ssh.set_missing_host_key_policy(paramiko.AutoAddPolicy())
13
14  ssh.connect(hostname, port=port, username=username, password=password)
15
16  stdin, stdout, stderr = ssh.exec_command(command)
17
18  output = stdout.read().decode()
19  with open("ssh_output.txt", "w") as f:
20      f.write(output)
21
22  ssh.close()
23  print("Done! Check ssh_output.txt")
24
```