

Cyber Security

Practical 4: Implement Brute force Attack and Virus

Brute Force Input:

```
import itertools import
string
def
bruteforce(password):
    chars = string.printable.strip()    attempts = 0
for length in range(1, len(password) + 1):    for guess
in itertools.product(chars, repeat=length):
    attempts += 1
guess = ''.join(guess)
if guess == password:
    return (attempts, guess)
return (attempts, None)
password = input("Input the password to crack: ") attempts, guess
= bruteforce(password) if guess:    print(f"Password cracked in
{attempts} attempts. The password is
{guess}.")
else:
    print(f"Password not cracked after {attempts} attempts.")
```

Brute Force Output:

```
PS C:\Users\Admin> & C:/Users/Admin/AppData/Local/Programs/Python/Python311/python.exe d:/Aditya04/bruteforce.py
Input the password to crack: 5555
Password cracked in 5037090 attempts. The password is 5555.
```

Input (Creating file and deleting it):

```
import os import time def
create_files(directory):      if not
os.path.exists(directory):
    os.makedirs(directory)
    for i in
range(5):
    file_path = os.path.join(directory, f"malicious_file_{i}.txt")
with open(file_path, 'w') as file:
    file.write(f"This is a simulated malicious file {i}.")
print(f"Created: {file_path}")
def delete_files(directory):    if
os.path.exists(directory):      for
file_name in os.listdir(directory):
    file_path = os.path.join(directory, file_name)
if os.path.isfile(file_path):
    os.remove(file_path)
print(f"Deleted: {file_path}")
os.rmdir(directory)            print(f"Deleted
directory: {directory}")
if __name__ ==
"__main__":
    test_directory = "D:\Test"
    print("Simulating malicious
behavior...")
create_files(test_directory)

    # Simulate waiting time
time.sleep(10) # 10 seconds

delete_files(test_directory)
    print("Simulation completed and cleaned
up.")
```

Virus Output:

```
PS C:\Users\Admin> & C:/Users/Admin/AppData/Local/Programs/Python/Python311/python.exe d:/Aditya04/virus.py
Simulating malicious behavior...
Created: D:\Test\malicious_file_0.txt
Created: D:\Test\malicious_file_1.txt
Created: D:\Test\malicious_file_2.txt
Created: D:\Test\malicious_file_3.txt
Created: D:\Test\malicious_file_4.txt
Deleted: D:\Test\malicious_file_0.txt
Deleted: D:\Test\malicious_file_1.txt
Deleted: D:\Test\malicious_file_2.txt
Deleted: D:\Test\malicious_file_3.txt
Deleted: D:\Test\malicious_file_4.txt
Deleted directory: D:\Test
Simulation completed and cleaned up.
```