7. Write a python program that simulates a brute-force attack on a password by trying out all possible character combinations.

```
def brute_force_pin(target_pin):
    # Try all possible 4-digit PINs from 0000 to 9999
    for guess in range(10000):
        # Convert the guess to a 4-digit string format
        guess_str = f"{guess:04d}"

        # Check if the generated PIN matches the target PIN
        if guess_str == target_pin:
            return guess_str
    return None

if __name__ == "__main__":
    # Target PIN to be cracked (e.g., "1234")
    target_pin = input("Enter the 4-digit PIN to crack (e.g., 1234): ")

    cracked_pin = brute_force_pin(target_pin)

    if cracked_pin:
        print(f"PIN cracked: {cracked_pin}")
    else:
        print("Failed to crack the PIN.")
```

Output:

```
Enter the 4-digit PIN to crack (e.g., 1234): 2423
PIN cracked:  2423
Enter the 4-digit PIN to crack (e.g., 1234): 10001
Failed to crack the PIN.
```