#### CRACKING PASSWORD WITH LOOKUP TABLES

Password cracking using lookup tables is a method where precomputed pairs of hashes and their corresponding plaintext passwords are stored in a table. It is a very fast way of cracking passwords, much faster than any other brute force methods. When a hash needs to be cracked, the attacker simply searches for it on the table. If found, they instantly know the original password without needing to perform any real-time hashing.

## **How Lookup Table Cracking Works**

- 1. A list of common passwords (like from a dictionary) is hashed using a specific hash function (e.g., MD5, SHA-1).
- 2. Each password and its resulting hash are stored in a table.
- 3. When an attacker obtains a password hash, they search the lookup table for a match.
- 4. If the hash is found, the corresponding plaintext password is revealed.

### **Limitations of Lookup Tables**

**Size**: Tables can be very large and require a lot of storage.

Hash-specific: A lookup table built for MD5 won't work on SHA-256.

**Useless against salted hashes**: A salt changes the resulting hash even for the same password, making lookup tables ineffective.

STEP1: Generate some password hashes using any NTLM hash generator.

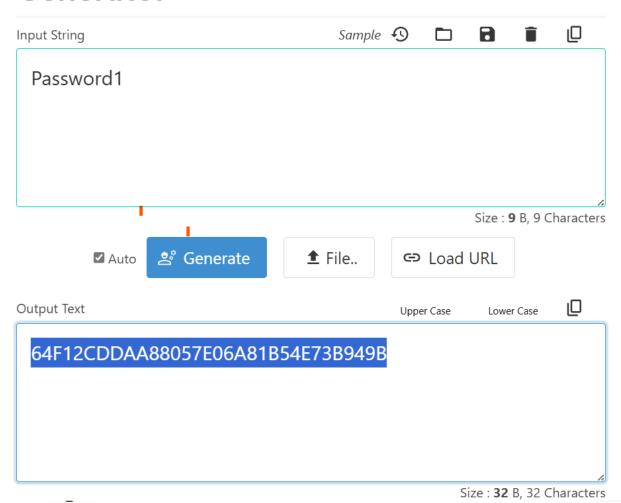
STEP1: copy the password hash and proceed to Crackstation (crackstation.net) website.

#### **ABOUT CRACKSTATION**

CrackStation is a free online tool and educational resource designed to demonstrate how easily weak or unsalted password hashes can be cracked using precomputed lookup tables. It supports common hash algorithms like MD5, SHA-1, and SHA-256, comparing input hashes against a massive database of over 1.5 billion entries derived from dictionary words, leaked password lists, and common patterns. While effective against simple or commonly used passwords, CrackStation is ineffective against salted

or strongly hashed passwords. It serves as a valuable reminder of the importance of using strong, unique passwords and secure hashing methods like bcrypt or Argon2.

# Generator





**Download CrackStation's Wordlist** 

#### Reminder:

Only generate or analyze password hashes and crack attempts on systems or in environments where you have explicit permission (like penetration testing labs or CTFs). Unauthorized access or cracking attempts are illegal and unethical.