Hash Function
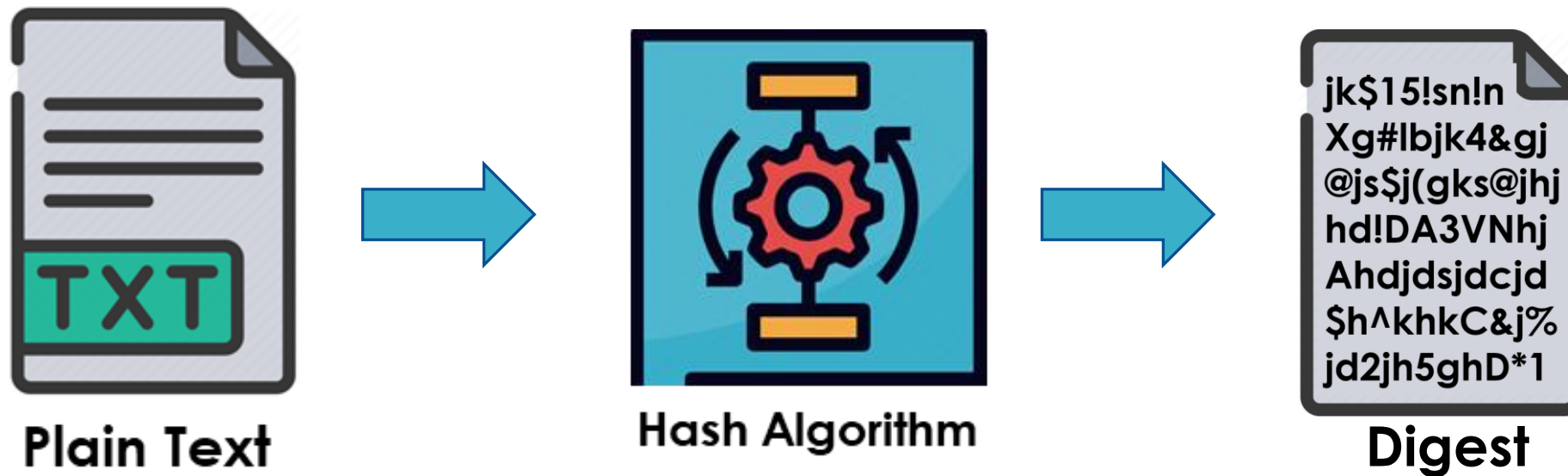
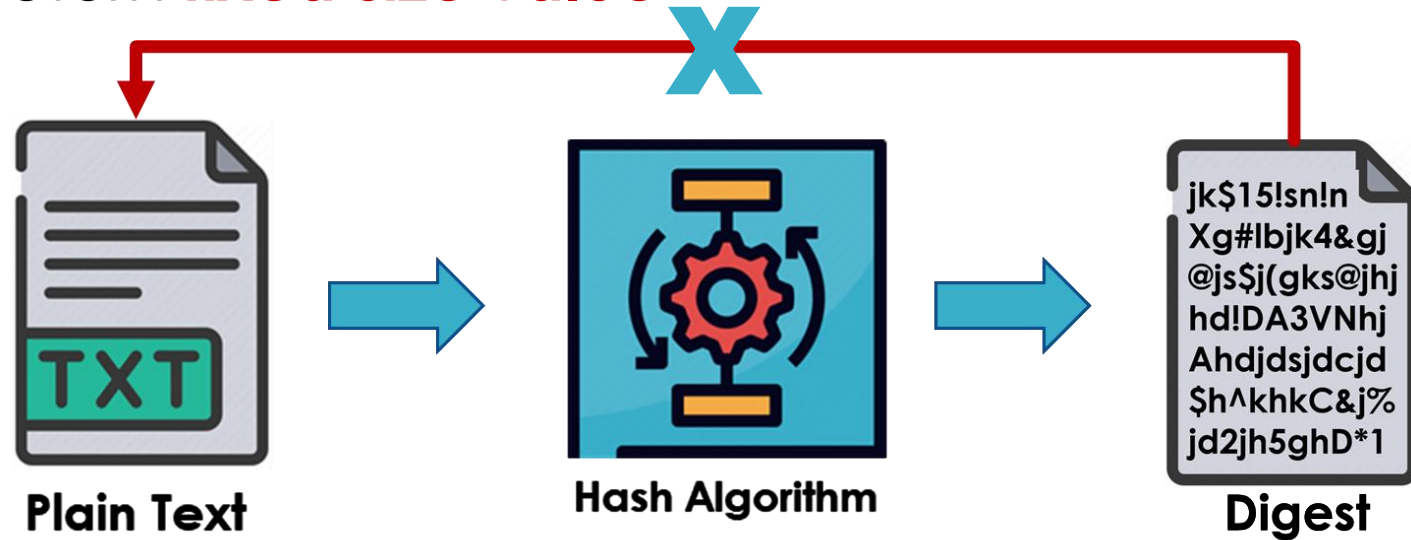**Hashing Algorithm** is a hash function that creates unique fingerprint of digital data from arbitrary size to a fixed size value.

Plain Text

Hash Algorithm

Digest

It's designed to be a one-way function infeasible to invert.
It is used for **data comparing** to check the **integrity**.

The values returned by a hash function are called hash values, hash codes, digests, or simply hashes.

Hash Algorithm Qualities

1) Input data from arbitrary size to return **fixed size value**
2) Output digest has **unique value**
3) infeasible to **invert**

Plain Text → **Hash Algorithm** → **Digest**

Digest content:
```
jk$15!sn!n
Xg#lbjk4&gj
@js$j(gks@jhj
hd!DA3VNhj
Ahdjdsjdcjd
$h^khkC&j%
jd2jh5ghD*1
```

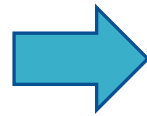| Text	Digest	MD5
a	0CC175B9C0F1B6A831C399E269772661	128 bits
abc123	E99A18C428CB38D5F260853678922E03	128 bits
Please subscribe my channel	6A8D7A7F7E2A931811D2B1BA015B3286	128 bits
Complete file	606FCC5F15300BE196EE775312F8A9019	128 bits

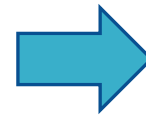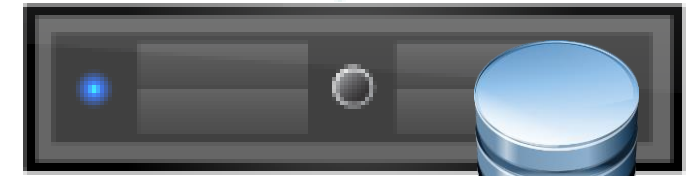# Password Hashing

Log in to Facebook

khurram

abc123

Log In

Forgotten account? · Sign up for Facebook

Hash Algorithm

User name	Password (Hash)
Khurram	6A8D7A7F7E2A931811D2B1BA015B3286
John	E99A18C428CB38D5F260853678922E03
Ahyan	6A8D7A7F7E2A931811D2B1BA015B3286

Database Server

Thank you