

Protecting Passwords



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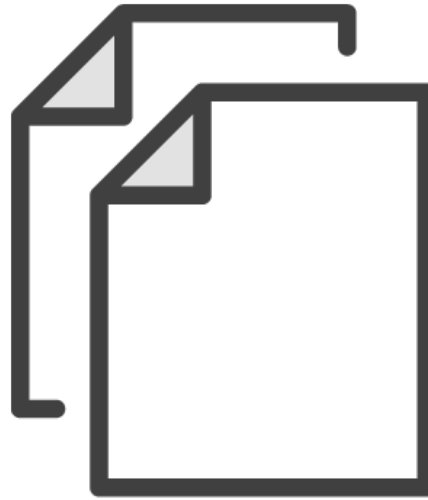


Why Passwords Need To Be Protected



Too Easy

People choose poor passwords that are easily guessed



Duplication

People tend to use the same passwords on multiple sites



Data Breaches

Passwords are stolen by attackers



What Does a Hash Algorithm Do?

P@\$\$wOrd1



$$10,555 \times 250 = 2,638,750$$

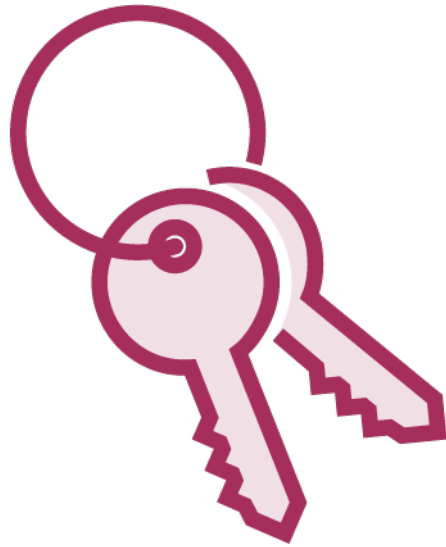
$$2,638,750 = ??? \times ???$$



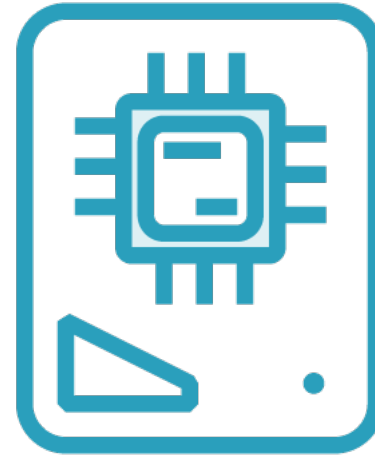
Good Hash Algorithms



Argon2



PBKDF2



scrypt



bcrypt

Salting the Hash



HesY7L3p1

P@\$\$wOrd1



Summary



Passwords are everywhere

If your application requires passwords, you need to protect them

Hashing algorithms can be used to protect passwords from prying eyes

Not all hashing algorithms are the same

Stick to the tried and true algorithms

- Argon2
- PBKDF2
- scrypt
- bcrypt