

# Password Security & Authentication Analysis

Objective: To demonstrate password hashing and security using a simple application (CyberChef).

## Step 1: Weak Password Hashing (MD5)

The password 'password' was hashed using MD5 to demonstrate weak hashing.

CyberChef - Input Password

Input password

CyberChef - MD5 Hash Output

MD5 Output 514dcc3b5aa765d61d8327deb882cf99

## Step 2: Strong Password Hashing (bcrypt)

bcrypt hashing produces salted and slow hashes, improving security.

```
CyberChef - bcrypt Hash Output

bcrypt Output $2y$10$examplehash
```

Conclusion: Weak passwords and fast hashes are insecure. Strong hashing and MFA are recommended.