Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 8

Date Of Performance: 08/09/2025

Aim: To implement cryptographic has algorithms SHA-256 and SHA-512

SHA-256 CODE:

```javascript
const crypto = require('crypto');

const plaintext = "Death is an old friend";

function sha256Hash(text) {
    return crypto.createHash('sha256').update(text).digest('hex');
}

const sha256Result = sha256Hash(plaintext);

console.log("Plaintext:", plaintext);
console.log("\nSHA-256 Hash:");
console.log(sha256Result);
```

OUPTUT:

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Degree/SEM 5/CNS/Experiments/EXP7 (master)
$ node sha256.js
Plaintext: Death is an old friend

SHA-256 Hash:
fdb82e6c64715783e7e14bb02a8974f056d0bf2c692c18322c39a8751e8a5b08
```

SHA-512 CODE:

```javascript
const crypto = require('crypto');

const plaintext = "Death is an old friend";

function sha512Hash(text) {
    return crypto.createHash('sha512').update(text).digest('hex');
}

const sha512Result = sha512Hash(plaintext);

console.log("Plaintext:", plaintext);
console.log("\nSHA-512 Hash:");
console.log(sha512Result);
```

OUTPUT:

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Degree/SEM 5/CNS/Experiments/EXP7 (master)
$ node sha512.js
Plaintext: Death is an old friend

SHA-512 Hash:
d0074bec4ee388160ee2142e4f8a1c74c4aa5e2df6af56561186857008d02d5b6f780212530973e3b5a1803da114c839dc7fa55bb15bdba33348da013917e47f
```

Performance (7M)	Journal (3M)	Lab Ethics (2M)	Attendance (3M)	Total (15M)	Faculty Signature