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CB.SC.U4CYS23036

Qn 1,

```
const readline = require("readline-sync");

let users = {
  "luffy": "gear5",
  "zoro": "enma",
  "praneesh": "Conqueror101",
  "sayanthan": "IronHeart",
  "sahil": "b2Bomber"
}

let maxAttempts = 3;
let attempts = 0;
let auth = false;

while (attempts < maxAttempts && !auth) {
  let inputUser = readline.question("Enter Username: ");
  let inputPass = readline.question("Enter Password: ");

  if (users[inputUser] == inputPass) {
    console.log("Authentication successful");
    auth = true;
  }
  else {
    attempts++;
    if (attempts < maxAttempts) {
      console.error("Authentication failed. Please try again.");
    }
  }
}
```

```

}

if (!auth && attempts >= maxAttempts){
    console.error("Limit Exceeded");
}

```

```

● ~/Praneesh/Academics  ʘ main  ʘ ?  > node "/home/Praneesh/Academics/index.js"
Enter Username: luffy
Enter Password: gear5
Authentication successful
● ~/Praneesh/Academics  ʘ main  ʘ ?  > node "/home/Praneesh/Academics/index.js"
Enter Username: sahil
Enter Password: nuclear
Authentication failed. Please try again.
Enter Username: ashwin
Enter Password: rockstar123
Authentication failed. Please try again.
Enter Username: sayanthan
Enter Password: ironman
Limit Exceeded
❖ ~/Praneesh/Academics  ʘ main  ʘ ?  >

```

Qn2,

```

const fs = require("fs");
const readline = require("readline-sync");
const filePath = __dirname + '/password.txt';

let data =
fs.readFileSync(filePath).toString().trim().split("\n");
let users = {};

for (let i=0; i<data.length; i++){
    let parts = data[i].split(" ");
    users[parts[0]] = parts[i];
}

let maxAttempts = 3;

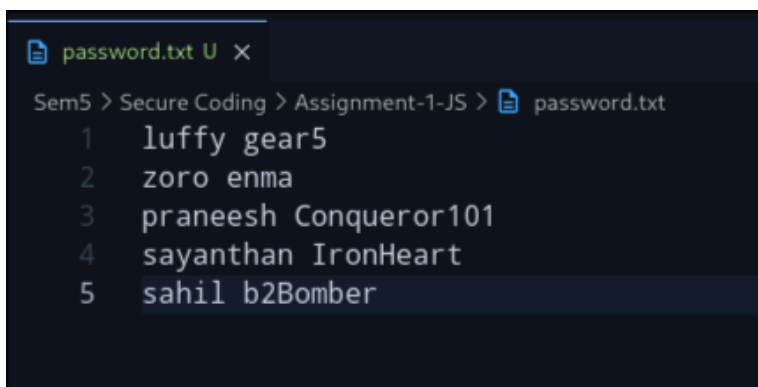
```

```
let attempts = 0;
let auth = false;

while(attempts<maxAttempts && !auth){
    let inputUser = readline.question("Enter Username: ");
    let inputPass = readline.question("Enter Password: ");

    if (users[inputUser] == inputPass){
        console.log("Authentication successful");
        auth = true;
    }
    else {
        attempts ++;
        if (attempts < maxAttempts){
            console.error("Authentication failed. Please try
again.");
        }
    }
}

if (!auth && attempts >= maxAttempts){
    console.error("Limit Exceeded");
}
```



A screenshot of a text editor window titled "password.txt U X". The editor shows the file path "Sem5 > Secure Coding > Assignment-1-JS > password.txt". The file contains a list of five entries, each with a number and a space-separated username and password:

- 1 luffy gear5
- 2 zoro enma
- 3 praneesh Conqueror101
- 4 sayanthan IronHeart
- 5 sahil b2Bomber

The fifth entry is highlighted with a blue background.

```

• ~/Praneesh/Academics  ? main  ?  > node "/home/crimson/Praneesh/Academics/Sem5/Secure Coding/Assignment-1-JS/auth_file.js"
Enter Username: zoro
Enter Password: enma
Authentication successful
• ~/Praneesh/Academics  ? main  ?  > node "/home/crimson/Praneesh/Academics/Sem5/Secure Coding/Assignment-1-JS/auth_file.js"
Enter Username: dinesh
Enter Password: hypy
Authentication failed. Please try again.
Enter Username: ashwin
Enter Password: java
Authentication failed. Please try again.
Enter Username: praneesh
Enter Password: onePiece
Limit Exceeded
❖ ~/Praneesh/Academics  ? main  ?  >

```

Qn3,

```

const fs = require("fs");
const crypto = require("crypto");
const readline = require("readline-sync");

const filePath = __dirname + "/hashed_password.txt";

function hashPwd(password) {
    return
    crypto.createHash("sha256").update(password).digest("hex");
}

let data =
fs.readFileSync(filePath).toString().trim().split("\n");
let users = {};

for (let i = 0; i < data.length; i++) {
    let parts = data[i].split(" ");
    let username = parts[0];
    let hash = parts[1];
    users[username] = hash;
}

let maxAttempts = 3;
let attempts = 0;
let auth = false;

```

```
while(attempts<maxAttempts && !auth){
    let inputUser = readline.question("Enter Username: ");
    let inputPass = readline.question("Enter Password: ");

    let inputHash = hashPwd(inputPass);

    if (users[inputUser] === inputHash) {
        console.log("Authentication successful");
        auth = true;
    }
    else {
        attempts ++;
        if (attempts < maxAttempts){
            console.error("Authentication failed. Please try
again.");
        }
    }
}

if (!auth && attempts >= maxAttempts){
    console.error("Limit Exceeded");
}
```

hashed_password.txt U X

Sem5 > Secure Coding > Assignment-1-JS > hashed_password.txt

```
1 luffy 68293c803068be189c7027ec48680d7e90ed4abf9647c535805424564912582d
2 zoro f80eb8656ae19cfbd7dfc6044c44d3e0201835b919cf676a8283d5ab7bfb7d28
3 praneesh fbed169e644100a3cba3f2711d819b57622514aa6e65bb12e79e51a564207cee
4 sayanthan 1f344841b5d211891eeb1425fee98d465a4edb0f21633b9b970e05e2f1956245
5 sahil 659debb8d533fcb4fa8aacca4fcc3c4be4cb4815ebcca997512326465d41a05
6
```

```
• ~/Praneesh/Academics  ? main  ? > node "/home/crimson/Praneesh/Academics/Sem5/Secure Coding/Assignment-1-JS/auth_hash.js"
Enter Username: sahil
Enter Password: b2Bomber
Authentication successful
• ~/Praneesh/Academics  ? main  ? > node "/home/crimson/Praneesh/Academics/Sem5/Secure Coding/Assignment-1-JS/auth_hash.js"
Enter Username: adithya
Enter Password: allaboveone
Authentication failed. Please try again.
Enter Username: pikachu
Enter Password: thunder
Authentication failed. Please try again.
Enter Username: tsar
Enter Password: russian_winter
Limit Exceeded
❖ ~/Praneesh/Academics  ? main  ? >
```