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IWP Lab Assessment 3

Question 1 :

Develop a Password Strength Meter application using HTML, CSS and JS.

Password strength calculation

- **Only Number or Characters - Weak - Display in red colour.**
- **Combination of Numbers and Characters - Moderate - Display in Orange Colour.**
- **Combination of Numbers, Characters with upper case - Strong - Display in Blue Colour.**
- **Combination of Numbers, characters with upper case and symbol - Uncrackable - Display in Green Colour.**

Use the mouseover event to show the number of letters in the password. If the password strength is Weak or Moderate, suggest a randomly generated strong password.

Code:

index.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="style.css">
    <title>Document</title>
</head>
<body>
    <input type="text" name="password" id="password" onmouseover="check()">
    <p name="length" id="length"></p>
    <p name="check-strength" id="check-strength">Type Password</p>
    <p name="random" id="random"></p>
    <script src="index.js"></script>

</body>
</html>
```

Style.css

```css
body{
    padding-top: 10%;
    text-align: center;
}
#password{
    border-radius: 20px;
    border-style: double;
    border-color: brown;
    height: 40px;
    width: 200px;
    background-color: rgb(44, 250, 137);

}
p{
```

```css
        font-size: xx-large;
}
input{
    color: darkviolet;
    opacity: 1;
    font-size: large;
    font-family: cursive;
}
::placeholder{
    color: darkviolet;
    opacity: 1;
    font-size: large;
    font-family: cursive;
}
```

Index.js

```javascript
function check(){
    var password = document.getElementById("password").value;
    var strength = document.getElementById("check-strength");
    var length = document.getElementById("length");
    var randomPwd = document.getElementById("random");
    var num = /\d/;
    var uppercase = /[A-Z]/;
    var lowecase = /[a-z]/;
    var symbol = /[@$-/:-?{-~!"^_`\[\]]/;
    if(password.length!=0){
        length.innerHTML = 'Password Length = '+password.length;
        if(num.test(password)&&uppercase.test(password)&&lowecase.t
est(password)&&symbol.test(password)){
            strength.innerHTML = '<span
style="color:green">UNCRACKABLE!</span>';
        }
        else
if(num.test(password)&&uppercase.test(password)&&lowecase.test(pass
word)){
            strength.innerHTML = '<span
style="color:blue">STRONG!</span>'
        }
        else if(num.test(password)&&lowecase.test(password)){
```

```
            strength.innerHTML = '<span
style="color:orange">MODERATE!</span>';
            randomPwd.innerHTML = 'Suggested Password =
'+generatePassword();


        }
        else if(num.test(password) ||
lowecase.test(password)){
            strength.innerHTML = '<span
style="color:red">WEAK!</span>';
            randomPwd.innerHTML = 'Suggested Password =
'+generatePassword();
        }

    }
}
function generatePassword() {
    var length = 8,
        charset =
"abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789@$-
/:-?{-~!",
        retVal = "";
    for (var i = 0, n = charset.length; i < length; ++i) {
        retVal += charset.charAt(Math.floor(Math.random() * n));
    }
    return retVal;
}
```
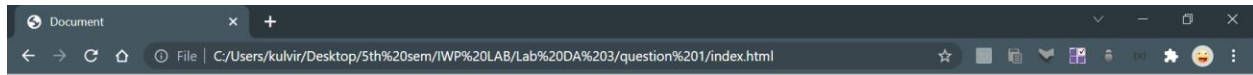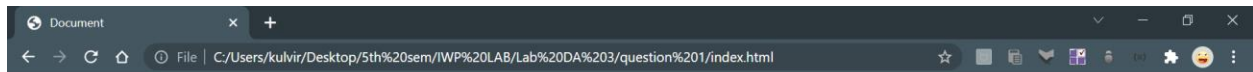
OUTPUT SCREENSHOTS

abc

Password Length = 3
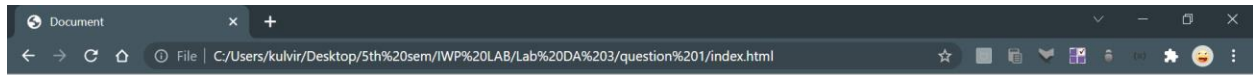
WEAK!

Suggested Password = W{7-@R1J

abc12

Password Length = 5

MODERATE!

Suggested Password = aA$YgxUE

abc123A

Password Length = 7

STRONG!

abc123A@

Password Length = 8

UNCRACKABLE!

Question 2

Develop a JavaScript program that will determine whether a customer has exceeded the credit limit on a charge account. For each customer, the following facts are available:

- On submit of the registration form welcome the user with the username.
- Balance at the beginning of the month
- Total of all items charged by this customer this month
- Total of all credits applied to this customer's account this month
- Allowed credit limit

Code

Index.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Charge Account</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div>
        <input type="text" id="username" placeholder="username">
<br> <br>
        <input type="password" id="password"
placeholder="password"> <br> <br>
        <button type="submit" onclick="login()"
id="btn">Login</button> <br> <br>
    </div>
```

```
        <script src="index.js"></script>
</body>
</html>
```

Style.css

```css
body{
    background-color: slategrey;
    padding: 10%;
    text-align: center;
}

#jstext{
    color: cyan;
    font-size: large;
    font-family: 'Courier New', Courier, monospace;

}
#username{
    border-radius: 20px;
    border-style: double;
    border-color: brown;
    height: 40px;
    width: 200px;
    background-color: rgb(44, 250, 137);

}
#password{
    border-radius: 20px;
    border-style: double;
    border-color: brown;
    height: 40px;
    width: 200px;
    background-color: rgb(44, 250, 137);

}
input{
    color: darkviolet;
    opacity: 1;
    font-size: large;
    font-family: cursive;
```

```css
}
::placeholder{
    color: darkviolet;
    opacity: 1;
    font-size: large;
    font-family: cursive;
}
```

Index.js

```javascript
function login(){
    let username = document.getElementById("username").value;
    let password = document.getElementById("password").value;
    users.forEach(element => {
        if(element.username===username &&
element.password===password){
            calculate(username);


        }
    });
}
function calculate(username){
    charge_account.forEach(ele => {
        if(ele.username === username){
            var initial_balance = ele.initial_balance;
            var arr = ele.items;
            var credits = 0;
            var cost = 0;
            var credit_limit = ele.credit_limit;
            arr.forEach(e => {
                credits = credits+e.credits;
                cost = cost + e.cost;
            });
            change(username,initial_balance,credits,cost,credit_lim
it);
        }
    })
}
function change(u,a,b,c,d){
    var obj = document.getElementById("username");
    obj.remove();
```

```javascript
    obj = document.getElementById("password");
    obj.remove();
    obj = document.getElementById("btn");
    obj.remove();
    document.body.appendChild(document.createElement('p'));
    document.querySelector("body p:last-child").id = "jstext";
    document.querySelector("#jstext").innerHTML = "<h1>Welcome
"+u+"<h1/><h2>Initial Balance = "+a+"<br>Total = "+c+"<br>Credits
Spent = "+b+"<br>Credit Limit = "+d+"<h2/>"

    // document.write("<h1>Welcome "+u+"<h1/><h2>Initial Balance =
"+a+"<br>Total = "+c+"<br>Credits Spent = "+b+"<br>Credit Limit =
"+d+"<h2/>");

}
charge_account = [
    {
        username: "asd",
        initial_balance: 1000,
        credit_limit: 50,
        items: [
            {
                name: "Football",
                cost: 100,
                credits: 10
            },
            {
                name: "Baseball",
                cost: 160,
                credits: 20
            }
        ]

    },
    {
        username: "zxc",
        initial_balance: 9000,
        credit_limit: 200,
        items: [
            {
                name: "Pool",
                cost: 1000,
```

```
                credits: 100
            }
        ]

    },
    {
        username: "qwe",
        initial_balance: 6000,
        credit_limit: 500,
        items: [
            {
                name: "Laptop Charger",
                cost: 6000,
                credits: 500
            }
        ]

    },
    {
        username: "poi",
        initial_balance: 10000,
        credit_limit: 800,
        items: [
            {
                name: "MacBook",
                cost: 8700,
                credits: 750
            },
            {
                name: "Basketbal",
                cost: 300,
                credits: 40
            }
        ]

    },
    {
        username: "lkj",
        initial_balance: 600,
        credit_limit: 15,
        items: [
            {
```

```
                name: "Football",
                cost: 100,
                credits: 10
            }
        ]

    },
    {
        username: "mnb",
        initial_balance: 1000,
        credit_limit: 50,
        items: [
            {
                name: "Football",
                cost: 234,
                credits: 10
            },
            {
                name: "Leather Ball",
                cost: 160,
                credits: 20
            }
        ]

    },

]
users = [
    {
        username: "asd",
        password: "asd"
    },
    {
        username: "zxc",
        password: "zxc"
    },
    {
        username: "qwe",
        password: "qwe"
    },
    {
        username: "poi",
```

```
        password: "poi"
    },
    {

        username: "lkj",
        password: "lkj"
    },
    {

        username: "mnb",
        password: "mnb"
    }
]
```

Output screenshots:

Welcome asd

Initial Balance = 1000
Total = 260
Credits Spent = 30
Credit Limit = 50