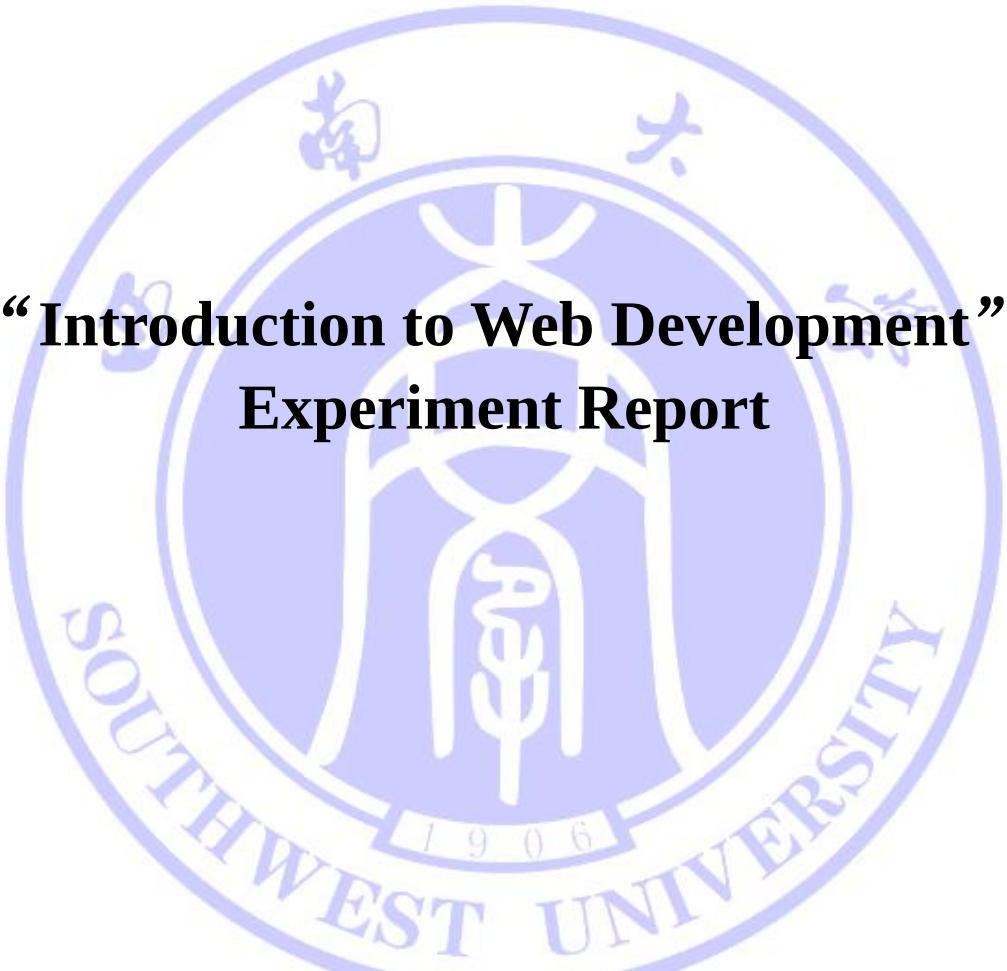
# Southwest University




## “Introduction to Web Development” Experiment Report

**School：School of Computer & information Science**

**Major：Software engineering**

**Class： 4**

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# Experiment Report 1

No.1:Objective:

Main:Learn to use JavaScript to realize some web functions

1. Use JavaScript to write a web page clock.
2. Use JavaScript to write a web page that automatically changes the background color.
3. Use JavaScript to write a web calculator.

No.2:Detailed requirements:

1. In the HTML code of this page, we need to add < script type = "text / JavaScript" in < head > Language = "JavaScript" > and < / script > and write a JavaScript code between them to make a function to get the system time, which is used to get the hours, minutes and seconds of the system time, and write a clock UI in < body >, and then use the timer to call the JavaScript function that has been written regularly to realize the dynamic update of the web page clock.

Ex1: A web page clock developed with HTML and JavaScript

2. Through the array function of JavaScript, periodic call function and condition judgment statement, make a function to automatically switch the background color, and call this function in < body > in a fixed cycle to realize the effect of automatically changing the background color.

Ex2: A HTML and JavaScript development of the use of automatic change the background color of the web page

3. Use JavaScript to write several functions to pop up the input box, assign the input content to the variable, and use the input symbol to calculate the variable and output

the result. The program should also use conditional judgment statements to limit the input content and legalize the data.

Ex3: A web calculator developed with HTML and JavaScript

No.3:Procedure:

Ex1[Website Code]

Html:

```
<!doctype html>
<html>
<head>
            <meta charset="utf-8">
            <title>Clock</title>
            <link href="clockStyle.css" rel="stylesheet" type="text/css">
            <script type="text/javascript" language="javascript">
              function aClock(){
                  var D=new Date();
                  var Ho=D.getHours();
                  var Mi=D.getMinutes();
                  var Se=D.getSeconds();

                  var runH=document.getElementById("Hourx");
                  runH.innerHTML=Ho;

                  var runM=document.getElementById("Minutesx");
                  runM.innerHTML=Mi;

                  var runS=document.getElementById("Secondsx");
                  runS.innerHTML=Se;
              }
            </script>
</head>

<body>
            <div id="clock">
              <div id="Hour"><div id="Hourx"></div></div>
              <p>:</p>
              <div id="Minutes"><div id="Minutesx"></div></div>
              <p>:</p>
```

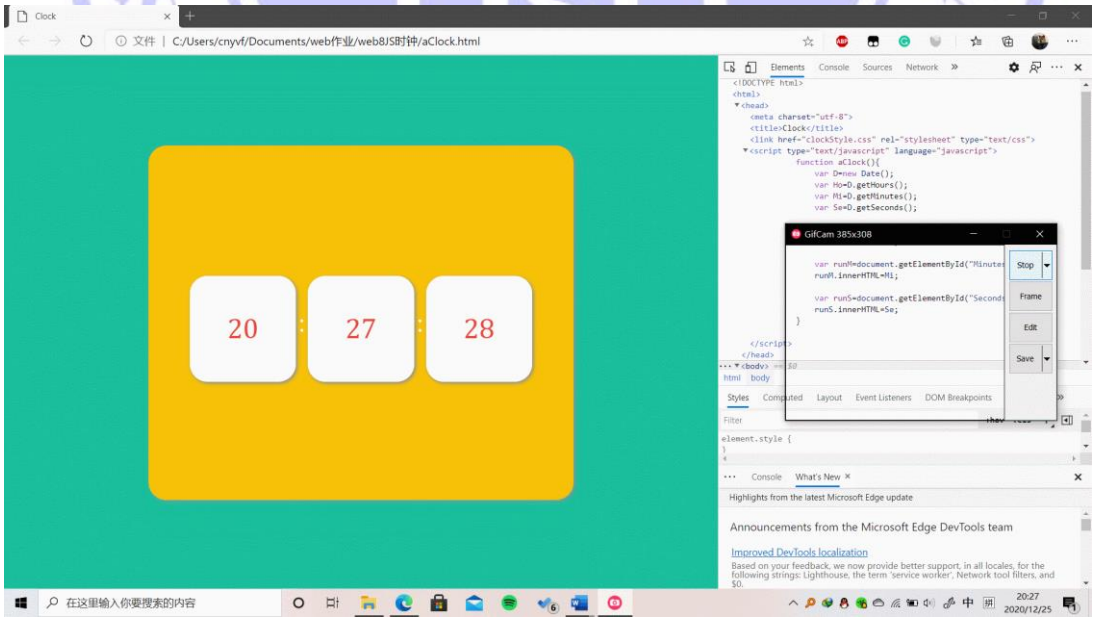
```
                <div id="Seconds"><div id="Secondsx"></div></div>
            </div>

            <script language="javascript" type="text/javascript">
            setInterval("aClock()",1000);
            </script>

</body>
</html>
```

CSS:

```
@charset "utf-8";

html, body {
            width: 100%;
            height: 100%;
            margin: 0;
            padding: 0;
                background-color: rgba(26,190,156,1.00);
              }

#clock{
            text-align: center;
            width: 600px;
            height: 500px;
            background-color:rgba(248,194,8,1.00);
            position:relative;
            margin: 0 auto;
            top:50%;
            margin-top: -250px;
            border-radius: 25px;
            box-shadow:2px 2px 5px #909090;
}

p{
            text-align: center;
            display: inline-block;
            position: relative;
            margin: auto 0;
            top:46%;
            font-size: 30px;
            color: rgba(255,255,255,1.00);

}
```

```
#Hour,#Minutes,#Seconds{
                color:rgba(234,66,57,1.00);
                font-size: 40px;
                text-align: center;
                width:150px;
                height: 150px;
                background-color:rgba(255,255,255,1.00);
                display: inline-block;
                position: relative;
                top:48%;
                margin: auto 0;
                margin-top: -75px;
                border-radius: 25px;
                box-shadow: 2px 2px 5px #909090;
}

#Hourx,#Minutesx,#Secondsx{
                margin-top:50px;
                font-family: Cambria, "Hoefler Text", "Liberation Serif",
Times, "Times New Roman", "serif";
}
```

Ex1[Website Result show on 1920*1080screen]:

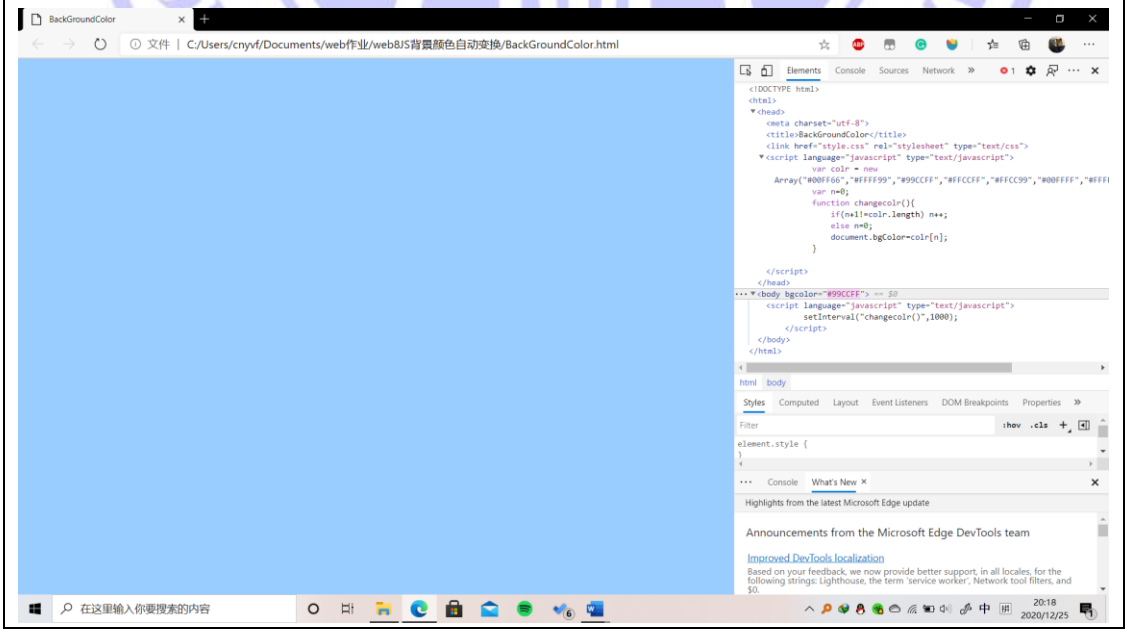


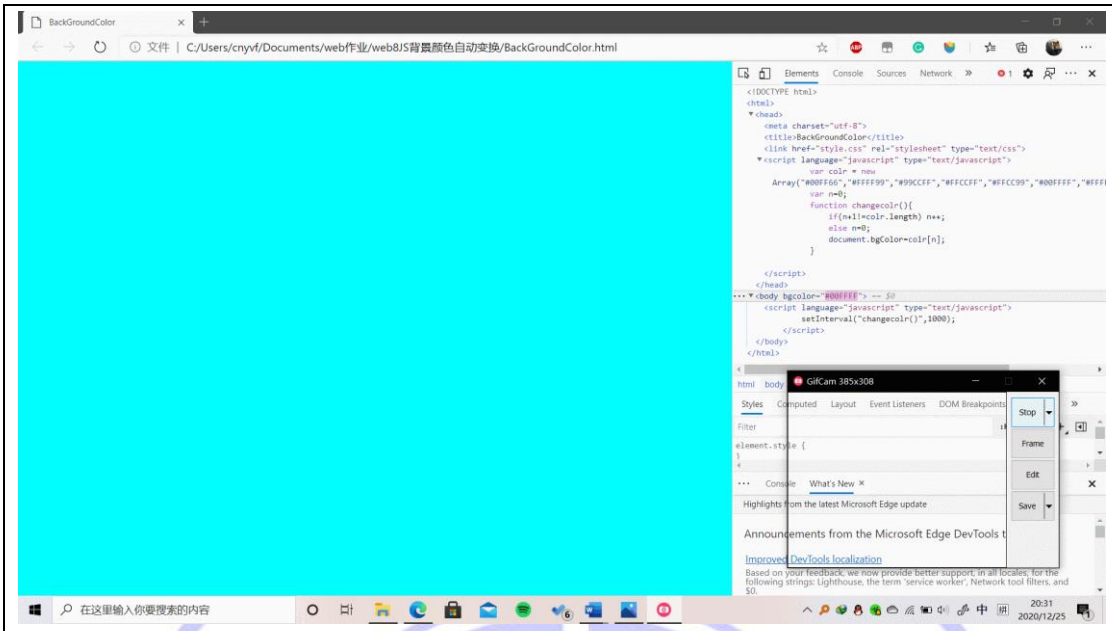

Ex2[Website Code]

Html:

```
<!doctype html>
<html>
<head>
<meta charset="utf-8">
<title>BackGroundColor</title>
<link href="style.css" rel="stylesheet" type="text/css">
    <script language="javascript" type="text/javascript">
        var colr = new
Array("#00FF66","#FFFF99","#99CCFF","#FFCCFF","#FFCC99","#00FFFF","#FFFF0
0","#FFCC00","#FF00FF");
        var n=0;
        function changecolr(){
            if(n+1!=colr.length) n++;
            else n=0;
            document.bgColor=colr[n];
        }
    </script>
</head>

<body>
    <script language="javascript" type="text/javascript">
        setInterval("changecolr()",1000);
    </script>
</body>
</html>
```

Ex2[Website Result show on 1920*1080screen]:





## Ex3[Website Code]

### Html:

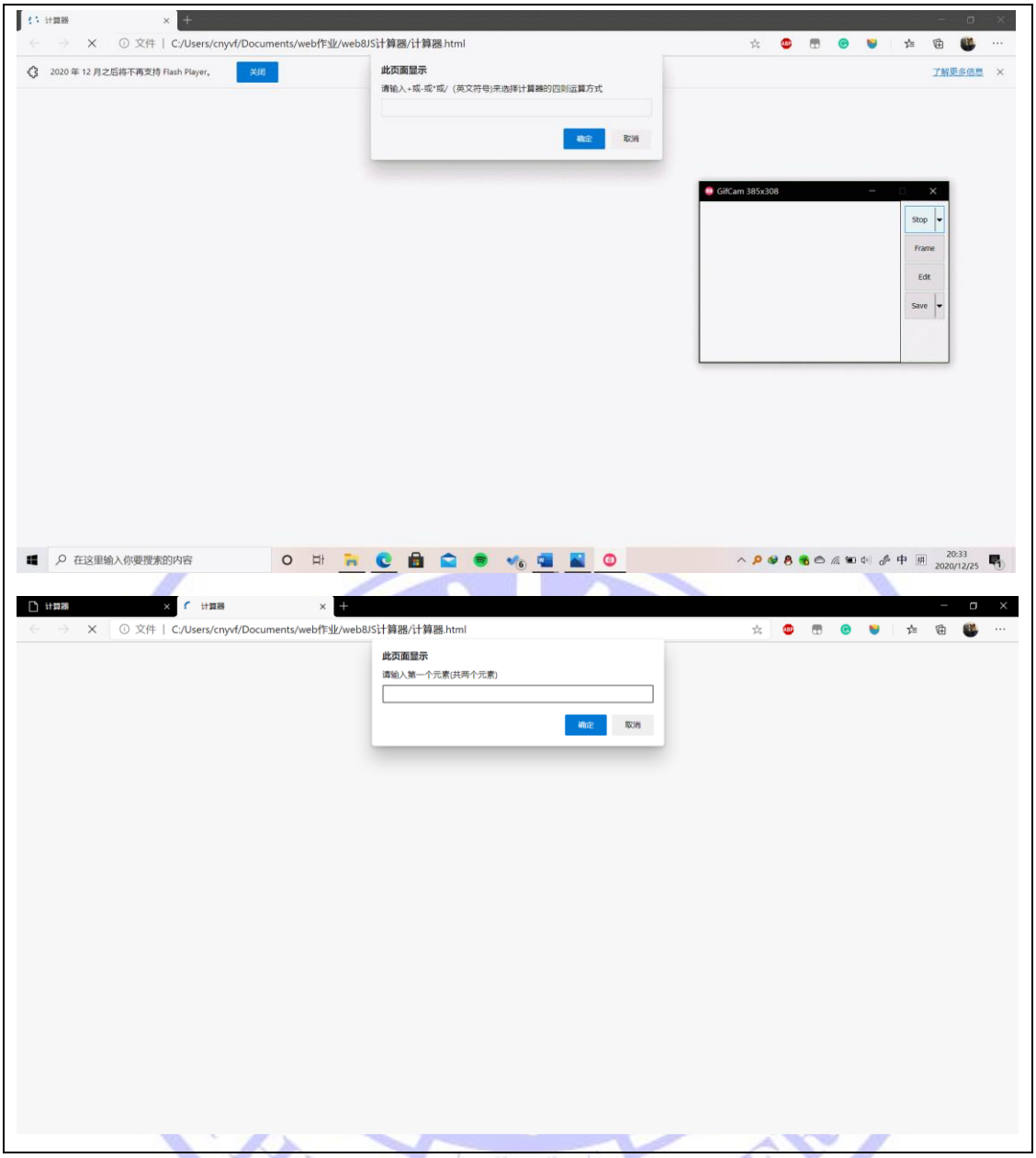
```
<!doctype html>
<html>
<head>
    <meta charset="utf-8">
    <title>计算器</title>
    <link href="style.css" rel="stylesheet" type="text/css">
    <script language="javascript" type="text/javascript">
        var meThod;
        var elementA;
        var elementB;
        var final;
        function Methodd(){
            meThod = prompt("请输入+或-或*或/（英文符号)来选择计算器的四则运算方式");
            if(meThod!="+"&&meThod!="-"&&meThod!="*"&&meThod!="/"){
                alert("请勿输入除加减乘除符号外的内容！");
                Methodd();
            }
            if(meThod==""){
                alert("请勿留空！");
                Methodd();
            }
        }
```

```
        function eleA(){
            elementA = Number(prompt("请输入第一个元素(共两个元素)"));
            if(elementA==""){
                alert("请勿留空！");
                eleA();
            }
        }

        function eleB(){
            elementB = Number(prompt("请输入第二个元素(共两个元素)"));
            if(elementB==""){
                alert("请勿留空！");
                eleB();
            }
        }

        function calcuLate(){
            if(meThod=="+") final=elementA+elementB;
            if(meThod=="-") final=elementA-elementB;
            if(meThod=="*") final=elementA*elementB;
            if(meThod=="/") final=elementA/elementB;
            document.getElementById("FinaL").innerHTML="计算结果
为:"+final;
        }

    </script>
</head>

<body>
    <div class="d1">
        <span id="FinaL">
        </span>
    </div>
    <script language="javascript" type="text/javascript">
        Methodd();
        eleA();
        eleB();
        calcuLate();
    </script>
</body>
</html>
```

CSS：

```
@charset "utf-8";

html,body{
    width: 100%;
    height: 100%;
    padding: 0;
    margin: 0;
    background-color: #99CCCC;
}

.d1{
    width: 600px;
    height: 500px;
    text-align: center;
    margin: 0 auto;
    position: relative;
    top: 50%;
    background-color: #FFCC99;
    margin-top: -250px;
}

#FinaL{
    font-family: Cambria, "Hoefler Text", "Liberation Serif", Times, "Times
New Roman", "serif";
    color:aliceblue;
    font-size: 50px;
    text-align: center;
    margin: 0 auto;
    position: relative;
    top: 45%;
}
```

Ex3[Website Result show on 1920*1080screen]:


计算器
文件 | C:/Users/cnyvf/Documents/web作业/web8JS计算器/计算器.html
2020 年 12 月之后将不再支持 Flash Player。
关闭
了解更多信息
此页面显示
请输入+或-或*或/（英文符号)来选择计算器的四则运算方式
确定
取消
GifCam 385x308
Stop
Frame
Edit
Save
在这里输入你要搜索的内容
20:33
2020/12/25
计算器
计算器
文件 | C:/Users/cnyvf/Documents/web作业/web8JS计算器/计算器.html
此页面显示
请输入第一个元素(共两个元素)
确定
取消


No.5:Analysis:

For Ex1: In the development of the first page, I learned how to use the system time acquisition function of JavaScript, how to generate variables and assign values to variables, how JavaScript controls the content displayed in HTML controls through the ID of controls, and how to call JavaScript functions periodically.

1. In order to read the system time, we need to use the data() function of JavaScript. The specific method to call the time, minute and second of the clock and assign the value to the variable is as follows:

```
var D=new Date();
var Ho=D.getHours();
var Mi=D.getMinutes();
var Se=D.getSeconds();
```

2. In order to keep the text content of time displayed in HTML updated continuously, the document.getElementById

("idname"). InnerHTML = variable name to identify ID to change the text content in HTML as the content of variable.

```
var runH=document.getElementById("Hourx");
runH.innerHTML=Ho;
var runM=document.getElementById("Minutesx");
runM.innerHTML=Mi;
var runS=document.getElementById("Secondsx");
runS.innerHTML=Se;
```

3. In order to make JavaScript function be called periodically, setinterval ("function name", interval time is millisecond) is used in < body > to implement

For Ex2: For Experiment 2, I learned to store variable values through the array function of JavaScript, and use the if statement to control the pointer variable value of each periodic call. In addition, I can point to different variable values to replace the HTML statement content, so as to achieve the effect of periodically changing the page background color.

1. For JavaScript array creation and initialization, the method code of assigning value to color code is as follows:

```
Var colr = new
Array("#00FF66","#FFFF99","#99CCFF","#FFCCFF","#FFCC99"
,"#00FFFF","#FFFF00","#FFCC00","#FF00FF");
```

2. For variables with pointer property and if statements to switch colors, the code is as follows:

```
var n=0;
```

```
function changecolr(){
    if(n+1!=colr.length) n++;
    else n=0;
```

3. Control the background color switching code as follows:

```
document.bgColor=colr[n];
```

For Ex3: In this experiment, I learned how to input information by using JavaScript to generate the pop-up, and I learned how to call functions in the function to achieve the effect of circular execution and the effect of function selection. Besides, I learned how to use JavaScript to realize the computing function between variables.

1. Use the pop-up function and assign values to variables. The method code is:

```
var name;
name=prompt("message");
```

2. For the calculation of variables, you can directly use logical operators, and the example of addition is as follows:

```
sum=a+b;
```

Summary:

Through this experiment, I learned how to use JavaScript in HTML to achieve dynamic web page effect, learned the basic syntax of JavaScript, learned how to use JavaScript to build functions and how to call JavaScript functions. Learn how to use JavaScript to get system time, learn how to call

JavaScript functions periodically, learn how to use JavaScript to control the change of HTML code, learn the condition judgment statement, variable control statement, logic operation statement, pop-up statement, etc.