浙江大学城市学院实验报告

课程名称　　　　　　　跨平台脚本开发技术

实验项目名称　　　　实验八 错误处理与正则表达式

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实验成绩 _____ 指导老师（签名 ）_____ 日期 _____

注意:

● 务请保存好各自的源代码，已备后用。

● 请把作业保存为 pdf 上传到 BB 平台，请务必在截止日期前提交。

实验目的:

掌握 JS 中的错误处理与正则表达式。

实验内容:

1. 学习 JavaScript 调试：把以下代码存为 debug.js，用不同的调试方式学习如何调试。

```javascript
  function numberToString(n, base) {
 var result = "", sign = "";
 if (n < 0) {
   sign = "-";
   n = -n;
 }
 do {
   result = String(n % base) + result;
   n /= base;
 } while (n > 0);
 return sign + result;
}
console.log(numberToString(13, 10));
// → 1.5e-3231.3e-3221.3e-3211.3e-3201.3e-3191.3e-3181.3…
```

1）用 console.log

2）在 node.js 和 chromedevtools 中设置断点调试；

3）添加 debugger 语句，在 node.js 和 chromedevtools 中观察。

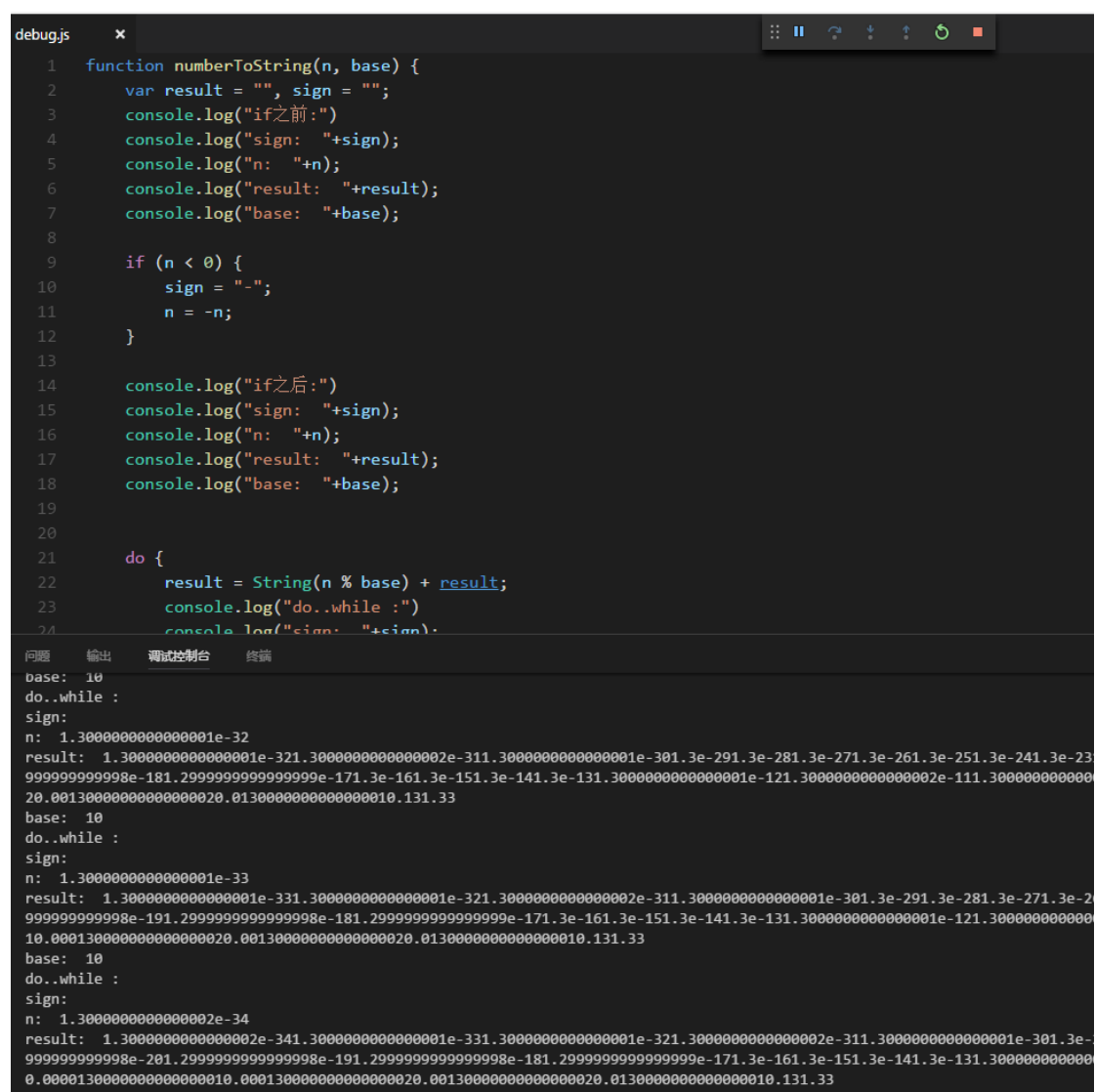2. 教材 P115 习题 8.11.1、8.11.2

3. 教材 P133 习题 9.20.1、9.20.2、9.20.3

实验步骤：

1、

1.1、

代码如下：

```
function numberToString(n, base) {
    var result = "", sign = "";
```

```
    console.log("if 之前:")
    console.log("sign:  "+sign);
    console.log("n:  "+n);
    console.log("result:  "+result);
    console.log("base:  "+base);

    if (n < 0) {
        sign = "-";
        n = -n;
    }

    console.log("if 之后:")
    console.log("sign:  "+sign);
    console.log("n:  "+n);
    console.log("result:  "+result);
    console.log("base:  "+base);


    do {
        result = String(n % base) + result;
        console.log("do..while :")
        console.log("sign:  "+sign);
        console.log("n:  "+n);
        console.log("result:  "+result);
        console.log("base:  "+base);
        n /= base;

    } while (n > 0);

    console.log("do..while 之后:")
    console.log("sign:  "+sign);
    console.log("n:  "+n);
    console.log("result:  "+result);
    console.log("base:  "+base);

    return sign + result;
}

console.log(numberToString(13, 10));
// → 1.5e-3231.3e-3221.3e-3211.3e-3201.3e-3191.3e-3181.3…
```
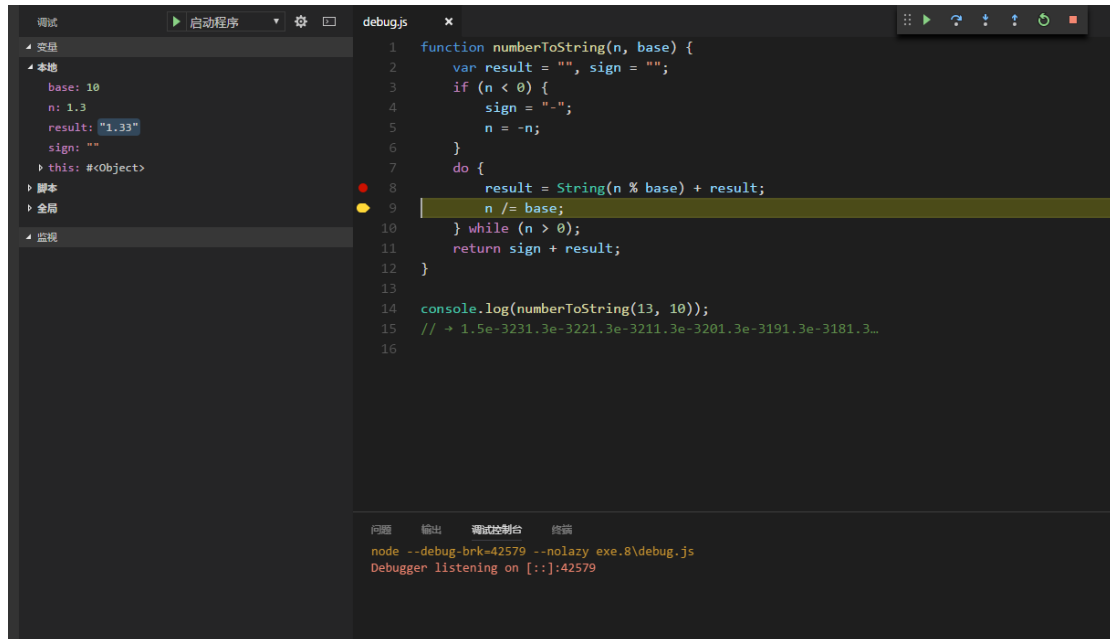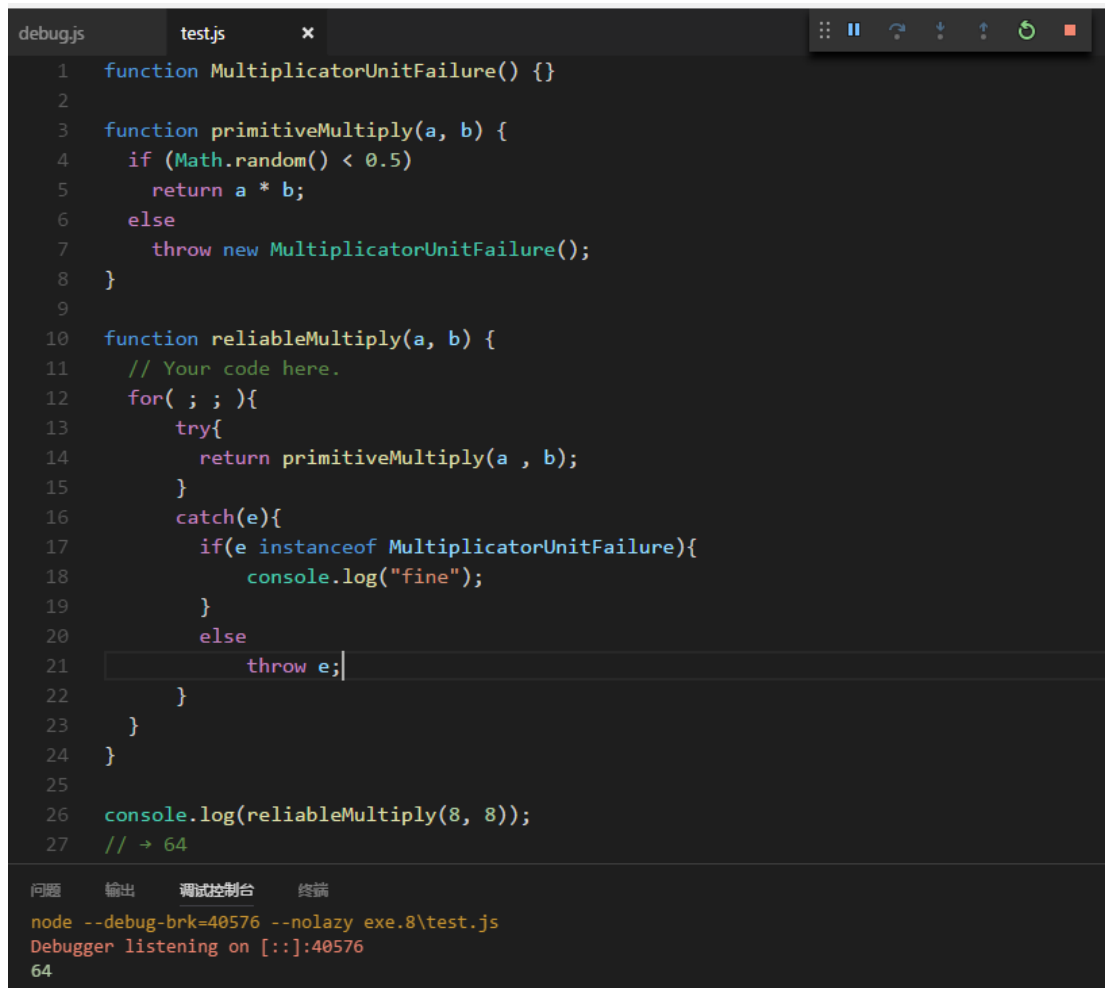
1.2、

1.3、

2、

2.1、

```
debug.js      test.js      ✕                                    ⠿ Ⅱ  ⤻  ↓  ↑  ↺  ■
      1    function MultiplicatorUnitFailure() {}
      2
      3    function primitiveMultiply(a, b) {
      4      if (Math.random() < 0.5)
      5        return a * b;
      6      else
      7        throw new MultiplicatorUnitFailure();
      8    }
      9
     10    function reliableMultiply(a, b) {
     11      // Your code here.
     12      for( ; ; ){
     13          try{
     14            return primitiveMultiply(a , b);
     15          }
     16          catch(e){
     17            if(e instanceof MultiplicatorUnitFailure){
     18                console.log("fine");
     19            }
     20            else
     21                throw e;
     22          }
     23      }
     24    }
     25
     26    console.log(reliableMultiply(8, 8));
     27    // → 64

问题    输出    调试控制台    终端
node --debug-brk=40576 --nolazy exe.8\test.js
Debugger listening on [::]:40576
64
```

2.2、

```
19        var locked = box.locked;
20        if(!locked)
21            return body();
22
23        box.unlock();
24        try{
25            return body();
26        }finally{
27            box.lock();
28        }
29    }
30
31    withBoxUnlocked(function() {
32      box.content.push("gold piece");
33    });
34
35    try {
36      withBoxUnlocked(function() {
37        throw new Error("Pirates on the horizon! Abort!");
38      });
39    } catch (e) {
40      console.log("Error raised:", e);
41    }
42    console.log(box.locked);
43    // → true
```

```
问题    输出    调试控制台    终端
node --debug-brk=18594 --nolazy exe.8\test2.js
Debugger listening on [::]:18594
Error raised: Error: Pirates on the horizon! Abort!
    at d:\CYann_Work\JS\exe.8\test2.js:37:11
    at withBoxUnlocked (d:\CYann_Work\JS\exe.8\test2.js:25:14)
    at Object.<anonymous> (d:\CYann_Work\JS\exe.8\test2.js:36:3)
    at Module._compile (module.js:570:32)
    at Object.Module._extensions..js (module.js:579:10)
    at Module.load (module.js:487:32)
    at tryModuleLoad (module.js:446:12)
    at Function.Module._load (module.js:438:3)
    at Timeout.Module.runMain [as _onTimeout] (module.js:604:10)
    at ontimeout (timers.js:365:14)
true
```

代码如下：

```
var box = {
    locked:true ,
    unlock:function(){
        this.locked = false;
    },
    lock:function(){
        this.locked = true;
    } ,
    _content:[] ,
    get content(){
```

```
        if(this.locked)
            throw new Error ("locked");
        return this._content;
    }
};

function withBoxUnlocked(body) {
  // Your code here.
  var locked = box.locked;
  if(!locked)
      return body();

  box.unlock();
  try{
      return body();
  }finally{
      box.lock();
  }
}

withBoxUnlocked(function() {
  box.content.push("gold piece");
});

try {
  withBoxUnlocked(function() {
    throw new Error("Pirates on the horizon! Abort!");
  });
} catch (e) {
  console.log("Error raised:", e);
}
console.log(box.locked);
// → true
```
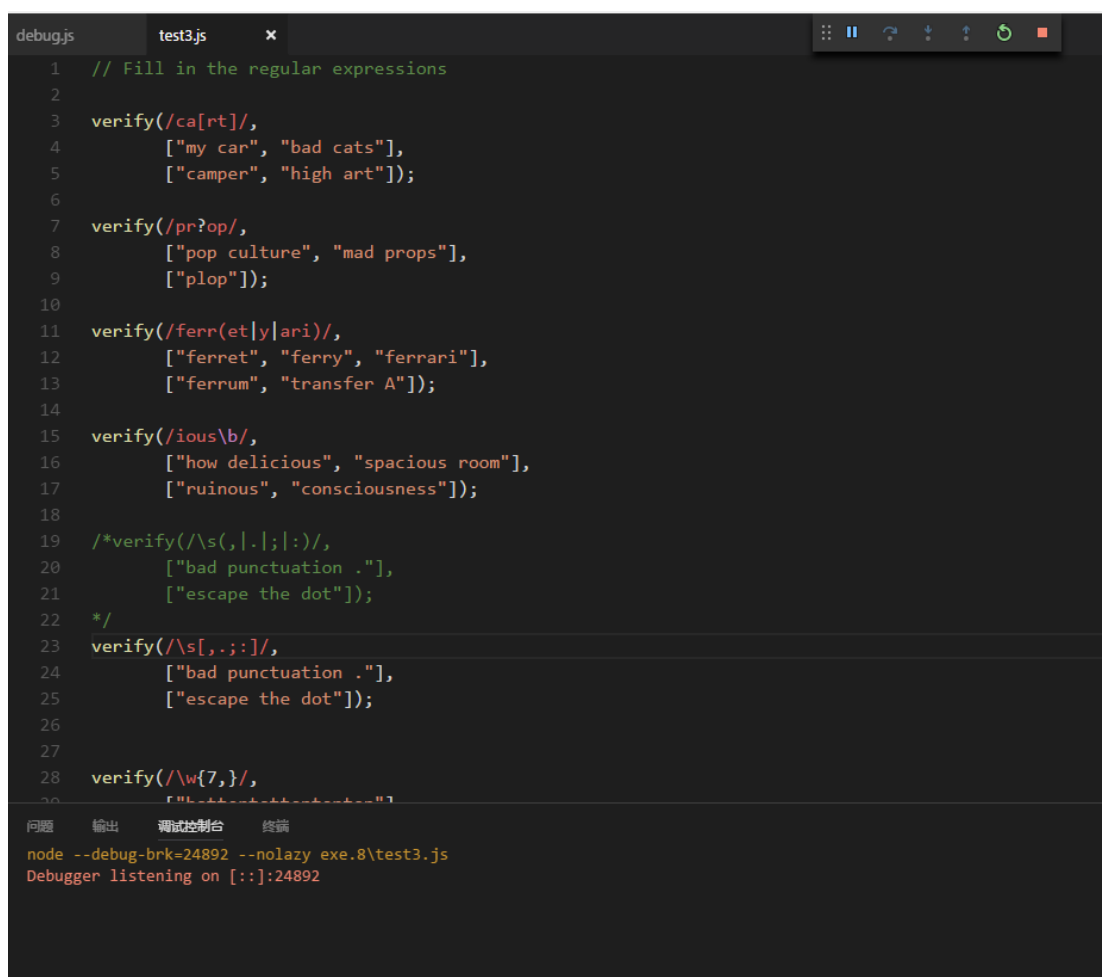
3、

3.1、

代码如下：

```
// Fill in the regular expressions

verify(/ca[rt]/,
       ["my car", "bad cats"],
       ["camper", "high art"]);

verify(/pr?op/,
       ["pop culture", "mad props"],
       ["plop"]);

verify(/ferr(et|y|ari)/,
       ["ferret", "ferry", "ferrari"],
       ["ferrum", "transfer A"]);

verify(/ious\b/,
       ["how delicious", "spacious room"],
       ["ruinous", "consciousness"]);
```

```
/*verify(/\s(,|.|;|:)/,
        ["bad punctuation ."],
        ["escape the dot"]);
*/
verify(/\s[,.;:]/,
        ["bad punctuation ."],
        ["escape the dot"]);


verify(/\w{7,}/,
        ["hottentottententen"],
        ["no", "hotten totten tenten"]);

verify(/\b[a-df-z]+\b/i,
        ["red platypus", "wobbling nest"],
        ["earth bed", "learning ape"]);



function verify(regexp, yes, no) {
  // Ignore unfinished exercises
  if (regexp.source == "...") return;
  yes.forEach(function(s) {
    if (!regexp.test(s))
      console.log("Failure to match '" + s + "'");
  });
  no.forEach(function(s) {
    if (regexp.test(s))
      console.log("Unexpected match for '" + s + "'");
  });
}
```

3.2、

```
test4.js    ✕

1    var text = "'I'm the cook,' he said, 'it's my job.'";
2    // Change this call.
3    console.log(text.replace(/(^|\w)'|'(\w|$)/i, '$1"$2'));
4    // → "I'm the cook," he said, "it's my job."
5
```

```
问题    输出    调试控制台    终端

node --debug-brk=23640 --nolazy exe.8\test4.js
Debugger listening on [::]:23640
"I'm the cook,' he said, 'it's my job.'
```

3.3、

```
test4.js    test5.js    ✕

1    // Fill in this regular expression.
2    var number = /^(\+|-|)(\d+(\.\d*)?|\.\d+)([eE](\+|-|)\d+)?$/;
3
4    // Tests:
5    ["1", "-1", "+15", "1.55", ".5", "5.", "1.3e2", "1E-4",
6     "1e+12"].forEach(function(s) {
7      if (!number.test(s))
8        console.log("Failed to match '" + s + "'");
9    });
10   ["1a", "+-1", "1.2.3", "1+1", "1e4.5", ".5.", "1f5",
11    "."].forEach(function(s) {
12     if (number.test(s))
13       console.log("Incorrectly accepted '" + s + "'");
14   });
```

```
问题    输出    调试控制台    终端

node --debug-brk=44348 --nolazy exe.8\test5.js
Debugger listening on [::]:44348
```