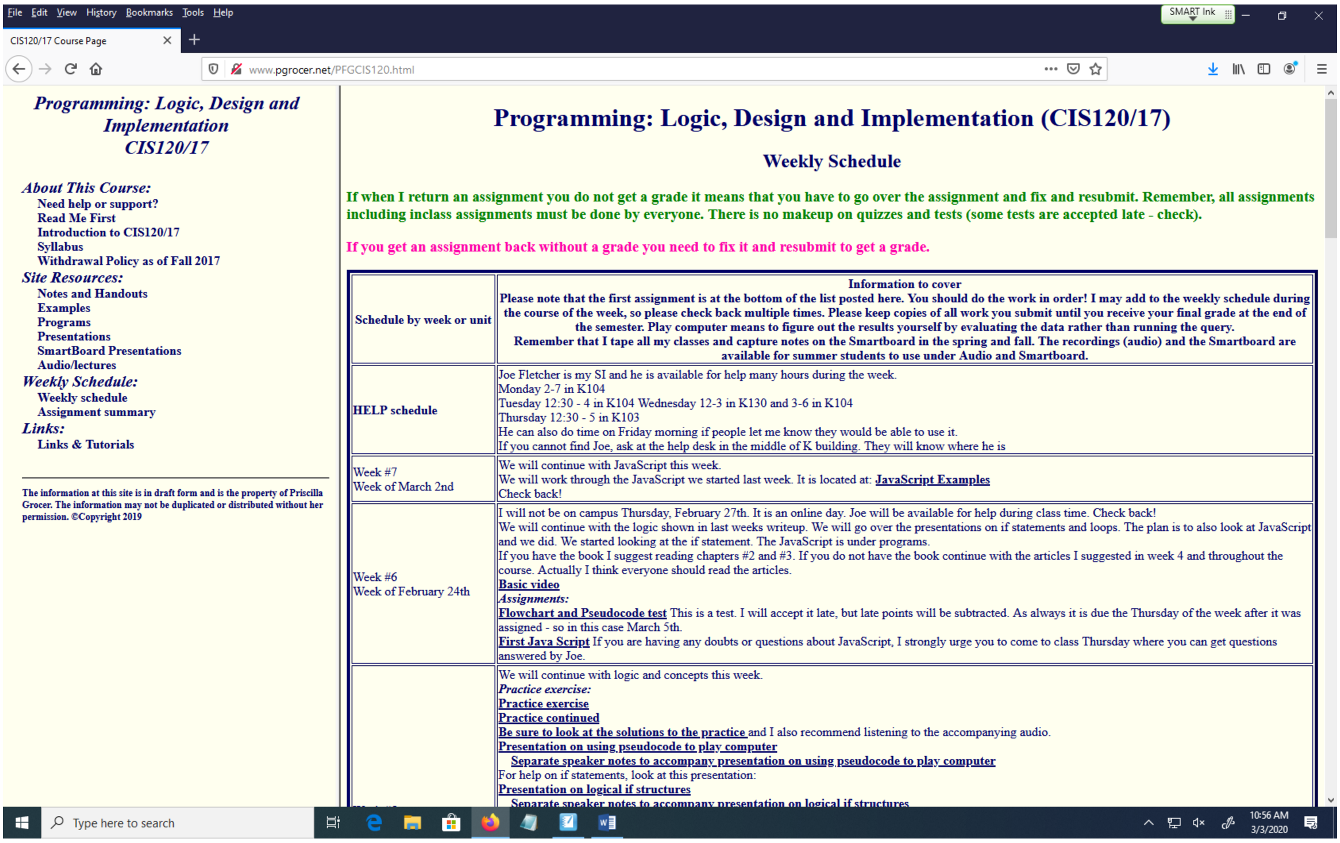
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CIS120/17 Course Page
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Programming: Logic, Design and Implementation CIS120/17

About This Course:

- Need help or support?
- Read Me First
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- Syllabus
- Withdrawal Policy as of Fall 2017

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- Examples
- Programs
- Presentations
- SmartBoard Presentations
- Audio/lectures

Weekly Schedule:

- Weekly schedule
- Assignment summary

Links:

- Links & Tutorials

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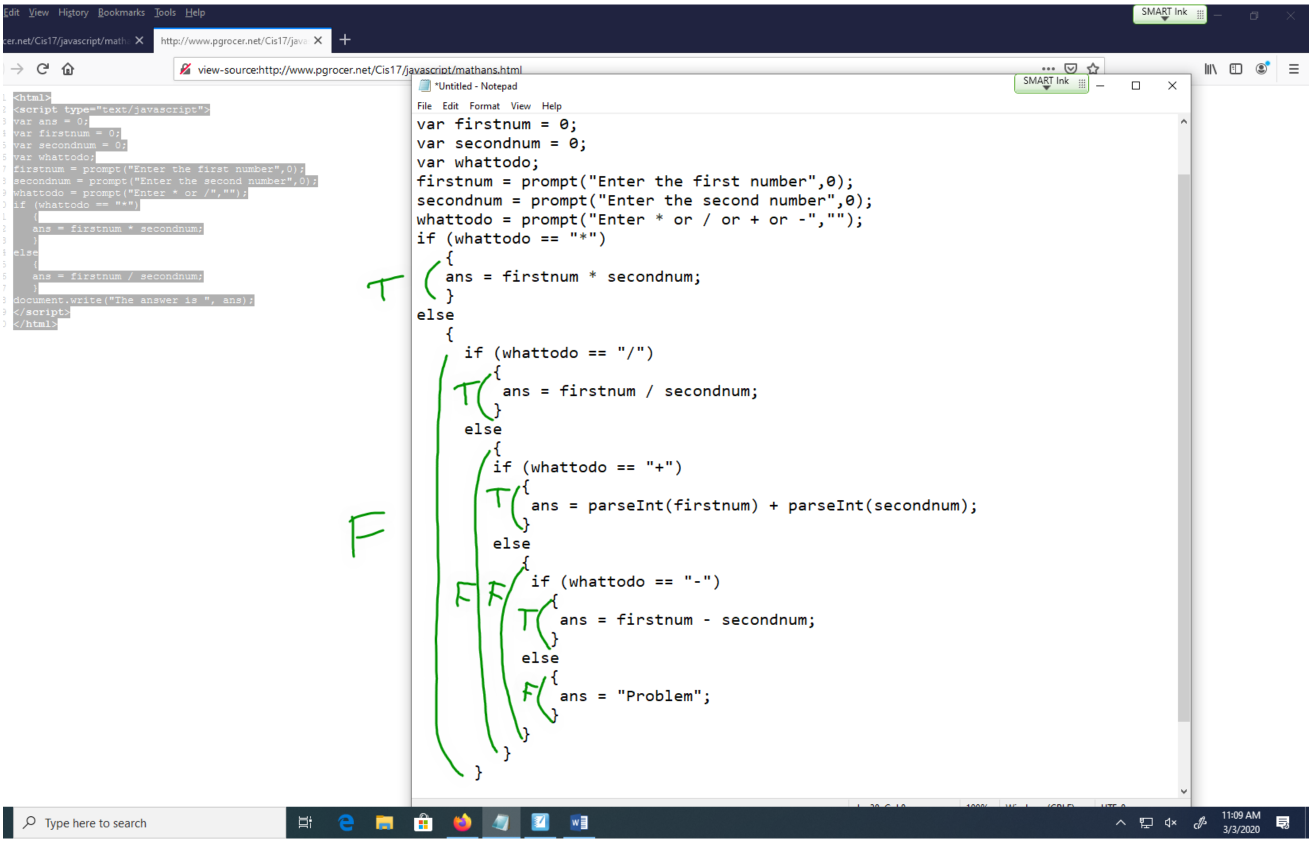
Programming: Logic, Design and Implementation (CIS120/17)

Weekly Schedule

If when I return an assignment you do not get a grade it means that you have to go over the assignment and fix and resubmit. Remember, all assignments including inclass assignments must be done by everyone. There is no makeup on quizzes and tests (some tests are accepted late - check).

If you get an assignment back without a grade you need to fix it and resubmit to get a grade.

Schedule by week or unit	**Information to cover** **Please note that the first assignment is at the bottom of the list posted here. You should do the work in order! I may add to the weekly schedule during the course of the week, so please check back multiple times. Please keep copies of all work you submit until you receive your final grade at the end of the semester. Play computer means to figure out the results yourself by evaluating the data rather than running the query.** **Remember that I tape all my classes and capture notes on the Smartboard in the spring and fall. The recordings (audio) and the Smartboard are available for summer students to use under Audio and Smartboard.**
HELP schedule	Joe Fletcher is my SI and he is available for help many hours during the week. Monday 2-7 in K104 Tuesday 12:30 - 4 in K104 Wednesday 12-3 in K130 and 3-6 in K104 Thursday 12:30 - 5 in K103 He can also do time on Friday morning if people let me know they would be able to use it. If you cannot find Joe, ask at the help desk in the middle of K building. They will know where he is
Week #7 Week of March 2nd	We will continue with JavaScript this week. We will work through the JavaScript we started last week. It is located at: **JavaScript Examples** Check back!
Week #6 Week of February 24th	I will not be on campus Thursday, February 27th. It is an online day. Joe will be available for help during class time. Check back! We will continue with the logic shown in last weeks writeup. We will go over the presentations on if statements and loops. The plan is to also look at JavaScript and we did. We started looking at the if statement. The JavaScript is under programs. If you have the book I suggest reading chapters #2 and #3. If you do not have the book continue with the articles I suggested in week 4 and throughout the course. Actually I think everyone should read the articles. **Basic video** ***Assignments:*** **Flowchart and Pseudocode test** This is a test. I will accept it late, but late points will be subtracted. As always it is due the Thursday of the week after it was assigned - so in this case March 5th. **First Java Script** If you are having any doubts or questions about JavaScript, I strongly urge you to come to class Thursday where you can get questions answered by Joe.
	We will continue with logic and concepts this week. ***Practice exercise:*** **Practice exercise** **Practice continued** **Be sure to look at the solutions to the practice** and I also recommend listening to the accompanying audio. **Presentation on using pseudocode to play computer** **Separate speaker notes to accompany presentation on using pseudocode to play computer** For help on if statements, look at this presentation: **Presentation on logical if structures** **Separate speaker notes to accompany presentation on logical if structures**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cer.net/Cis17/javascript/matha
http://www.pgrocer.net/Cis17/java
view-source:http://www.pgrocer.net/Cis17/javascript/mathans.html
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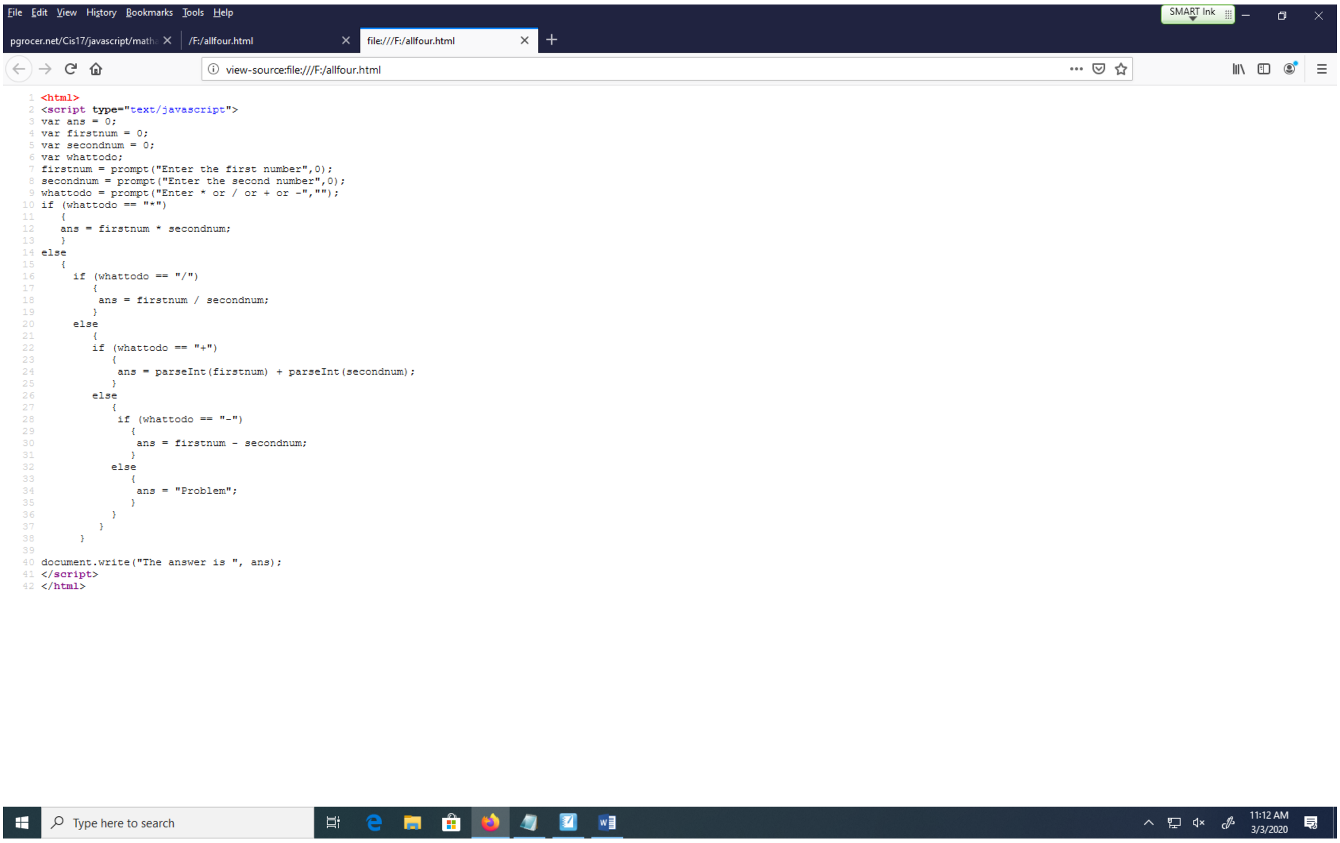
3/3/2020

```
<html>
<script type="text/javascript">
var ans = 0;
var firstnum = 0;
var secondnum = 0;
var whattodo;
firstnum = prompt("Enter the first number",0);
secondnum = prompt("Enter the second number",0);
whattodo = prompt("Enter * or /","");
if (whattodo == "*")
   {
   ans = firstnum * secondnum;
   }
else
   {
   ans = firstnum / secondnum;
   }
document.write("The answer is ", ans);
</script>
</html>
```

```
var firstnum = 0;
var secondnum = 0;
var whattodo;
firstnum = prompt("Enter the first number",0);
secondnum = prompt("Enter the second number",0);
whattodo = prompt("Enter * or / or + or -","");
if (whattodo == "*")
   {
   ans = firstnum * secondnum;
   }
else
   {
     if (whattodo == "/")
        {
        ans = firstnum / secondnum;
        }
     else
        {
        if (whattodo == "+")
           {
           ans = parseInt(firstnum) + parseInt(secondnum);
           }
        else
           {
            if (whattodo == "-")
               {
               ans = firstnum - secondnum;
               }
            else
               {
               ans = "Problem";
               }
           }
        }
   }
```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file:///F:/allfour.html
view-source:file:///F:/allfour.html
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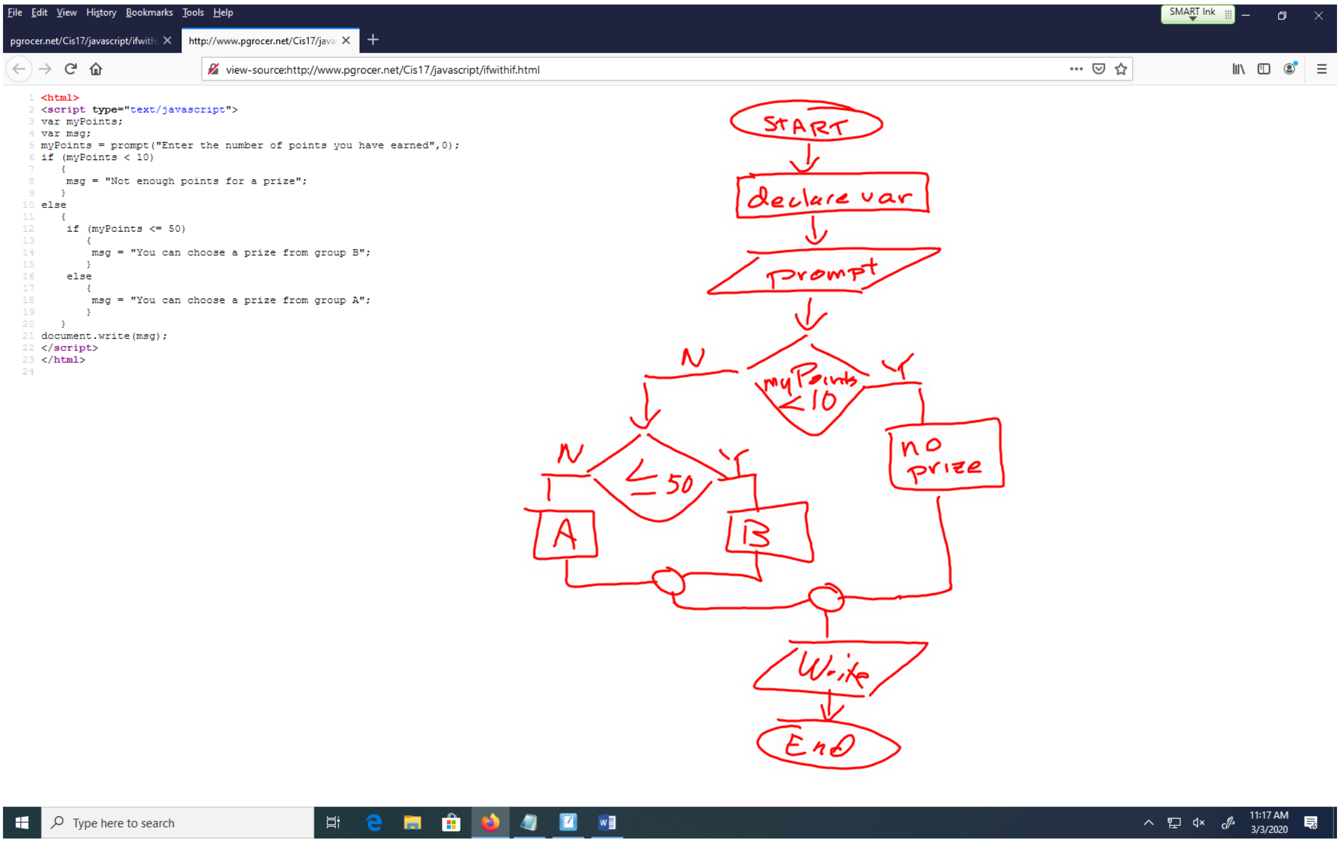
3/3/2020

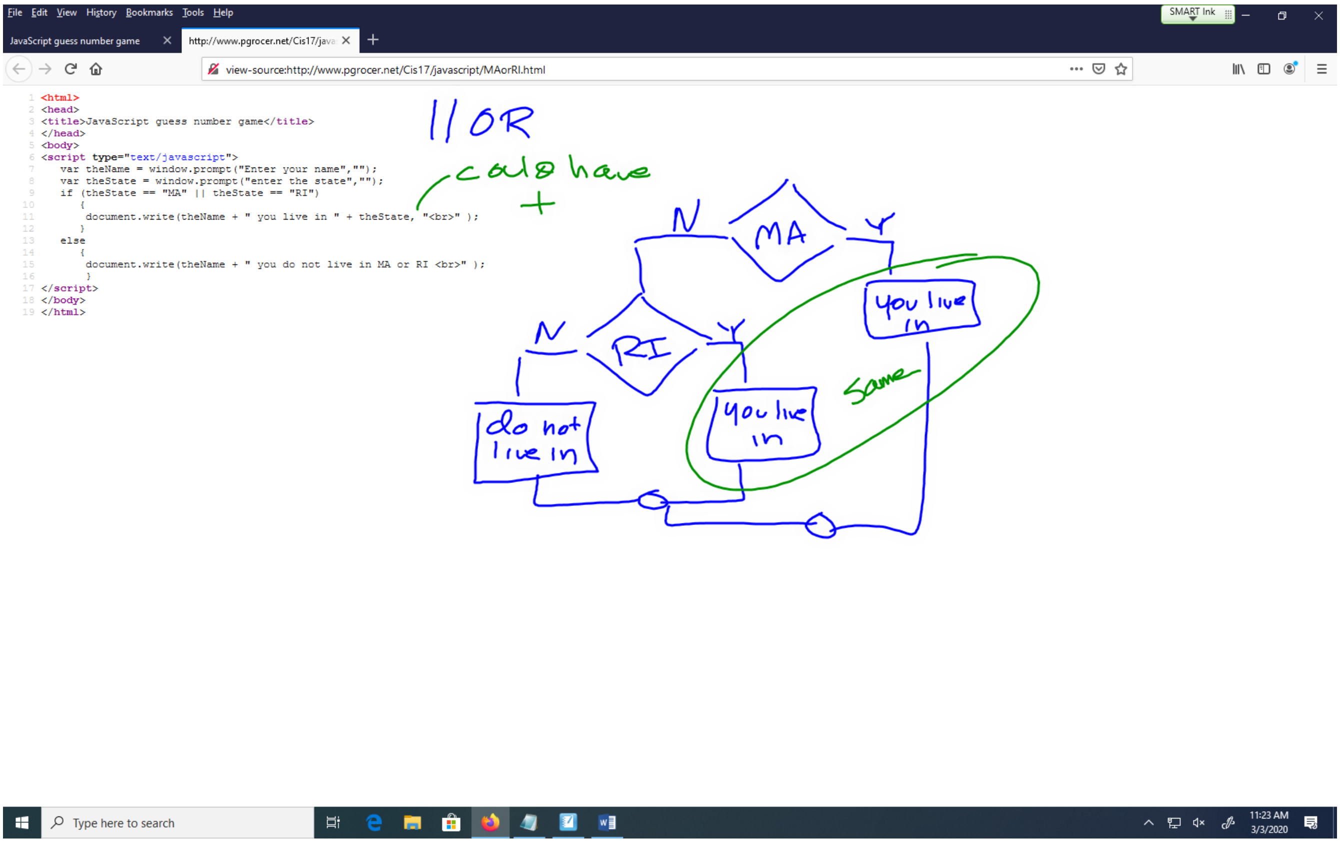
```
<html>
<script type="text/javascript">
var ans = 0;
var firstnum = 0;
var secondnum = 0;
var whattodo;
firstnum = prompt("Enter the first number",0);
secondnum = prompt("Enter the second number",0);
whattodo = prompt("Enter * or / or + or -","");
if (whattodo == "*")
   {
   ans = firstnum * secondnum;
   }
else
   {
     if (whattodo == "/")
        {
         ans = firstnum / secondnum;
        }
     else
        {
        if (whattodo == "+")
           {
            ans = parseInt(firstnum) + parseInt(secondnum);
           }
        else
           {
            if (whattodo == "-")
              {
               ans = firstnum - secondnum;
              }
           else
              {
               ans = "Problem";
              }
           }
         }
      }

document.write("The answer is ", ans);
</script>
</html>
```



File Edit View History Bookmarks Tools Help
pgrocer.net/Cis17/javascript/ifwithi
http://www.pgrocer.net/Cis17/java
view-source:http://www.pgrocer.net/Cis17/javascript/ifwithif.html
SMART Ink
Type here to search
11:17 AM
3/3/2020

```
<html>
<script type="text/javascript">
var myPoints;
var msg;
myPoints = prompt("Enter the number of points you have earned",0);
if (myPoints < 10)
   {
    msg = "Not enough points for a prize";
   }
else
   {
    if (myPoints <= 50)
       {
        msg = "You can choose a prize from group B";
       }
    else
       {
        msg = "You can choose a prize from group A";
       }
   }
document.write(msg);
</script>
</html>
```

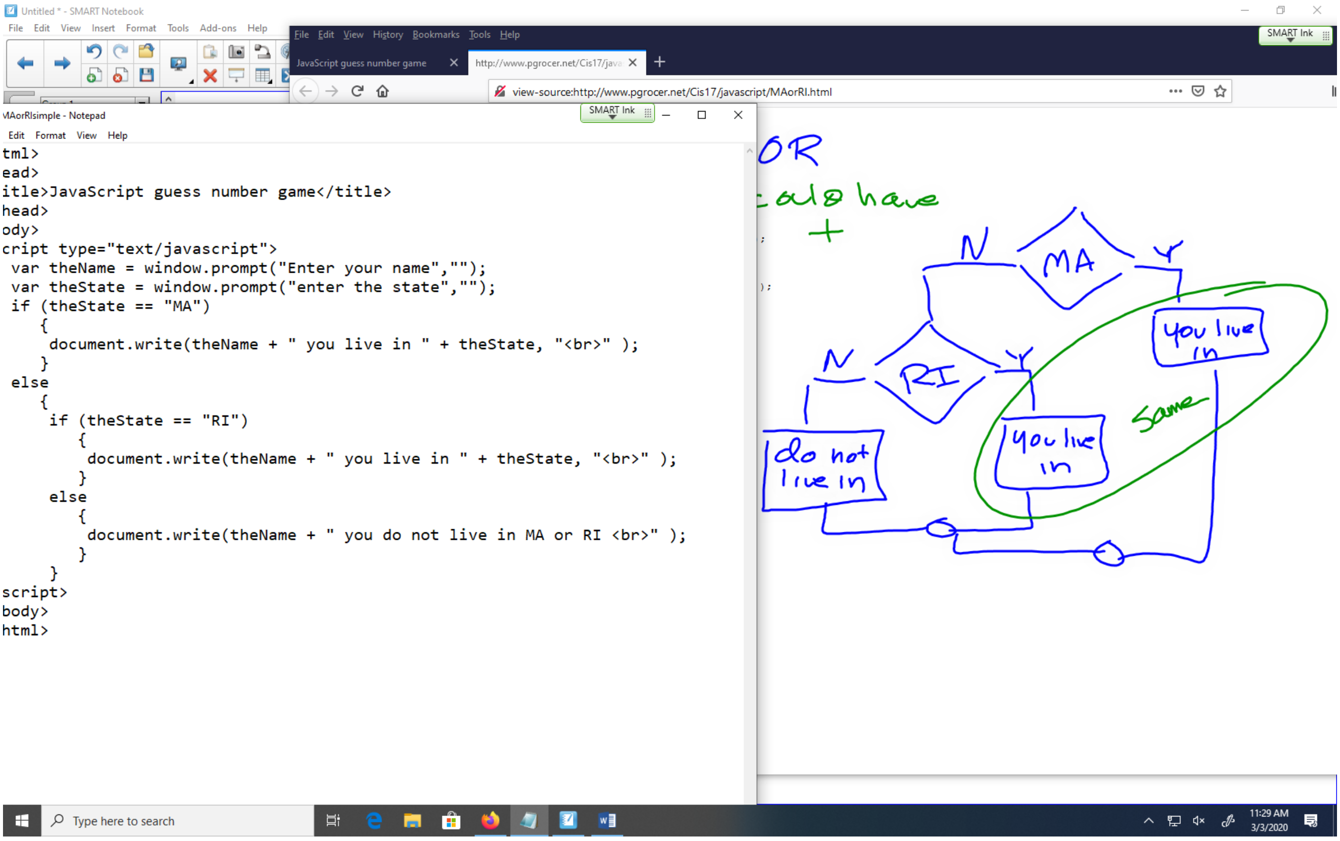
START
declare var
prompt
N
myPoints < 10
Y
no prize
N
≤ 50
Y
A
B
Write
End


File Edit View History Bookmarks Tools Help
SMART Ink
JavaScript guess number game
http://www.pgrocer.net/Cis17/java
view-source:http://www.pgrocer.net/Cis17/javascript/MAorRI.html
N
MA
Y
N
RI
Y
do not live in
you live in
you live in
Same
Type here to search
11:23 AM
3/3/2020

```
<html>
<head>
<title>JavaScript guess number game</title>
</head>
<body>
<script type="text/javascript">
   var theName = window.prompt("Enter your name","");
   var theState = window.prompt("enter the state","");
   if (theState == "MA" || theState == "RI")
      {
       document.write(theName + " you live in " + theState, "<br>" );
      }
   else
      {
       document.write(theName + " you do not live in MA or RI <br>" );
       }
</script>
</body>
</html>
```

// OR

could have +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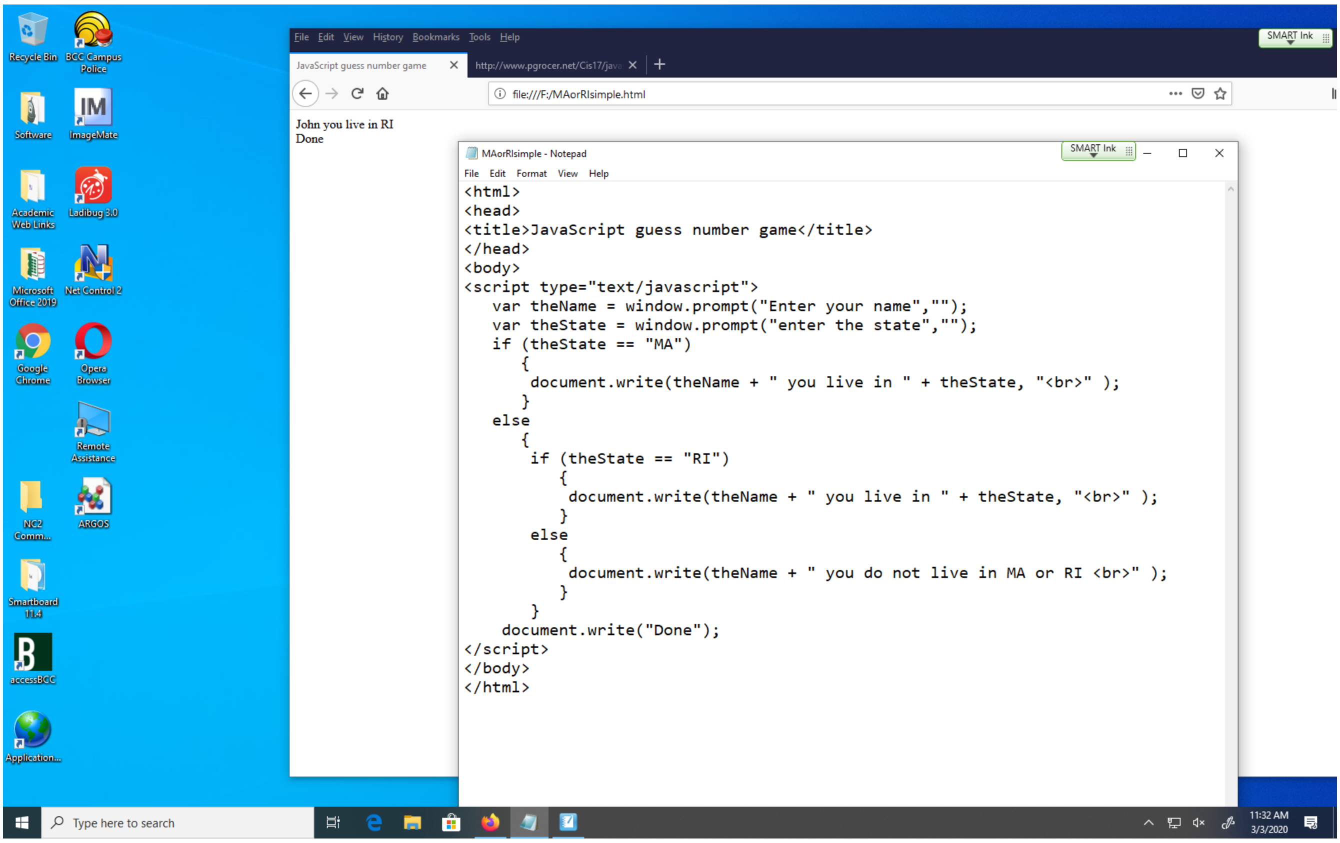
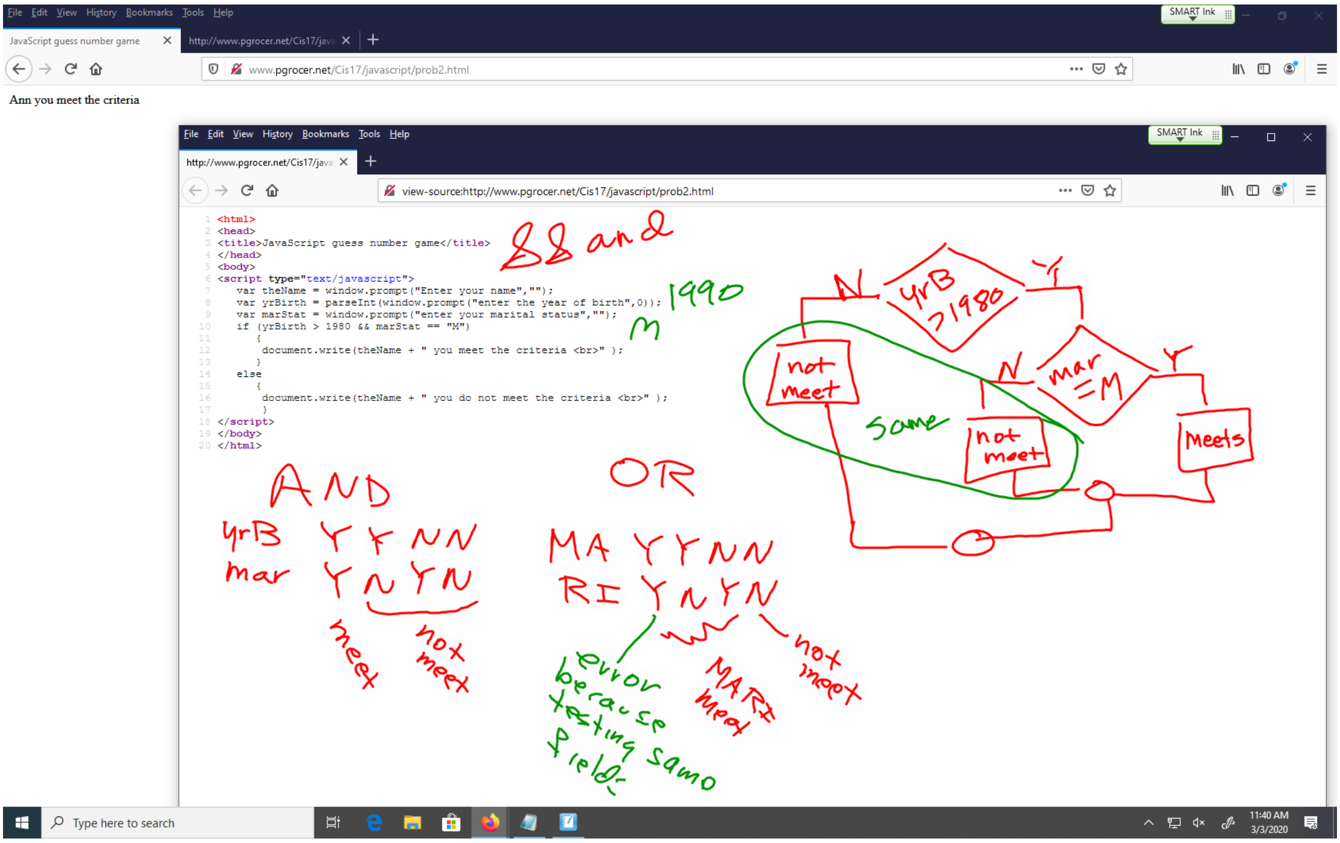
JavaScript guess number game
http://www.pgrocer.net/Cis17/java
view-source:http://www.pgrocer.net/Cis17/javascript/MAorRI.html
SMART Ink
MAorRIsimple - Notepad
Edit Format View Help
OR
als have
+
N
MA
Y
N
RI
Y
you live in
do not live in
you live in
same
Type here to search
11:29 AM
3/3/2020

```
tml>
ead>
itle>JavaScript guess number game</title>
head>
ody>
cript type="text/javascript">
 var theName = window.prompt("Enter your name","");
 var theState = window.prompt("enter the state","");
 if (theState == "MA")
    {
     document.write(theName + " you live in " + theState, "<br>" );
    }
 else
    {
     if (theState == "RI")
        {
         document.write(theName + " you live in " + theState, "<br>" );
        }
     else
        {
         document.write(theName + " you do not live in MA or RI <br>" );
        }
    }
script>
body>
html>
```



```
John you live in RI
Done
```

```
<html>
<head>
<title>JavaScript guess number game</title>
</head>
<body>
<script type="text/javascript">
   var theName = window.prompt("Enter your name","");
   var theState = window.prompt("enter the state","");
   if (theState == "MA")
      {
       document.write(theName + " you live in " + theState, "<br>" );
      }
   else
      {
       if (theState == "RI")
          {
           document.write(theName + " you live in " + theState, "<br>" );
          }
       else
          {
           document.write(theName + " you do not live in MA or RI <br>" );
          }
       }
    document.write("Done");
</script>
</body>
</html>
```


File Edit View History Bookmarks Tools Help
JavaScript guess number game
http://www.pgrocer.net/Cis17/java
www.pgrocer.net/Cis17/javascript/prob2.html
SMART Ink
view-source:http://www.pgrocer.net/Cis17/javascript/prob2.html
N
yrB >1980
Y
not meet
N
mar =M
Y
Same
not meet
Meets
Type here to search
11:40 AM
3/3/2020

Ann you meet the criteria

```
<html>
<head>
<title>JavaScript guess number game</title>
</head>
<body>
<script type="text/javascript">
   var theName = window.prompt("Enter your name","");
   var yrBirth = parseInt(window.prompt("enter the year of birth",0));
   var marStat = window.prompt("enter your marital status","");
   if (yrBirth > 1980 && marStat == "M")
      {
       document.write(theName + " you meet the criteria <br>" );
      }
   else
      {
       document.write(theName + " you do not meet the criteria <br>" );
       }
</script>
</body>
</html>
```

&& and

1990

M

AND

yrB Y Y N N

mar Y N Y N

meet

not meet

OR

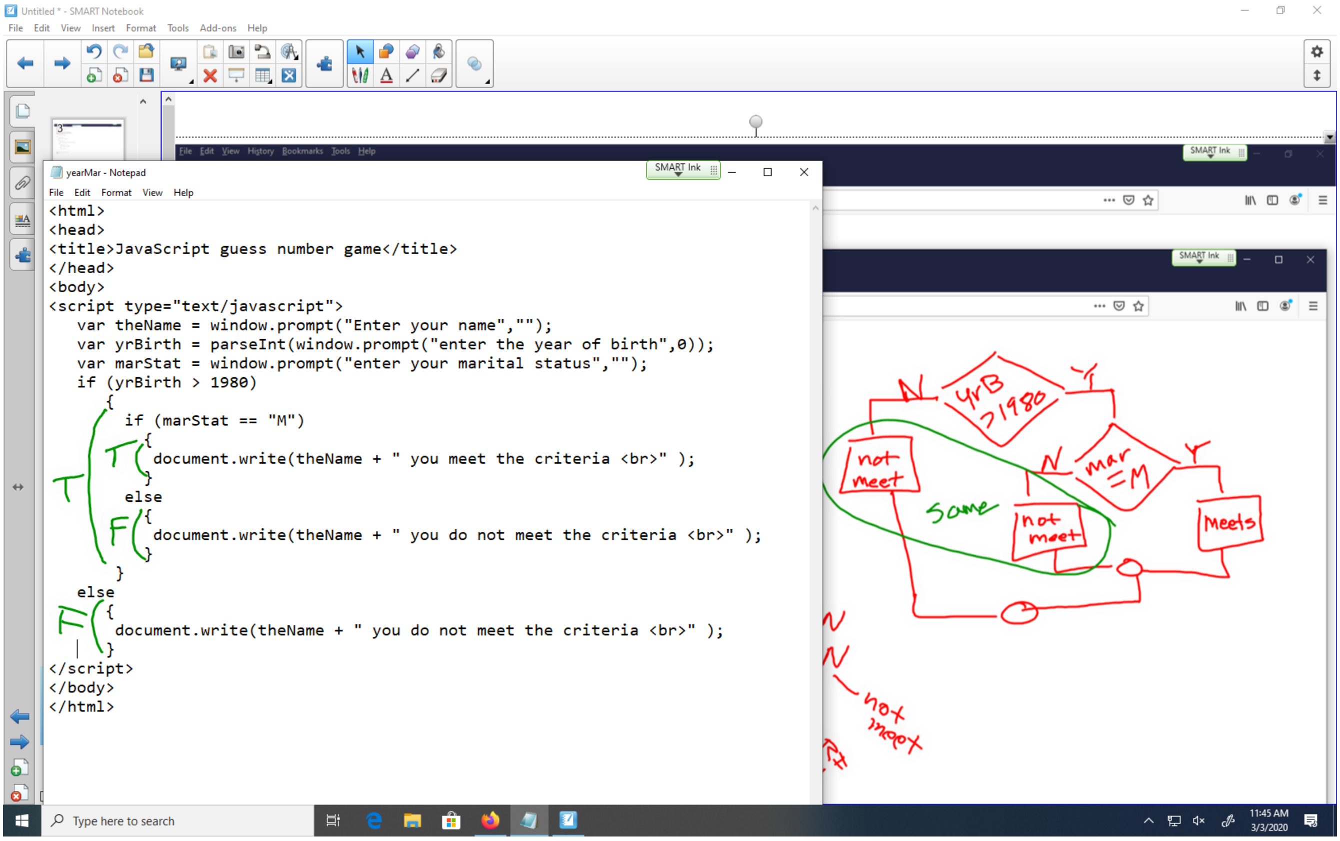
MA Y Y N N

RI Y N Y N

error because testing same field

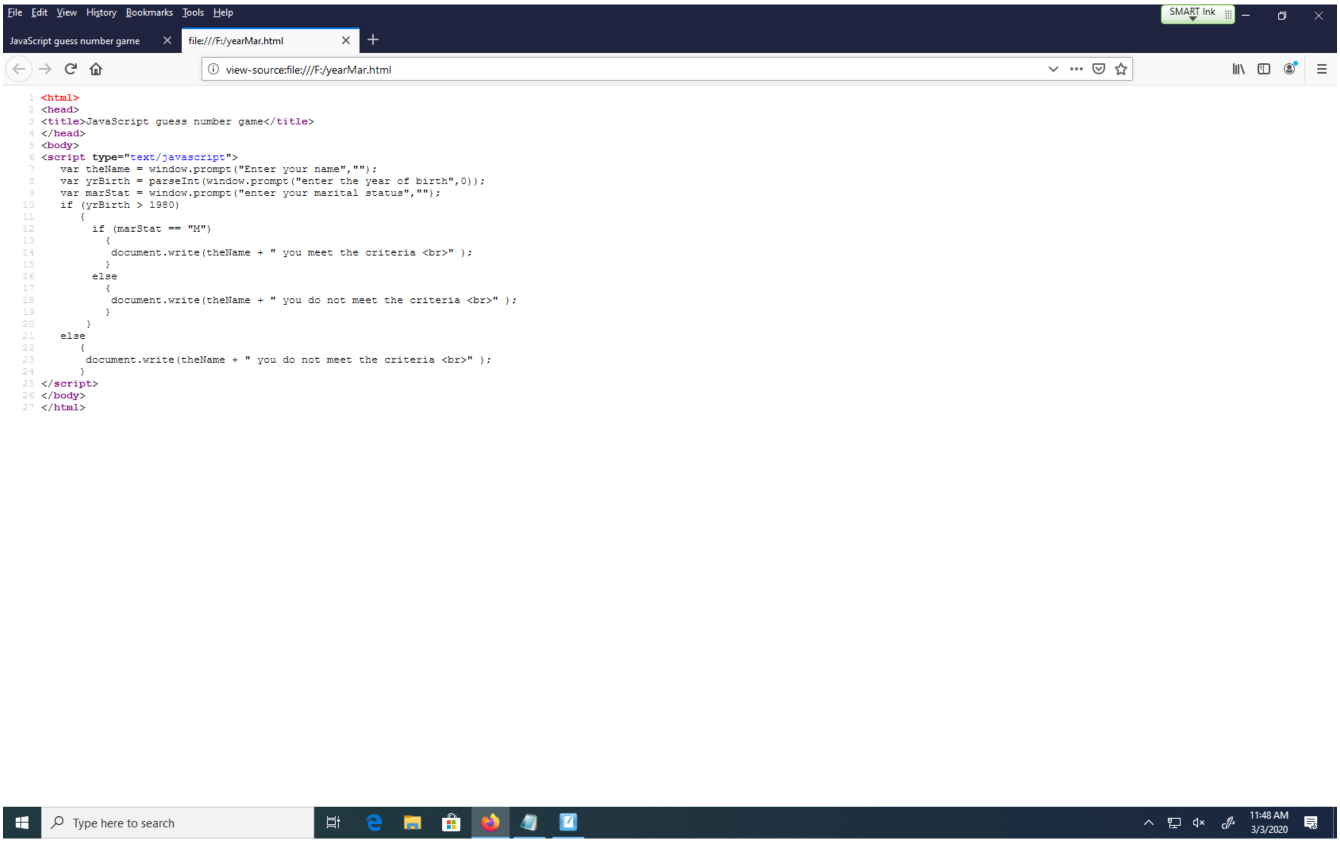
MART meet

not meet



yearMar - Notepad

```
<html>
<head>
<title>JavaScript guess number game</title>
</head>
<body>
<script type="text/javascript">
    var theName = window.prompt("Enter your name","");
    var yrBirth = parseInt(window.prompt("enter the year of birth",0));
    var marStat = window.prompt("enter your marital status","");
    if (yrBirth > 1980)
        {
          if (marStat == "M")
            {
            document.write(theName + " you meet the criteria <br>" );
            }
          else
            {
            document.write(theName + " you do not meet the criteria <br>" );
            }
         }
    else
        {
        document.write(theName + " you do not meet the criteria <br>" );
        }
</script>
</body>
</html>
```


File Edit View History Bookmarks Tools Help
SMART Ink
JavaScript guess number game
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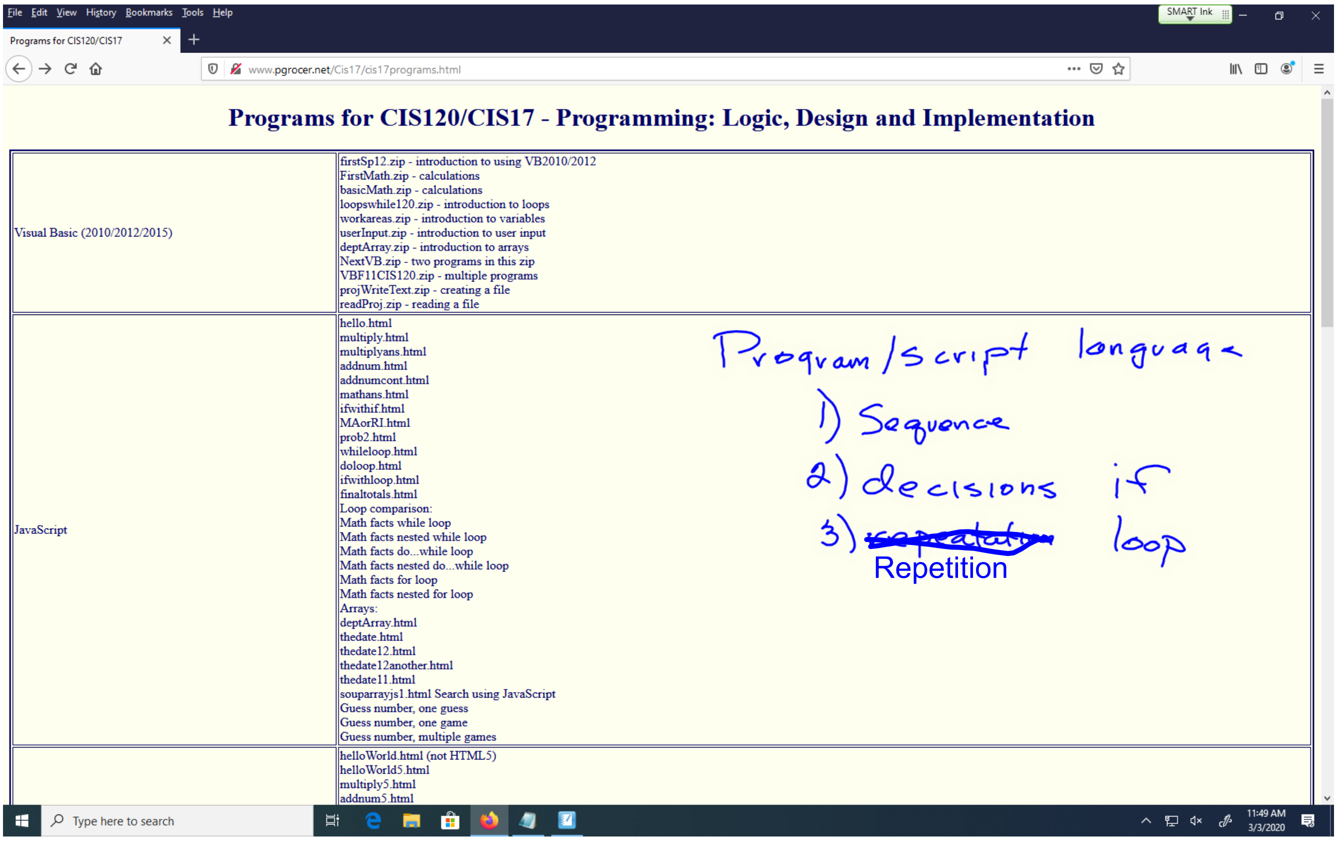
view-source:file:///F:/yearMar.html
Type here to search
11:48 AM
3/3/2020

```
<html>
<head>
<title>JavaScript guess number game</title>
</head>
<body>
<script type="text/javascript">
   var theName = window.prompt("Enter your name","");
   var yrBirth = parseInt(window.prompt("enter the year of birth",0));
   var marStat = window.prompt("enter your marital status","");
   if (yrBirth > 1980)
      {
        if (marStat == "M")
          {
           document.write(theName + " you meet the criteria <br>" );
          }
        else
          {
           document.write(theName + " you do not meet the criteria <br>" );
          }
       }
   else
      {
       document.write(theName + " you do not meet the criteria <br>" );
      }
</script>
</body>
</html>
```


File Edit View History Bookmarks Tools Help
Programs for CIS120/CIS17
www.pgrocer.net/Cis17/cis17programs.html
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3/3/2020

Programs for CIS120/CIS17 - Programming: Logic, Design and Implementation

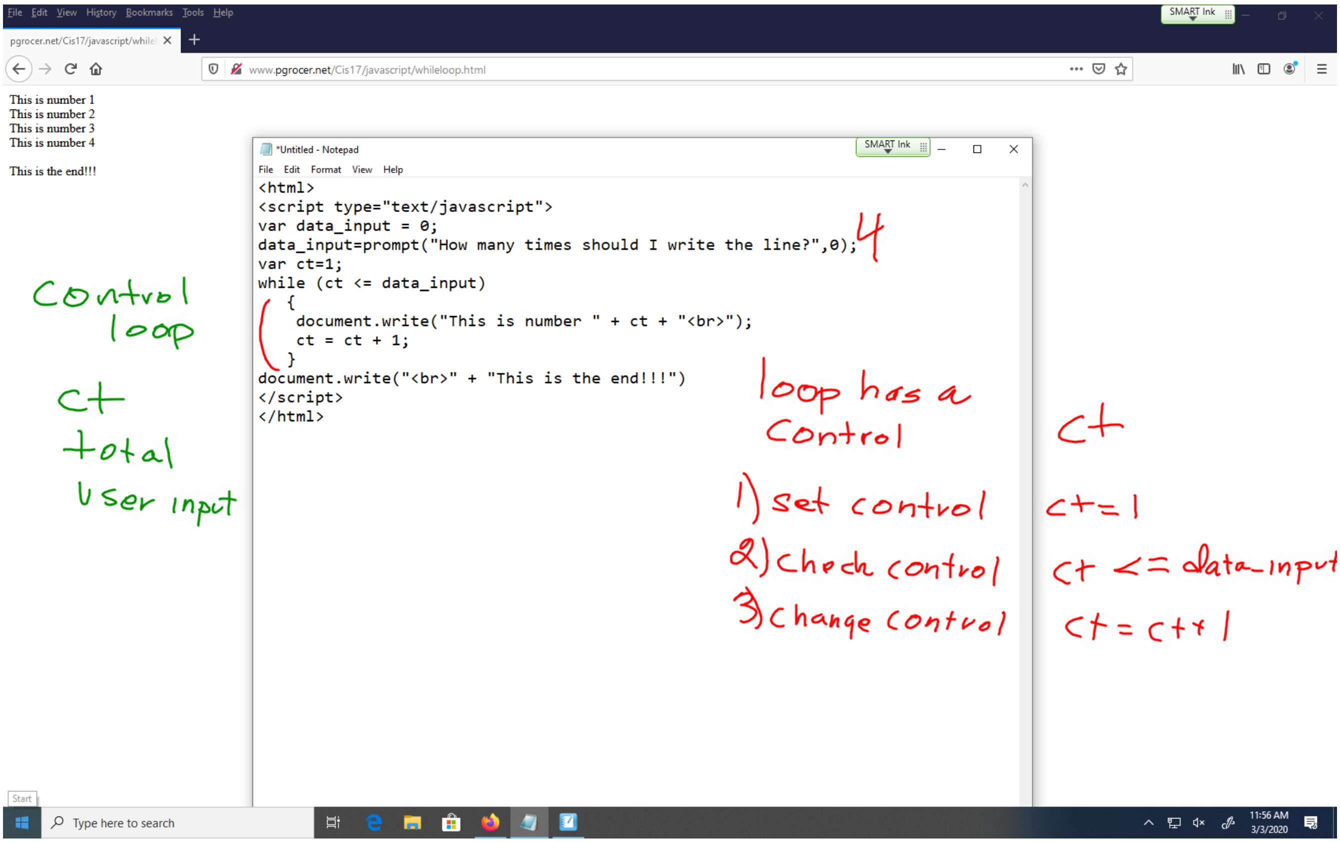
Visual Basic (2010/2012/2015)	firstSp12.zip - introduction to using VB2010/2012 FirstMath.zip - calculations basicMath.zip - calculations loopswhile120.zip - introduction to loops workareas.zip - introduction to variables userInput.zip - introduction to user input deptArray.zip - introduction to arrays NextVB.zip - two programs in this zip VBF11CIS120.zip - multiple programs projWriteText.zip - creating a file readProj.zip - reading a file
JavaScript	hello.html multiply.html multiplyans.html addnum.html addnumcont.html mathans.html ifwithif.html MAorRI.html prob2.html whileloop.html doloop.html ifwithloop.html finaltotals.html Loop comparison: Math facts while loop Math facts nested while loop Math facts do...while loop Math facts nested do...while loop Math facts for loop Math facts nested for loop Arrays: deptArray.html thedate.html thedate12.html thedate12another.html thedate11.html souparrayjs1.html Search using JavaScript Guess number, one guess Guess number, one game Guess number, multiple games
	helloWorld.html (not HTML5) helloWorld5.html multiply5.html addnum5.html

Program/script language

1) Sequence

2) decisions if

3) ~~repeatation~~ loop
Repetition


File Edit View History Bookmarks Tools Help
SMART Ink
pgrocer.net/Cis17/javascript/while
www.pgrocer.net/Cis17/javascript/whileloop.html
*Untitled - Notepad
File Edit Format View Help
Start
Type here to search
11:56 AM
3/3/2020

```
This is number 1
This is number 2
This is number 3
This is number 4

This is the end!!!
```

```
<html>
<script type="text/javascript">
var data_input = 0;
data_input=prompt("How many times should I write the line?",0);
var ct=1;
while (ct <= data_input)
   {
    document.write("This is number " + ct + "<br>");
    ct = ct + 1;
   }
document.write("<br>" + "This is the end!!!")
</script>
</html>
```

4

Control loop

ct

total

user input

loop has a Control

1) set control

2) check control

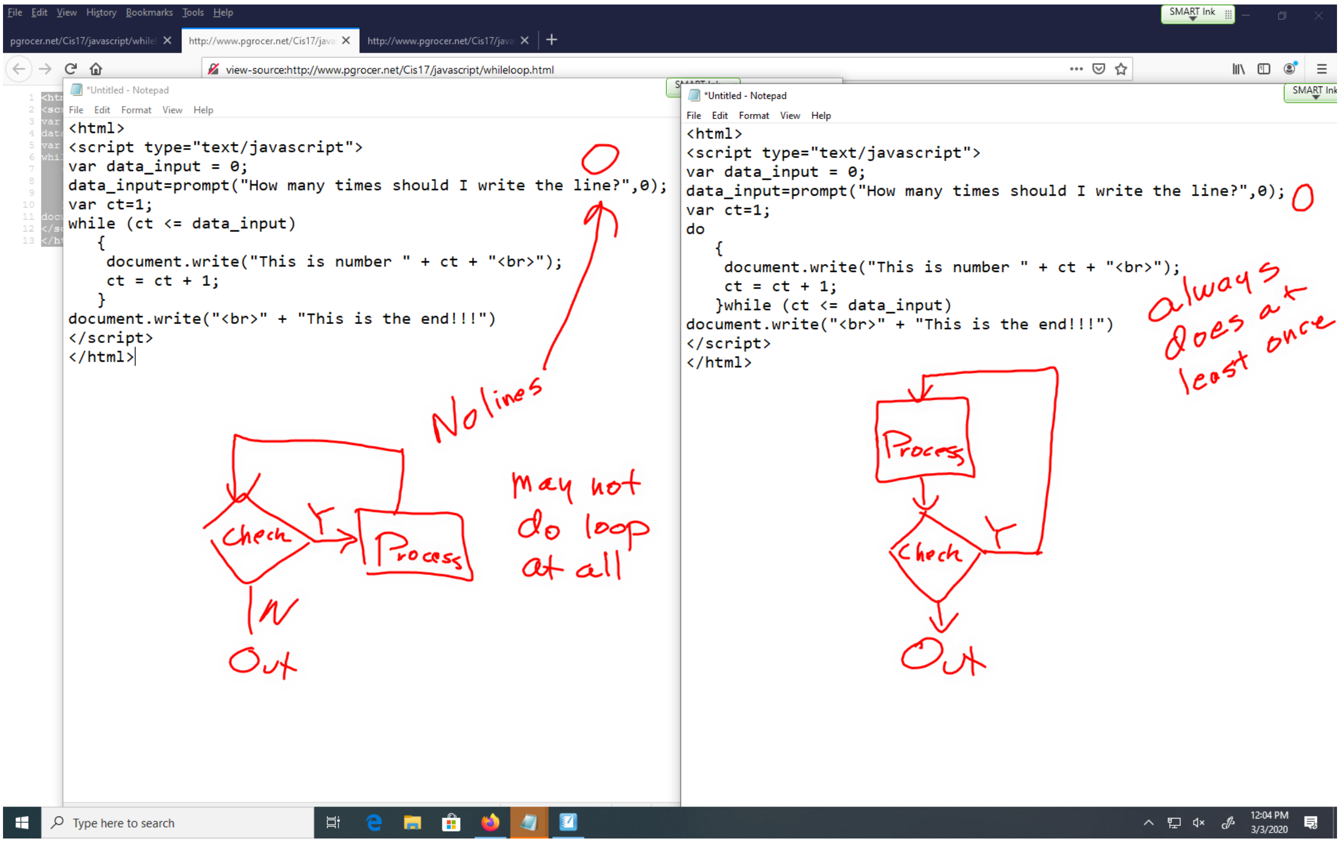
3) change control

ct

ct=1

ct <= data_input

ct = ct+1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pgrocer.net/Cis17/javascript/while
http://www.pgrocer.net/Cis17/java
http://www.pgrocer.net/Cis17/java
view-source:http://www.pgrocer.net/Cis17/javascript/whileloop.html
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File Edit Format View Help
Check
Y
Process
N
Out
Process
Check
Y
Out
Type here to search
12:04 PM
3/3/2020

```
<html>
<script type="text/javascript">
var data_input = 0;
data_input=prompt("How many times should I write the line?",0);
var ct=1;
while (ct <= data_input)
   {
    document.write("This is number " + ct + "<br>");
    ct = ct + 1;
   }
document.write("<br>" + "This is the end!!!")
</script>
</html>
```

0

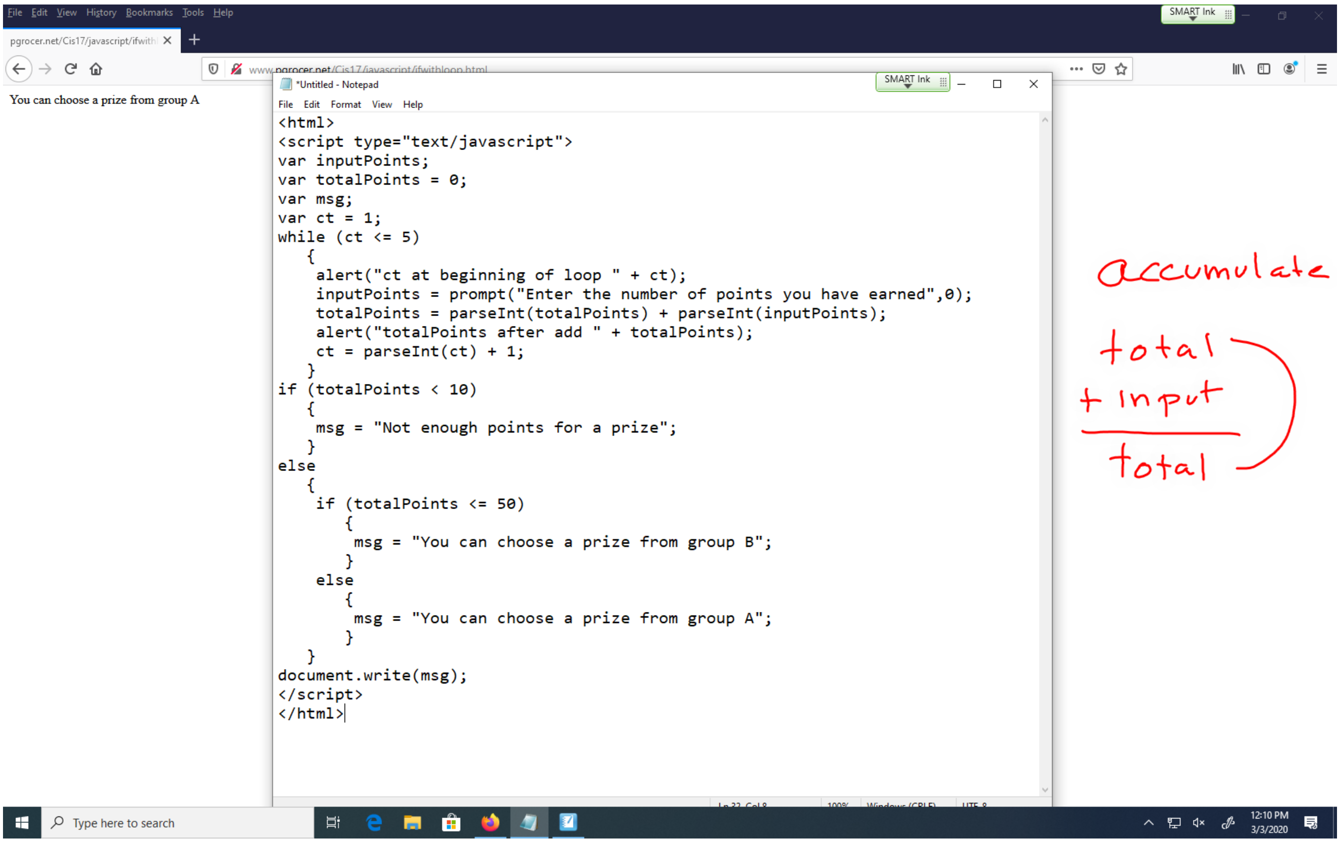
No lines

may not do loop at all

```
<html>
<script type="text/javascript">
var data_input = 0;
data_input=prompt("How many times should I write the line?",0);
var ct=1;
do
   {
    document.write("This is number " + ct + "<br>");
    ct = ct + 1;
   }while (ct <= data_input)
document.write("<br>" + "This is the end!!!")
</script>
</html>
```

0

always does at least once


File Edit View History Bookmarks Tools Help
pgrocer.net/Cis17/javascript/ifwith
www.pgrocer.net/Cis17/javascript/ifwithloop.html
SMART Ink
*Untitled - Notepad
File Edit Format View Help
Type here to search
12:10 PM
3/3/2020

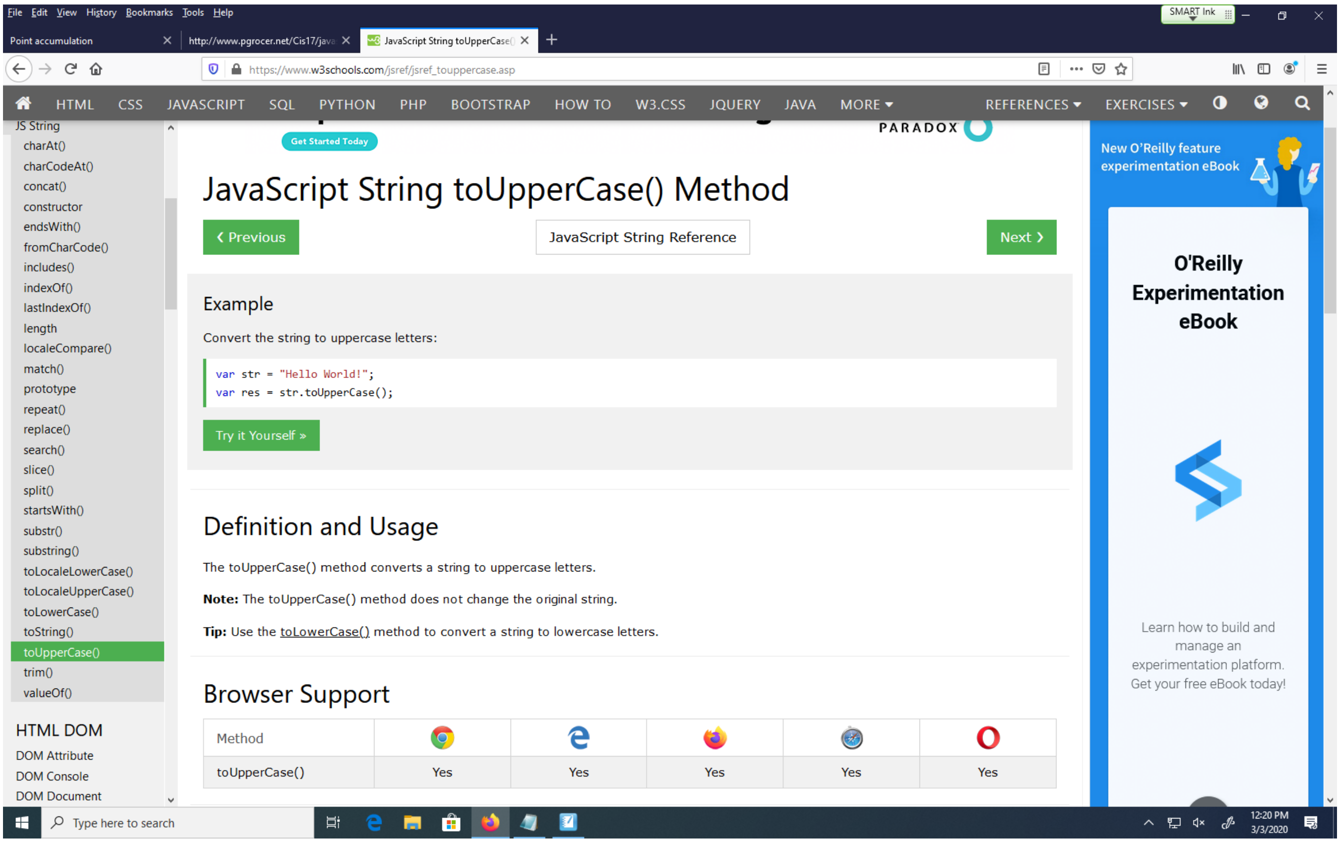
You can choose a prize from group A

```
<html>
<script type="text/javascript">
var inputPoints;
var totalPoints = 0;
var msg;
var ct = 1;
while (ct <= 5)
   {
    alert("ct at beginning of loop " + ct);
    inputPoints = prompt("Enter the number of points you have earned",0);
    totalPoints = parseInt(totalPoints) + parseInt(inputPoints);
    alert("totalPoints after add " + totalPoints);
    ct = parseInt(ct) + 1;
   }
if (totalPoints < 10)
   {
    msg = "Not enough points for a prize";
   }
else
   {
    if (totalPoints <= 50)
       {
        msg = "You can choose a prize from group B";
       }
    else
       {
        msg = "You can choose a prize from group A";
       }
   }
document.write(msg);
</script>
</html>
```

accumulate

total
+ input

total



JavaScript String toUpperCase() Method

‹ Previous JavaScript String Reference Next ›

Example

Convert the string to uppercase letters:

```
var str = "Hello World!";
var res = str.toUpperCase();
```

Try it Yourself »

Definition and Usage

The toUpperCase() method converts a string to uppercase letters.

Note: The toUpperCase() method does not change the original string.

Tip: Use the toLowerCase() method to convert a string to lowercase letters.

Browser Support

Method	Chrome	Edge	Firefox	Safari	Opera
toUpperCase()	Yes	Yes	Yes	Yes	Yes