

choose one:     Received             Received help from:  
 (or more)      no help             Collaborated with: \_\_\_\_\_

Homework:    /SI110/The Cyber Battlefield/Programs 2 & 3

For this assignment you are expected and encouraged to make use of:  
<http://rona.cs.usna.edu/~si110/resources/interpreter.html> the line-at-a-time Javascript interpreter  
<http://rona.cs.usna.edu/~si110/resources/batchInterpreter.html> the batch Javascript interpreter

1. What Javascript statement produces the following alert  
 Note: You must use the line-at-a-time interpreter (URL above) to experiment and make sure your solution works!



10/8/6/0

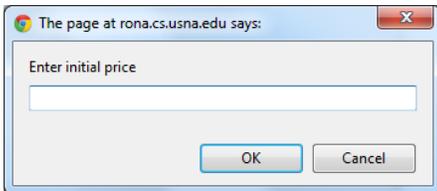
2. Run both versions of the program below in the batch interpreter and explain which version is correct and why.

10/8/6/0

```
// version 1
var a = prompt("enter age");
var y = 2012 + a;
alert("When you are twice your current age, the year will be " + y);

// version 2
var a = prompt("enter age");
var y = 2012 + Number(a);
alert("When you are twice your current age, the year will be " + y);
```

3. A store has a sale in which everything is 30% off. Specially marked items are an additional 15% off. The following program computes the discounted price for a specially marked item that was originally \$97. Show how to modify the program so that the user enters the initial price (as shown). Test in the batch interpreter! (URL above).



10/8/6/0

```
var c1 = 97*(1 - .30);
var c2 = c1*(1 - .15);
alert("discount price is " + c2);
```

Check one:  I didn't try in interpreter  
 I tried in the interpreter and it didn't work right  
 I tried in the interpreter and it worked right

4. The link below pulls up a program in the batch interpreter. Assume that this is the actual code used by a simple ATM that allows you to withdraw money from your bank account. Do not modify the actual code, but find some input that breaks this program! I.e. that makes it behave incorrectly.

<http://rona.cs.usna.edu/~si110/lec/107/hw/bankHW.html>

a. What input did you enter to break the program? 10/8/6/0

b. What incorrect program behavior resulted from that input? 10/8/6/0

c. What would have to change in the code to fix this problem? 10/8/6/0

5. Fill in the "if" condition in the program below so that it works properly. Note that "company" refers to companies in the Brigade, of course. Your condition should make this program behave properly NO MATTER WHAT THE USER ENTERS! You can pull up the code (with the empty "if" condition) in the batch interpreter at the URL below, and you must test your modifications! <http://rona.cs.usna.edu/~si110/lec/107/hw/coHW.html>

10/8/6/0

```
var co = prompt("Enter company number");
```

```
if ( _____ )
{
    alert(co + " is a valid company number");
}
else
{
    alert(co + " is an invalid company number");
}
```

- Check one:  I didn't try in interpreter  
 I tried in the interpreter and it didn't work right  
 I tried in the interpreter and it worked right

6. Consider the following code.

```
var a = prompt("enter a");
if (a > 5)
{
    if (a < 10)
    {
        alert('dog');
    }
    else
    {
        alert('cat');
    }
}
else
{
    alert('cat');
}
```

a. What is output when the user enters:

- |      |    |       |         |
|------|----|-------|---------|
| i.   | 7  | _____ | 3/0/0/0 |
| ii.  | 14 | _____ | 3/0/0/0 |
| iii. | -7 | _____ | 3/0/0/0 |
| iv.  | 5  | _____ | 3/0/0/0 |
| v.   | 10 | _____ | 3/0/0/0 |

b. The program outputs dog if (circle one)

- a > 5 || a < 10  
 a > 5 && a < 10

5/0/0/0