Flow control

Internet programming

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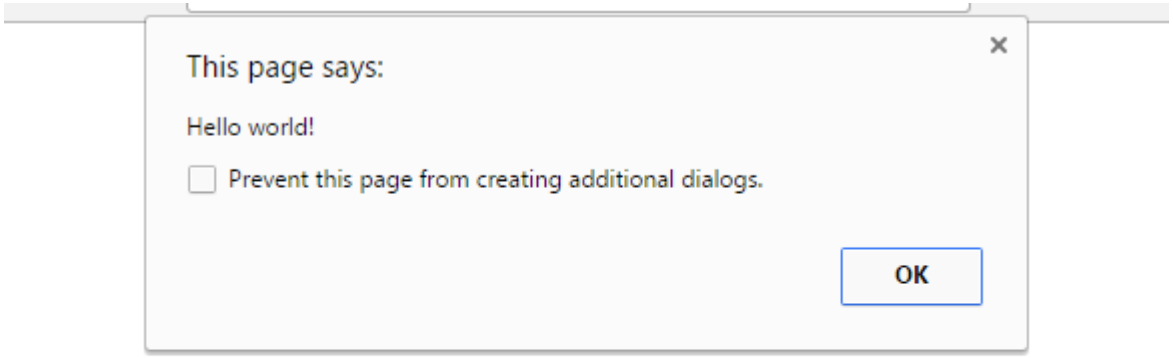
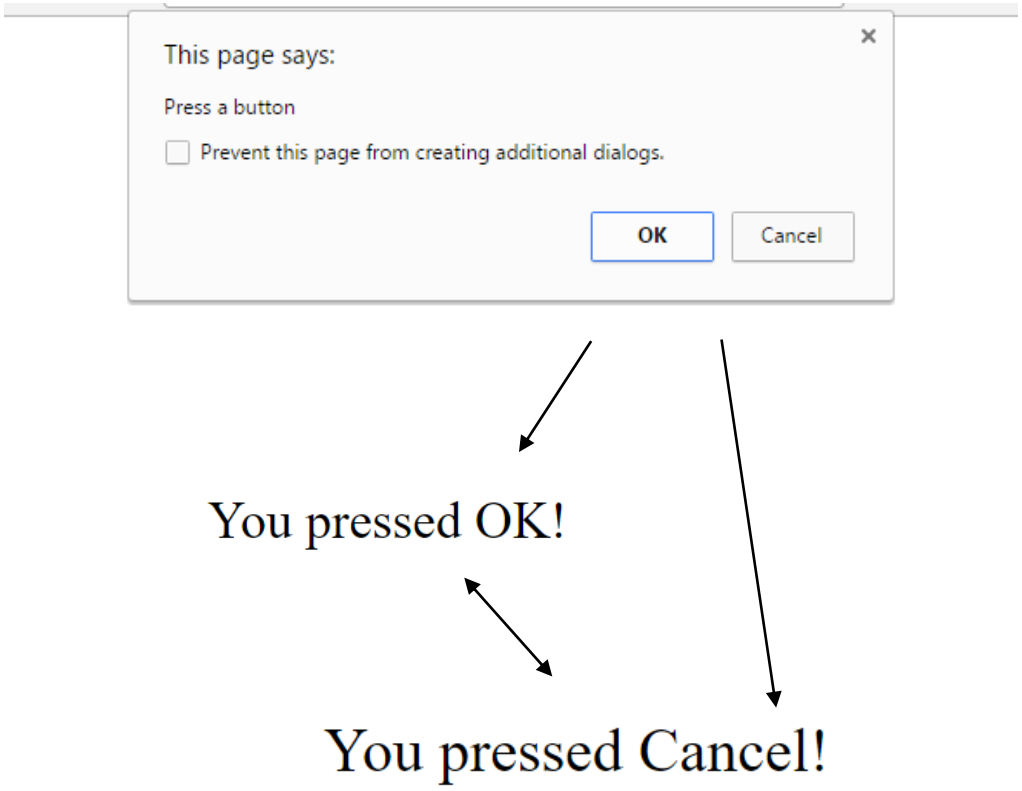
Alert Box

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
alert("Hello world!");
</script>
</body>
</html>
```

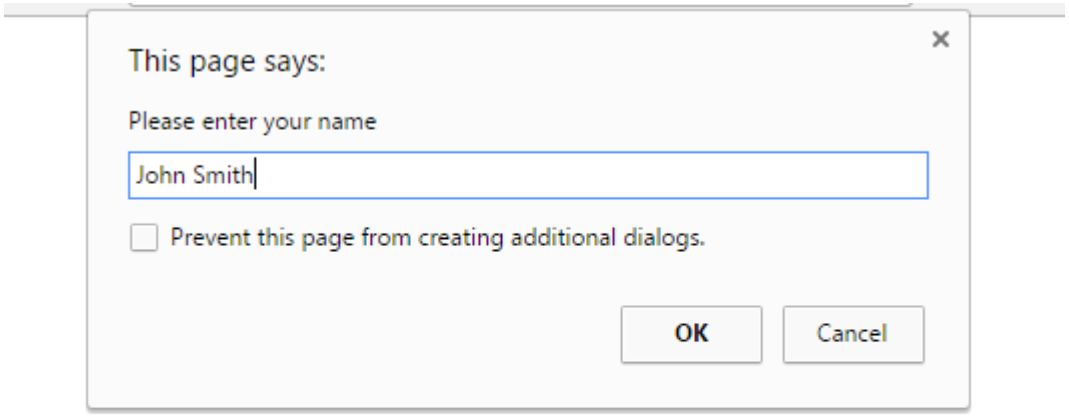


Confirm Box

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var r = confirm("Press a button");
if (r == true) {
    x = "You pressed OK!";
} else {
    x = "You pressed Cancel!";
}
document.write(x);
</script>
</body>
</html>
```



Prompt Box

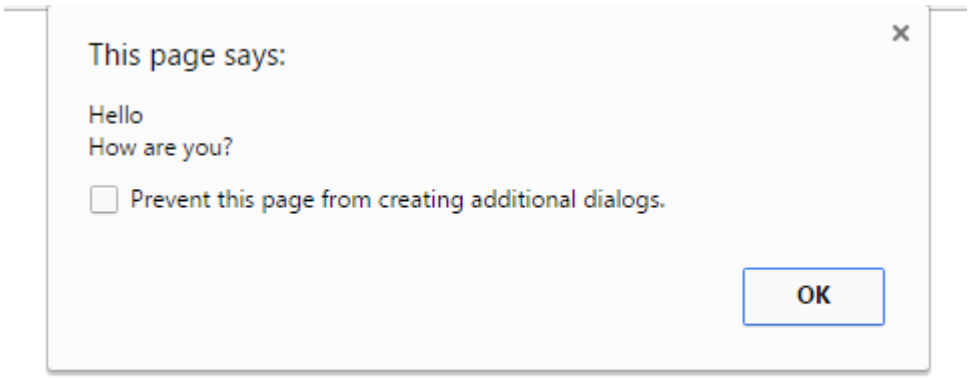



```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var person = prompt("Please enter your name", "Harry Potter");
if (person != null) {
    document.write("Hello " + person + "! How are you today?");
}
</script>
</body>
</html>
```

Hello John Smith! How are you today?

Line breaks

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
alert("Hello\nHow are you?");
</script>
</body>
</html>
```



Problem 1

Write a program that prints the maximum of two numbers read from the standard input.

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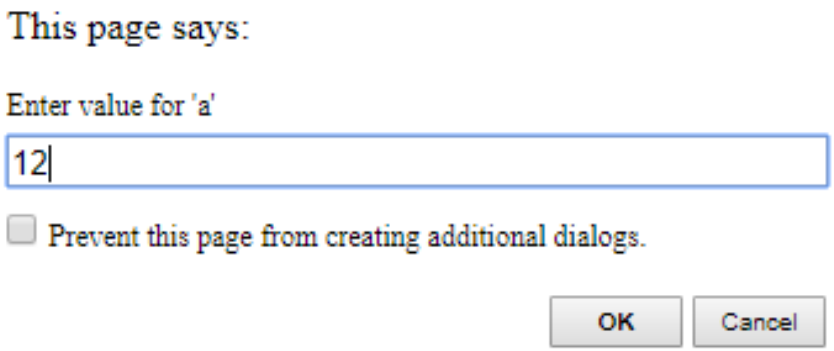
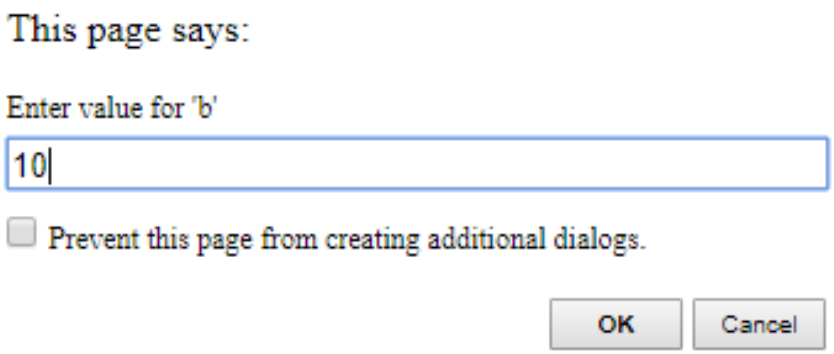




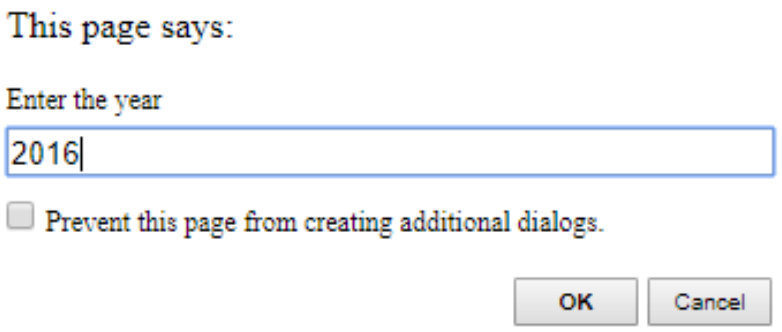
Value of max is 12

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var a = prompt(“Enter value for 'a'");
var b = prompt(“Enter value for 'b'");
a = parseInt(a); // parsing to integer
b = parseInt(b); // parseFloat() for floating point numbers
if (!isNaN(a) && !isNaN(b)) { // check is a number
            if(a>b) {
               document.write("Value of max is " + a);
            }
            else {
               document.write(“Value of max is " + b);
            }
} else {
            document.write(“You have not entered an integer!")
}
</script>
</body>
</html>
```

Problem 2

Write program that will check if a given year (read from SI) is a leap or not and prints an appropriate message.



→ 2016 is leap year

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var year = prompt(“Enter the year");
year = parseInt(year);
if (!isNaN(year)) {
          if((year%4 == 0 && year%100 != 0) || year%400 == 0) {
             document.write(year + “ is leap year ");
          } else {
             document.write(year + " it is not leap year");
          }
} else {
          document.write("You have not entered an integer!")
}
</script>
</body>
</html>
```

Problem 3

The coordinates of a point are read from SI. Write a program that will print the quadrant or the axis where the point belongs. If the point is in the center, print an appropriate message.

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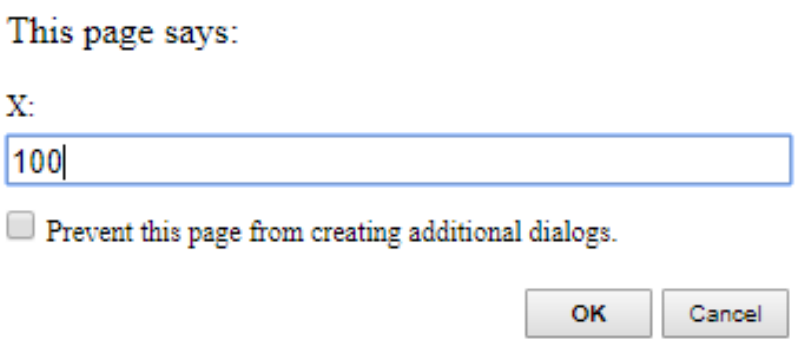
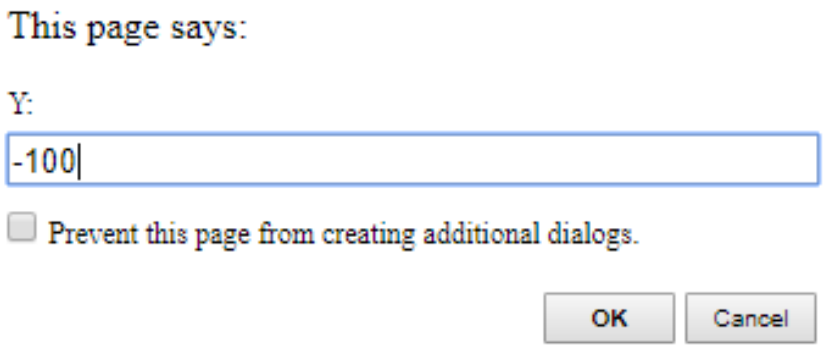




Fourth quadrant

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var x = prompt("X:");
var y = prompt("Y:");
x = parseInt(x);
y = parseInt(y);
if (!isNaN(x) && !isNaN(y)) {
     if(x > 0) {
          if(y > 0)
            document.write(“First quadrant.\n");
          else if(y < 0)
            document.write(“Fourth quadrant.\n");
          else document.write("Poz. x axis.\n");
          }
>
</html>
```

```
else if(x < 0) {
          if(y > 0)

document.write(“Second quadrant.\n");
          else if(y < 0)

document.write("Third quadrant.\n");
          else

document.write("Neg. x axis.\n");
}
else{
          if(y > 0)

document.write("Poz. y axis.\n");
          else if(y < 0)

document.write("Neg. y axis.\n");
          else

document.write(“Origin \n");
}
    } else {
document.write("You have not entered an
integer!")
}
</script>
</body
```

Problem 4

Write a program that will generate and print the grade according to the following table:

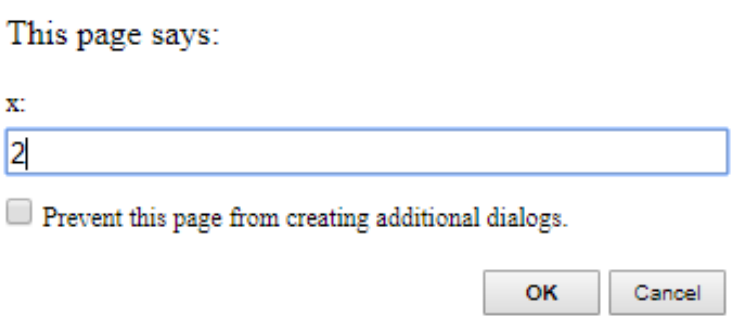
```
 0-50   -> 5
51-60   -> 6
61-70   -> 7
71-80   -> 8
81-90   -> 9
91-100  -> 10
```

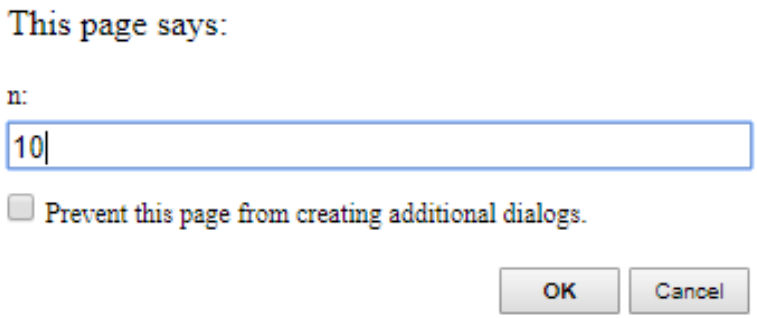
Solution

```
<!DOCTYPE html>
<html><head></head>
<body>
<script type="text/javascript">
var i = prompt(“Enter points:");
i = parseInt(i);
if (!isNaN(i)) {
          grade = 0;
          if (i>=0 && i<=50 ) grade = 5;
          else if (i>50 && i<=60 ) grade = 6;
          else if (i>60 && i<=70 ) grade = 7;
          else if (i>70 && i<=80 ) grade = 8;
          else if (i>80 && i<=90 ) grade = 9;
          else if (i>90 && i<=100) grade = 10;
          else document.write(“The wrong number has been entered for the points!\n");
          if (ocenka )
                    document.write("Student did not receive grade " + grade);
} else {
          document.write("You have not entered an integer!")
}
</script>
</body>
</html>
```

Problem 5

Write a program that computes y = x^n for a given natural number n, n>=1 and a real number x.





$$2 \text{ ^ } 10 = 1024$$

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var x = prompt(“x:");
var n = prompt(“n:");
x = parseInt(x);
n = parseInt(n);
var counter, y;
if (!isNaN(x) && !isNaN(n)) {

          for (var counter = 1, y = x; counter < n; counter ++) {
                              x *= y ;
          }
          document.write(y + " ^ " + n + " = " + x);
} else {
          document.write("You have not entered an integer!")
}
</script>
</body>
</html>
```

Problem 6

Write a program that for n numbers read from SI will count the numbers divisible by 3,the ones that have residue 1 when divided by 3 and the ones that have residue 2.

Example:

4 numbers with residue 0 divided by 3
6 numbers with residue 1 divided by 3
2 numbers with residue 2 divided by 3

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var n1=0, n2=0, n3=0;
var x = prompt(“Enter number:");
x = parseInt(x);
while(!isNaN(x)) {
          if(x % 3 == 0) {
                    n1 += 1;
          } else if(x % 3 == 1) {
                    n2 += 1;
          } else {
                    n3 += 1;
          }
          x = prompt(“Enter number:");
          x = parseInt(x);
}
document.write("<strong>" + n1
+ "</strong> numbers with residue 0 divided by 3 <br>");
document.write("<strong>" + n2
+ "</strong> numbers with redidue 1 divided by 3 <br>");
document.write("<strong>" + n3
+ "</strong> numbers with redidue 2 divided by 3 <br>");
</script>
</body>
</html>
```

Problem 7

Write a program that for unknown number of integers read from SI will find the number with maximum value among them. The program stops when you enter “!”.

Solution

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
<script type="text/javascript">
var max = prompt(“Enter number:");
max = parseInt(max);
var x = max;
while(!isNaN(x)) {
          if(x > max) {
                    max = x;
          }
          x = prompt(“Enter number:");
          x = parseInt(x);
}
document.write(“Max: " + max);
</script>
</body>
</html>
```