

# Binary operators

- Xor : ^

0b101 ^

0b100; // return 1 or 0b001

- Shift left: <<

0b001 << 2; // return 4 or 0b100;

- Shift right: >>

0b1000 >> 2; // return 2 or 0b0010

- shift left and shift right are often used to multiply or divide by 2

# Compound operators

- |= Bitwise OR assignment
- &= Bitwise AND assignment
- .+= String concatenation assignment
- >>= Left shift assignment
- <<= Right shift assignment

## Sncode : Loop for (i=0;i<10;i+=2) do ... endfor

- Another example:

```
for(i=0,j=10;i<10;i+=2,--j) do // a=++i; a=i++; --j j--
    i; " "; j; " ";
    if i == 5 then "\n"; endif
endfor
```

```
return
```

```
0 10 1 9 2 8 3 7 4 6 5 5
6 4 7 3 8 2 9 1
```

## Sncode : Loop for i in variable do ... endfor

```
a = [1,2,3,4] ;  
for i in a do  
    i; " ";  
endfor // return 1 2 3 4  
for i in { "x" : 1, "y" : 2 } do  
    i; " ";  
endfor // return  
{ "key": "x", "nbrows": 2, "value": 1 }  
{ "key": "y", "nbrows": 2, "value": 2 }
```

## Sncode : Loop for i function(...) do ... endfor

- Some function in Sncode can be used as a "callback" function
- The loop will be perform for each row return by the callback function

```
for i sql("select username from sed_login_user") do;  
    i; " ";  
endfor
```

will return for each user:

```
{"sqlerr":"","error":false,"nbrows":23,  
"sqlcode":0,"rows":{"username":"arnaud"},
```



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Cours #9

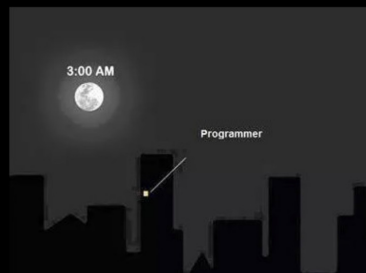
# Course #9

- What we have seen in course #8
  - save a form in ajax
  - file operators
  - binary operators
  - compound operators
  - loop
  - callbacks
  - flush, get\_output clear\_output

# Course #9

- What we will see in this course:
  - Exercices!!!!
  - How to write an algorithm....

Real programmers count from 0.



Q: Why do Java programmers have to wear glasses?

A: Because they don't C#.  
*(see sharp)*

Courtesy: Arjan Einbu

UNIX is user friendly...

It's just very particular about who its friends are.

Courtesy: CodingBytes

If the box says:

**"This software requires Windows XP or better"**

Does that mean it'll run on Linux?



Courtesy: Adam Liss

The programmer got stuck in the shower because the instructions on the shampoo bottle said...

**Lather, Rinse, Repeat.**

Courtesy: Adam Liss



## Exercise 1 course #9

- Write a widget that take in input:

diameter

- And return the Circumference with the formula:

$\pi \times \text{diameter}$

- The widget must validate the input parameter

## Exercise 2 course #9

- Modify the last widget to accept an additional parameter:
  - inch or centimeter
    - `<input type="radio" name="metric" value="inch"> Inches`
    - `<input type="radio" name="metric" value="cm"> cm`
- Display the result in the inch or centimeter depending on this value
- Always display the value in centimeter. So if the value is in inch
  - Display the result in each
  - Display the result in centimeter
- If the value is in centimeter, display only the result in centimeter

## Exercise #3 Course #9

- Write a widget that take to input:
  - firstname
  - lastname
- And the widget will display the firstname in reverse and lastname in reverse

## Exercice #4 Course #9

- Modify the last widget to display the statistic of each letter in a table:

a: 10

c: 5

...

## Exerice #5 course #9

- Write a widget that take 3 parameter:
  - p1
  - p2
  - p3
- When you submit the form, verify that each parameter has a value (is not empty) and display ok or display the parameter that are not ok.

## Exercice #6 course #9

- Modify the last widget to use 10 parameters instead

## Exercice #7 course #9

- Modify the last widget to use 100 parameters instead